I-5 HOV/Truck Lanes Project
SR-14 to Parker Road

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA–005, PM R45.4/R59.0
EA 2332E0
EA 2332A0

Final Environmental Impact Report/ Environmental Assessment with Finding of No Significant Impact

Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by the Department under its assumption of responsibility pursuant to 23 U.S.C. 327.

Caltrans

September 2009

SCH# 2007051028
07-LA-05-PM 45.4/59.0
2332E0
2332A0

Interstate 5, widen existing to include high-occupancy vehicle lanes and truck climbing lanes from State Route 14 in the south to Parker Road in the north, in the City of Santa Clarita and unincorporated Los Angeles County, California

FINAL ENVIRONMENTAL IMPACT REPORT
Submitted Pursuant to: (State) Division 13, California Public Resources Code
California Environmental Quality Act

THE STATE OF CALIFORNIA
Department of Transportation

Sept 1, 2009
Date of Approval

Ron Kosinski
Deputy District Director
Division of Environmental Planning, District 7
California Department of Transportation

CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR

I-5 HOV/TRUCK LANES PROJECT

SR-14 TO PARKER ROAD.

The California Department of Transportation (Caltrans) has determined that Alternative 2 (Reduced Median Alternative), will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment (EA), which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate Mitigation Measures. It provides sufficient evidence and analysis for determining that an EIS is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA.

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Notwithstanding any other provision of law, a claim arising under federal law seeking judicial review of a permit, license or approval issued by federal agency for a highway or public transportation project shall be barred unless it is filed within 180 days after publication of a notice in the Federal Register announcing that the permit, license, or approval is final pursuant to the law under which the agency action is taken, unless a shorter time is specified in the federal law pursuant to which judicial review is allowed.

September 1, 2009
Date of Approval

Ron Kosinski
Caltrans Deputy District Director
Division of Environmental Planning, District 7
California Department of Transportation

SCH# 2007051028
07-LA-05-PM 45.4/59.0
EA 2332E0

Interstate 5, widen existing to include high-occupancy vehicle lanes and truck climbing lanes from State Route 14 in the south to Parker Road in the north, in the City of Santa Clarita and unincorporated Los Angeles County, California

DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
and (Federal) 42 U.S.C. 4332(2)(C)

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327

THE STATE OF CALIFORNIA
Department of Transportation

Dec 11, 2008
Date of Approval

Ron Kosinski
Deputy District Director
Division of Environmental Planning District 7
California Department of Transportation

Executive Summary

S.1 Overview

The California Department of Transportation (Caltrans) proposes to widen existing Interstate 5 (I-5) to include high-occupancy vehicle (HOV) lanes, truck climbing lanes, and additional auxiliary lanes from State Route 14 (SR-14) on the south to Parker Road on the north, a distance of approximately 13.6 miles (mi) (Figure ES.1). The project is located within the City of Santa Clarita and unincorporated Los Angeles County. The proposed improvements include extending the existing HOV lanes on I-5 from SR-14 to south of Parker Road, a distance of approximately 13 mi, and adding truck climbing lanes from the SR-14 interchange to Calgrove Boulevard (northbound) and to Pico Canyon Road/Lyons Avenue (southbound), a distance of approximately 3 to 4 mi. The proposed I-5 HOV/Truck Lanes project (project) also proposes adding and/or extending auxiliary lanes in the northbound and southbound direction at several locations.

I-5 is a major north/south freeway connecting the states of California, Oregon, and Washington, and a major commuter route from the Santa Clarita Valley into the southern Los Angeles area. The area within the project limits is surrounded by mountainous terrain, and is therefore a geographically constrained area. As such, there is no direct alternative freeway route to I-5 in the city of Santa Clarita. A local arterial, The Old Road, runs parallel and adjacent to the I-5 freeway within the study limits.

In addition to serving as a major commuter facility, it is also the region's primary goods movement artery. It is part of the Interstate System of highways and is used as a major local and regional truck route. I-5 is listed as a "high-priority corridor" on the National Highway System (NHS), serving inter-regional commodities and vehicular travel in the north-south direction from California's most southern border with Mexico to its most northern border with Oregon. It is also listed on the State Highway Extra Legal Load (SHELL) Route system. These systems list those highways that have been constructed to accommodate the high volume and weight of inter- and intrastate truck traffic. Within the project limits, I-5 is classified as an urban freeway, and it functions as the gateway to and from the Los Angeles Basin to central and northern California. As a result of this unique characteristic of spanning the entire

state, the interstate in the north Los Angeles County area experiences high volumes of traffic, including truck traffic.

The existing I-5 facility within the project limits currently provides generally four mixed-flow lanes in each direction with the exception of through the midpoint of the I-5/SR-14 interchange, where there are three mixed-flow lanes in each direction. Two truck lanes in each direction pass through the I-5/SR-14 interchange area, separated from the mainline freeway. Within the project limits, this truck bypass route begins (southbound)/ends (northbound) just north of the I-5/SR-14 interchange consisting of ±5 percent grade.

Changes have been made to this environmental document since the circulation of the draft environmental document. Public and agency comments received during the circulation of the Draft Environmental Impact Report/Environmental Assessment (EIR/EA) and Public Hearing have resulted in refinements that have been incorporated in this final environmental document. A vertical line in the outside margin indicates changes in the document.

S.2 Purpose and Need

S.2.1 Need

I-5 is experiencing greater automobile and truck congestion as a result of population growth in north Los Angeles County and goods movement into and out of the Ports of Los Angeles and Long Beach. Freeway traffic volumes are expected to approximately double by 2030, which will continue to cause substantial delays.

S.2.2 Purpose

The purpose of the project is to achieve the following objectives:

- Reduce delays to vehicles caused by slower-moving trucks through the hilly southern portion of this segment of I-5.
- Improve operational and safety design features to facilitate the movement of people, freight, and goods on the project segment.
- Reduce existing and forecast traffic congestion on the project segment of I-5 to accommodate planned growth within the study area.

S.3 Project Description

This section describes the Proposed Action and the design alternatives that were developed by a multidisciplinary team to achieve the proposed project purpose and need while avoiding or minimizing environmental impacts. The alternatives are Alternative 1 (No Build Alternative), Alternative 2 (Reduced Median Alternative), and Alternative 3 (Full Median Alternative).

The project is being evaluated in three segments. Segment 1 extends from the I-5/SR-14 interchange to north of the Pico Canyon Road/Lyons Avenue/I-5 interchange. Segment 2 extends from north of the Pico Canyon Road/Lyons Avenue/I-5 interchange to north of the State Route 126 (SR-126) interchange. Segment 3 extends from north of SR-126 to south of Parker Road.

S.3.1 No Build Alternative (Alternative 1)

The No Build Alternative would maintain the current configuration of the existing freeway. There would be no improvements to the mainline freeway, only approved/ pending local interchange improvements. Some of the known projects include the following:

- **Hasley Canyon Road/I-5 Interchange Improvements:** Construction ongoing; anticipated to be completed in 2011.
- **Rye Canyon Road/I-5 Southbound Ramp Improvements:** Construction is anticipated to begin in 2009/2010 fiscal year.
- **Rye Canyon Road Widening:** Construction is anticipated to begin in 2009/ 2010.
- **Magic Mountain Parkway/I-5 Interchange Improvements:** Phase 1 was completed in April 2006. Phase 2 construction is ongoing and expected to be complete in 2009. Phase 3 currently has no funding.
- **The Old Road Improvement Projects (Widening of The Old Road from Magic Mountain Parkway to Turnberry Lane):** The Draft EIR anticipated for public review in early 2011. Phase I (Magic Mountain Parkway to Rye Canyon Road and replacement of the Santa Clara River Bridge) construction is anticipated to begin in 2013. Phase II (Rye Canyon Road to Turnberry Lane) construction is anticipated to begin as early as 2013.
- **The Old Road Widening (Parker Road to Hillcrest Parkway):** The Project Study Report (PSR) equivalent was approved on January 25, 2007. Los Angeles

County is currently performing environmental studies. Public review of the environmental document is tentatively scheduled for early 2010. The schedule is contingent upon securing additional funding for the project.

- **I-5/SR-14 HOV Direct Connector Project:** Construction is anticipated from 2008 to 2011.
- **I-5 HOV Lanes from SR-118 to SR-14:** Construction has been completed. The HOV lanes were opened in April 2008.
- **I-5 Pavement Rehabilitation:** One project is programmed, with construction to begin in 2012/2013. Other projects are to follow as funding becomes available.
- **Upgrade I-5 Median Barrier from South of Weldon Canyon Road to 530 Feet (ft) north of Weldon Canyon:** Construction is anticipated to begin in 2011.
- **Corridor Intelligent Transportation System (ITS) Improvements:** No project is currently programmed. These improvements are to be implemented with projects as appropriate until complete.
- **I-5 at Castaic Weight Station; Upgrade Weight Station Facility:** The Final Project Report/Environmental Document (PR/ED) was approved October 2008. Construction is expected to begin October 2010.

Under the No Build Alternative, the HOV and truck lanes would not be added and the congestion and operational problems in this segment would not be alleviated.

The No Build Alternative provides a baseline for comparing the impacts associated with the Build Alternatives since environmental reviews must consider the effects of not implementing the project.

S.3.2 Build Alternatives

Both Build Alternatives (Alternatives 2 and 3) propose to widen the center median and the outside shoulder of the northbound and southbound lanes between SR-14 and south of Parker Road to accommodate HOV, additional auxiliary, and truck lanes. Both Build Alternatives would provide one HOV lane in each direction from the I-5/ SR-14 interchange to south of the Parker Road interchange. Both Build Alternatives would extend one northbound truck lane from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 overcrossing to the Calgrove Boulevard/I-5 interchange. Southbound truck climbing lanes are proposed between the Weldon Canyon Road overcrossing and Calgrove Boulevard interchange (two

truck lanes) and from Calgrove Boulevard to south of the Pico Canyon Road/Lyons Avenue interchange (one truck lane).

Both Build Alternatives propose adding and/or extending auxiliary lanes in the northbound direction from SR-14 to the northbound truck lane merge, Calgrove Boulevard to Pico Canyon Road/Lyons Avenue, and Valencia Boulevard to Magic Mountain Parkway, and in the southbound direction between SR-126 and Rye Canyon Road, Rye Canyon Road, and Magic Mountain Parkway, and Valencia Boulevard and McBean Parkway.

S.3.2.1 Alternative 2 (Reduced Median Alternative) – Preferred Alternative

Alternative 2 proposes median and inside shoulder widths that are less than the Caltrans standard (48 ft median and less than 10 ft inside shoulders at median structure columns) within a maximum 210 ft cross section. The reduced median width of 48 ft is measured from the inside the Mixed Flow Lane (MFL), Edge of Travel Way (ETW), to inside the MFL ETW. Additional widening beyond the 48 ft minimum in the median area would be provided when necessary for horizontal stopping sight distance requirements. A 48 ft median would accommodate a 1 ft buffer, a 12 ft HOV lane, and a 10 ft inside shoulder. Shoulder widths along freeway ramps would be 8 ft. Alternative 2 would not provide for a 10 ft continuous inside shoulder (at column locations) or a 4 ft buffer between HOV and adjacent mixed-flow lanes. The HOV buffer would be 1 ft. The maximum cross section width under Alternative 2 (210 ft) is intended to accommodate the proposed HOV and truck climbing lanes within the existing Caltrans right of way to the extent feasible to limit the number of right of way acquisitions.

Per Caltrans HOV lane guidelines, California Highway Patrol (CHP) enforcement areas are recommended every 2 mi. Based on Caltrans criteria, approximately five enforcement areas would be required within the 13.6 mi project limit. Additional width in the median (beyond the proposed 48 ft) is required to provide for those CHP enforcement areas and has been included in the design of the Reduced Median Alternative.

S.3.2.2 Alternative 3 (Full Median Alternative)

The Full Median Alternative (Alternative 3) proposes construction of the truck climbing and HOV lanes consistent with Caltrans standards. The standard full median width of 62 ft is measured from inside the MFL ETW to inside the MFL ETW. The only exception to the 62 ft median width occurs in two areas north of the Pico Canyon Road/Lyons Avenue interchange, where the existing median is 60 ft wide. The typical cross section for this alternative is a maximum of 245 ft, which includes 12 ft travel lanes, a 10 ft outside shoulder, and a continuous CHP enforcement area in the median. The standard median width of 62 ft would accommodate a 4 ft buffer, a 12 ft HOV lane, a 10 ft inside shoulder, and an additional 4 ft inside shoulder for continuous CHP enforcement. The only exception to the 62 ft median width would be in two areas north of the Pico Canyon Road/Lyons Avenue interchange, where the median width would be 60 ft. The additional width for the continuous enforcement area provides for continuous 10 ft inside shoulders at the structure column locations.

Early Implementation Project (EIP)

Construction of the truck lane improvements has been identified as the EIP due to partial funding of the truck lanes component. The EIP consists of construction of truck lanes from the SR-14 interchange to south of the Pico Canyon Road/Lyons Avenue interchange.

The EIP improvements in the northbound direction would include widening into the existing median to maintain five northbound lanes after the merge of the separated truck lanes just north of the Weldon Canyon Road/I-5 overcrossing to the Calgrove Boulevard interchange. The outside lane would become the truck climbing lane as the general-purpose lanes would be shifted toward the median.

The EIP improvements in the southbound direction would include widening into the existing median to maintain five southbound lanes from south of the Pico Canyon Road/Lyons Avenue interchange to Calgrove Boulevard. The truck lanes would become the truck climbing lane and the general-purpose lanes would be shifted toward the median.

At the Calgrove Boulevard southbound on-ramp, a sixth lane would be added on southbound I-5. Two of the six southbound lanes would be dropped at the existing SR-14 interchange truck bypass lanes, while four lanes would join the existing I-5 lanes before the SR-14 general-purpose lane connector.

The EIP would be constructed within the limits analyzed for the ultimate improvements.

S.4 Joint CEQA/NEPA Document

The proposed project is a joint project by Caltrans and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327(a)(2)(a).

The Draft EIR/EA was circulated for public review from December 17, 2008, to February 17, 2009. Comments have been received and addressed from the public and reviewing agencies. The Final EIR/EA includes responses to comments received on the Draft EIR/EA, and identifies the selection of Alternative 2 as the Preferred Alternative. Following the distribution of the Final EIR/EA, if the decision is made to approve the project, a Notice of Determination (NOD) will be published for compliance with CEQA and a Finding of No Significant Impact (FONSI) will be issued for compliance with NEPA.

S.5 Coordination with Public and Other Agencies

S.5.1 Permits and Approvals Needed

Table S.1 identifies the permits and/or approvals that are or may be required prior to or during construction of the project.

S.5.2 Unresolved Issues

There are no unresolved issues at this time. Coordination with regulatory agencies is ongoing.

Table S.1 Permits and/or Approvals Needed

Permit/Approval	Agency	Status
Encroachment Permit-Roadway	County of Los Angeles-Public Works	Coordination will occur after environmental document approval.
Streambed Alteration Agreement (Section 1602)	California Department of Fish and Game (CDFG)	Application will be submitted after environmental document approval.
Section 402 NPDES (Construction Activity)	Los Angeles Regional Water Quality Control Board	Application will be submitted prior to construction.
Section 402 NPDES (Groundwater Dewatering)	Los Angeles Regional Water Quality Control Board	Application will be submitted prior to construction.
Section 401 Permit	Los Angeles Regional Water Quality Control Board	Application will be submitted after environmental document approval.
Section 404 Permit (Individual or Nationwide[1])	United States Army Corps of Engineers (ACOE)	Application will be submitted after environmental document approval.
Section 7 Informal Consultation for Threatened and Endangered Species	United States Fish and Wildlife Service	Completed
Encroachment Permit-Flood Control	County of Los Angeles-Public Works	Coordination will occur after environmental document approval.

[1] After receipt of the Section 404 Permit application, the ACOE will determine whether an Individual or Nationwide Permit is applicable.

S.6 Project Impacts

Table S.2 provides a summary of the impacts that are summarized from the environmental analysis contained in Chapter 2. The environmental commitments and measures to minimize harm are listed in the Environmental Commitments Record in Appendix E.

Table S.2 Summary of Impacts

Environmental Resource		Alternative 1 (No Build)	Alternative 2 (Reduced Median) – Preferred Alternative	Alternative 3 (Full Median)
Land Use		No impact.	Temporary construction impacts and permanent acquisition of one full parcel and three partial parcels for additional right of way.	Temporary construction impacts and permanent acquisition of eight partial parcels and one full parcel for additional right of way.
Growth		No impact.	Temporary noise impacts would include construction crew commuting of construction equipment and materials to the project site and excavation/grading/roadway construction. Permanent impacts are solely from traffic noise.	Temporary noise impacts would include construction crew commuting of construction equipment and materials to the project site and excavation/grading/roadway construction Permanent impacts are solely from traffic noise.
Farmlands		No impact.	No temporary or permanent impacts to Farmlands.	Permanent loss of 3.02 acres (ac) of Prime Farmland and 1.024 ac of Farmland of Statewide Importance.
Community Impacts	**Community Character and Cohesion**	No impact.	Temporary impacts would include construction-related impacts such as traffic disruptions/congestion/detours/ increasing of noise/vibration/light and glare/increasing of emissions. No negative permanent impacts to the regional and local community.	Temporary impacts would include construction-related impacts such as traffic disruptions/congestion/detours/ increasing of noise/vibration/light and glare/increasing of emissions. No negative permanent impacts to the regional and local community.
	Relocation	No impact.	Temporary loss of parking spaces and unpaved field roads. No permanent impacts related to acquisitions or relocation of residential or commercial buildings.	Temporary loss of parking spaces and unpaved field roads. No permanent impacts related to acquisitions or relocation of residential or commercial buildings.
	Environmental Justice	No Impact.	No disproportionately high and adverse impacts on any minority or low-income populations.	No disproportionately high and adverse impacts on any minority or low-income populations.
Utilities and Emergency Services		No impact.	Temporary construction impacts. Permanent beneficial impacts from replacement/upgrade/addition of the Intelligent Transportation System (ITS) facilities.	Temporary construction impacts. Permanent beneficial impacts from replacement/upgrade/addition of the ITS facilities.
Traffic and Transportation/Pedestrian and Bicycle Facilities		Increased traffic congestion; degradation of LOS	Temporary construction impacts, closures, detours. Permanent beneficial impacts from improvement in existing and future level of service (LOS) and reduced traffic congestion.	Temporary construction impacts, closures, detours. Permanent beneficial impacts from improvement in existing and future LOS and reduced traffic congestion.
Visual and Aesthetics		No impact.	Temporary visual effects during construction. Permanent change in appearance of freeway facility.	Temporary visual effects during construction. Permanent change in appearance of freeway facility.
Cultural Resources		No impact.	No impact to known resources. Potential impact to unknown resources/burials.	No impact to known resources. Potential impact to unknown resources/burials.

Table S.2 Summary of Impacts

Environmental Resource	Alternative 1 (No Build)	Alternative 2 (Reduced Median) – Preferred Alternative	Alternative 3 (Full Median)
Hydrology and Floodplains	No impact.	Temporary construction impact. Permanent minor increase in 100-year base flood elevation.	Temporary construction impact. Permanent minor increase in 100-year base flood elevation.
Water Quality and Storm Water Runoff	No impact.	Permanent and temporary increase in pollutant loading from freeway during storm events. Permanent increase in volume of storm water runoff.	Permanent and temporary increase in pollutant loading from freeway during storm events. Permanent increase in volume of storm water runoff.
Geology and Soils	No impact.	Temporary disturbance and compaction of soil and increased soil erosion during construction. Permanent alteration of existing landforms during construction grading and construction of cut and fill slopes.	Temporary disturbance and compaction of soil and increased soil erosion during construction. Permanent alteration of existing landforms during construction grading and construction of cut and fill slopes.
Paleontology	No impact.	Potential permanent loss due to ground-disturbing activities; Paleontological Mitigation Plan required.	Potential permanent loss due to ground-disturbing activities; Paleontological Mitigation Plan required.
Hazardous Waste and Materials	No impact.	Likelihood of encountering aerially deposited lead, asbestos-containing materials, lead-based paint, and lead- and chromium-containing paint and pavement markings during construction. Potential to encounter petroleum hydrocarbon contamination, naturally occurring petroleum gas or natural gas, and polychlorinated biphenyls during construction.	Likelihood of encountering aerially deposited lead, asbestos-containing materials, lead-based paint, and lead- and chromium-containing paint and pavement markings during construction. Potential to encounter petroleum hydrocarbon contamination, naturally occurring petroleum gas or natural gas, and polychlorinated biphenyls during construction.
Air Quality	Continued degradation of air quality.	Temporary fugitive dust and diesel engine emissions during construction. Decreased air pollutant emissions during operation.	Temporary fugitive dust and diesel engine emissions during construction Decreased air pollutant emissions during operation.
Noise	No impact.	Temporary increase in noise levels during construction; permanent increase in noise levels during operation.	Temporary increase in noise levels during construction; permanent increase in noise levels during operation.
Energy	No impact.	One-time expenditure of energy to construct improvements.	One-time expenditure of energy to construct improvements.
Natural Communities	No impact.	Temporary impacts from grading and construction activities and trimming and pruning oak trees. Temporary impacts to of 4.96 ac of oak woodland habitat, 2.65 ac of Riparian Communities, 23.49 ac of Coastal Sage Scrub Communities, and 73 oak trees (including 14 heritage oaks). Permanent removal of vegetation, including mature trees;	Temporary impacts from grading and construction activities and trimming and pruning oak trees. Temporary impacts to 5.01 ac of oak woodland habitat, 2.43 ac of Riparian Communities, 26.38 ac of Coastal Sage Scrub Communities, and 80 oak trees (including 27 heritage oaks). Permanent removal of vegetation, including mature trees.

Table S.2 Summary of Impacts

Environmental Resource	Alternative 1 (No Build)	Alternative 2 (Reduced Median) – Preferred Alternative	Alternative 3 (Full Median)
		Permanent impacts to 3.27 ac of Oak Woodland Communities, 1.60 ac of Riparian Communities, 18.51 ac of Coastal Sage Scrub Communities, and 109 oak trees (including 20 heritage oaks).	Permanent impacts to 4.98 ac of Oak Woodland Communities, 1.92 ac of Riparian Communities, 22.25 ac of Coastal Sage Scrub Communities, and 120 oak trees (including 12 heritage oaks).
Wetlands and Other Waters	No impact.	4.01 ac temporary impacts to California Department of Fish and Game (CDFG) jurisdictional areas. 3.55 ac temporary impacts to United States Army Corps of Engineers (ACOE) and Regional Water Quality Control Board (RWQCB) jurisdictional areas. 1.65 ac permanent impacts to CDFG jurisdictional areas. 1.84 ac permanent impacts to ACOE and RWQCB jurisdictional areas.	4.04 ac temporary impacts to CDFG jurisdictional areas. 3.52 ac temporary impacts to ACOE and RWQCB jurisdictional areas. 2.01 ac permanent impacts to CDFG jurisdictional areas. 2.32 ac permanent impacts to ACOE and RWQCB jurisdictional areas.
Plant Species	No impact.	No impact.	No impact.
Animal Species	No impact.	Temporary construction impacts and permanent loss of habitat for Santa Ana sucker; arroyo chub; bat species; and special-status coastal sage scrub and chaparral, riparian, woodland and montane, and grassland and open space animal species.	Temporary construction impacts and permanent loss of habitat for Santa Ana sucker; arroyo chub; bat species; and special-status coastal sage scrub and chaparral, riparian, woodland and montane, and grassland and open space animal species.
Threatened and Endangered Species	No impact.	Temporary construction impacts and permanent loss of habitat for unarmored threespine stickleback, least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, California gnatcatcher, and, potentially, arroyo toad.	Temporary construction impacts and permanent loss of habitat for unarmored threespine stickleback, least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, California gnatcatcher, and, potentially, arroyo toad.
Invasive Species	No impact.	Potential permanent spread of invasive species.	Potential permanent spread of invasive species.
Cumulative Impacts	No impact	Cumulative loss of oak woodland.	Cumulative loss of oak woodland.

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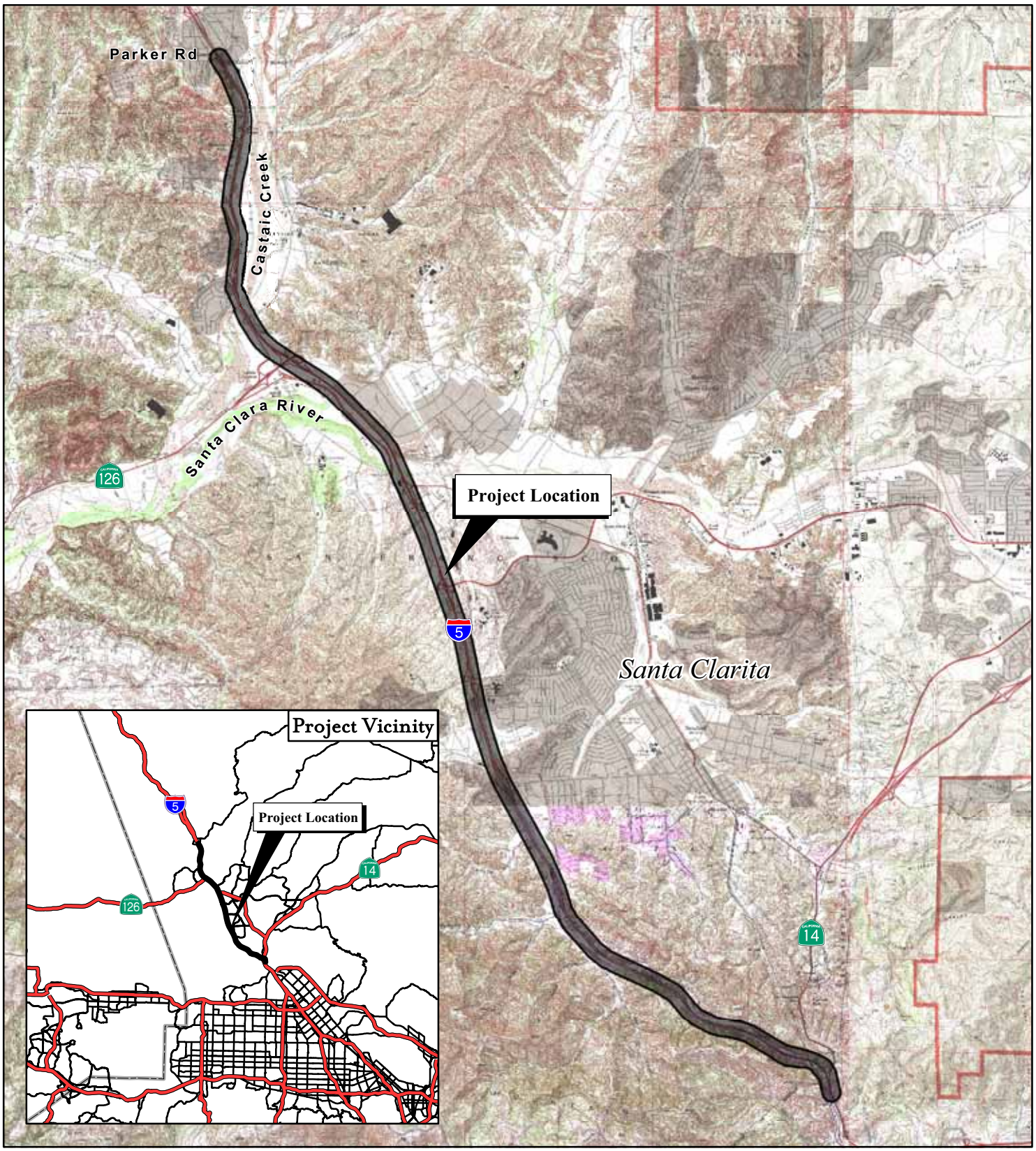

FIGURE ES.1

Legend

Project Location

N

0 3,750 7,500 Feet

I-5 HOV / Truck Lanes Project

Project Location

07-LA-5 PM R45.4/R59.0

EA 2332E0

SOURCE: USGS 7.5' QUAD, CALIF.

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to widen existing Interstate 5 (I-5) to include high-occupancy vehicle (HOV) lanes, truck climbing lanes, and additional auxiliary lanes from State Route 14 (SR-14) on the south to Parker Road on the north, a distance of approximately 13.6 miles (mi) (Figure 1.1). The project is located within the City of Santa Clarita and within unincorporated Los Angeles County. The proposed improvements include extending the existing HOV lanes on I-5 from SR-14 to south of Parker Road, a distance of approximately 13 mi, and adding truck climbing lanes from the SR-14 interchange at Calgrove Boulevard (northbound) and to Pico Canyon Road/Lyons Avenue (southbound), a distance of approximately 3 to 4 mi. The proposed I-5 HOV/Truck Lanes project (project or proposed project) also includes additional auxiliary lanes in the northbound and southbound directions at several locations.

I-5 is a major north/south freeway connecting the States of California, Oregon, and Washington, and a major commuter route from the Santa Clarita Valley into the southern Los Angeles area. The area within the proposed project limits is surrounded by mountainous terrain, and is therefore a geographically constrained area. As such, there is no direct alternative freeway route to I-5 in Santa Clarita Valley. A local arterial, The Old Road, runs parallel and adjacent to I-5 within the study limits.

In addition to serving as a major commuter facility, it is also the region's primary goods movement artery. It is part of the Interstate System of highways and is used as a major local and regional truck route. I-5 is listed as a "high-priority corridor" on the National Highway System (NHS), serving inter-regional commodities and vehicular travel in the north-south direction from California's most southern border with Mexico to its most northern border with Oregon. It is also listed on the State Highway Extra Legal Load (SHELL) Route system. These systems list those highways that have been constructed to accommodate the high volume and weight of inter- and intrastate truck traffic. Within the project limits, I-5 is classified as an urban freeway, and it functions as the gateway to and from the Los Angeles Basin to central and northern California. As a result of this unique characteristic of spanning the entire state, the interstate in the north Los Angeles County area experiences high volumes of traffic, including truck traffic.

The existing I-5 facility within the project limits currently provides generally four mixed-flow lanes in each direction with the exception of through the midpoint of the I-5/SR-14 interchange, where there are three mixed-flow lanes in each direction. Two truck lanes in each direction pass through the I-5/SR-14 interchange area, separated from the mainline freeway. Within the project limits, this truck bypass route begins (southbound)/ends (northbound) just north of the I-5/SR-14 interchange consisting of ±5 percent grade.

Two studies preceded development of the project. The *Transportation Concept Report* (November 1998) for I-5, prepared by Caltrans, suggested improvements to achieve or maintain a Level of Service (LOS) of D during the peak hours. Specifically, the *Transportation Concept Report* recommended four mixed-flow lanes, two HOV lanes, and one truck lane in each direction.

The Los Angeles County Metropolitan Transportation Authority (Metro) prepared the *North County Combined Highway Corridors Study (North County Study)* (June 24, 2004) to develop feasible and cost-effective solutions for alleviating traffic congestion in the north Los Angeles County area. Both short- and long-range improvements for the project corridor were identified in the *North County Study*. As part of the Short Term Plan, the addition of an HOV lane and a truck lane in each direction from the I-5/SR-14 interchange to Calgrove Boulevard and addition of an HOV lane in each direction from Calgrove Boulevard to I-5/SR-126 was identified. The Long Range Plan identified the addition of one truck lane and one HOV lane from SR-14 to Calgrove Boulevard, two truck lanes and one HOV lane from Calgrove Boulevard to SR-126 and one truck lane and one HOV lane from SR-126 to Lake Hughes. Both studies acknowledge the existing and projected population growth within the Santa Clarita Valley and identified freeway improvements that respond to this growth.

The proposed project is fully funded and is in the 2008 Regional Transportation Plan (RTP), which was found to conform by the Southern California Association of Governments (SCAG) on May 8, 2008, and the Federal Highway Administration/ Federal Transit Administration (FHWA/FTA) adopted the air quality conformity finding on June 5, 2008. The project is also included in 2008 Regional Transportation Improvement Program (RTIP) (RTIP Project ID: LAE0465, In L.A./Santa Clarita on Route 5 from State Route 14 to Parker Road, HOV, Truck and Auxiliary Lane Improvement, page 4). The 2008 RTIP was found to conform by FHWA/FTA on November 17, 2008. The design concept and scope of the proposed project are

consistent with the project description in the 2008 RTP, the 2008 RTIP, and the assumptions in the SCAG regional emissions analysis.

1.2 Purpose and Need

1.2.1 Need for the Proposed Project

I-5 is experiencing greater automobile and truck congestion as a result of population growth in north Los Angeles County and goods movement into and out of the Ports of Los Angeles and Long Beach. Freeway traffic volumes are expected to approximately double by 2030, which will continue to cause substantial delays.

1.2.1.1 Capacity, Transportation Demand, and Safety

Level of Service

The quality of traffic flow can be defined in terms of level of service (LOS). The measure used to provide an estimate of LOS is density. There are six LOS, ranging from LOS A (free traffic flow with low volumes and high speeds, resulting in low densities) to LOS F (traffic volumes exceed capacity and result in forced flow operations at low speeds, resulting in high densities). LOS thresholds for a basic freeway segment are summarized in Table 1.A.

Existing Traffic Volumes

Existing (2006) traffic volumes are shown in Table 1.B. Within the project limits, in the southbound direction, I-5 is experiencing a.m. and p.m. peak-hour traffic that ranges from 2,210 to 6,610 vehicles per hour (vph) and from 2,420 to 6,460 vph, respectively. In the northbound direction, the a.m. and p.m. peak-hour traffic volumes range from 1,570 to 5,620 vph and from 2,790 to 7,020 vph, respectively. The percentage of truck traffic along this stretch of I-5 varies from 9.4 percent to 20.8 percent of the total traffic volume. Average Daily Traffic (ADT)[1] ranges from 83,000 to 202,000 in the project segment of I-5.

[1] Average Daily Traffic is an estimate of the average number of vehicles passing a point or segment of a roadway facility, in both directions, during a 24-hour period.

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Table 1.A LOS Thresholds for a Basic Freeway Segment

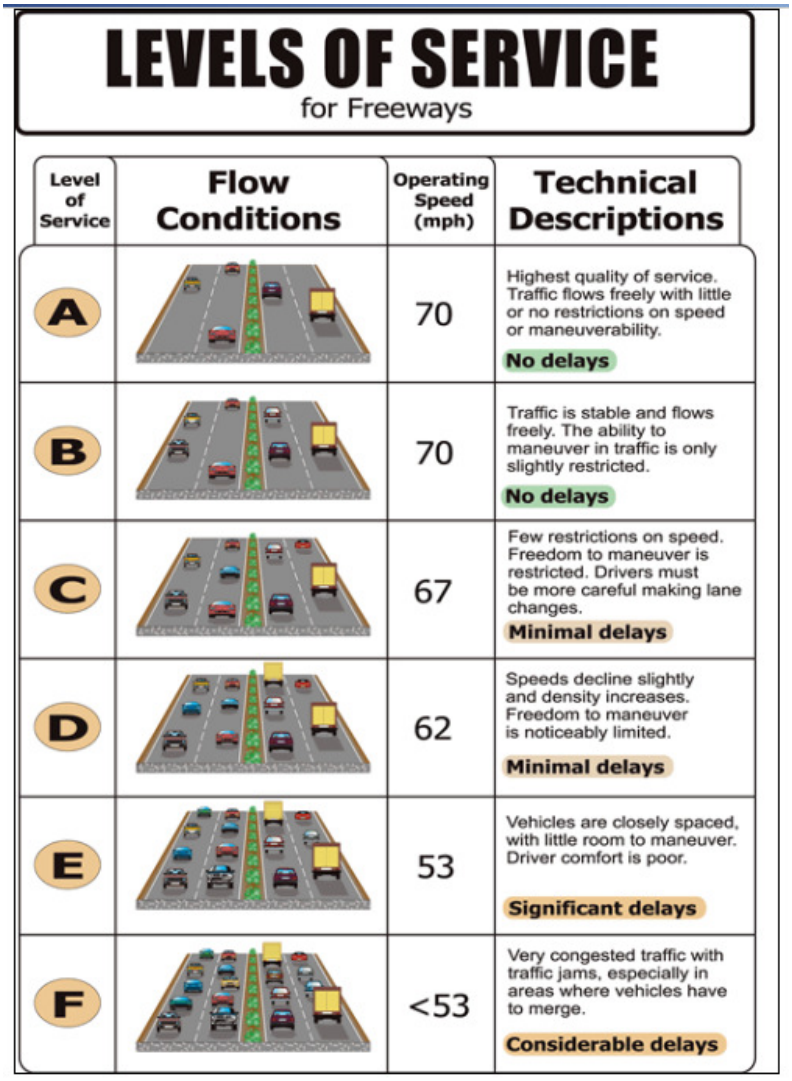

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Table 1.B Existing (2006) Traffic Volumes

I-5 Segment	% Trucks (Daily)	AM Peak Hour		PM Peak Hour		ADT
		SB	NB	SB	NB	
North of Parker Road[1]	26.6	1,600	1,190	2,040	2,250	65,000
Between Parker Road and Hasley Canyon Road	20.8	2,210	1,570	2,420	2,790	83,000
Between Hasley Canyon Road and SR-126	17.3	3,110	2,170	3,010	3,620	100,000
Between SR-126 and Rye Canyon Road	15.3	3,420	3,340	4,150	4,080	124,000
Between Rye Canyon Road and Magic Mountain Parkway	14.2	4,200	3,340	5,350	4,080	134,000
Between Magic Mountain Parkway and Valencia Boulevard	12.2	4,490	4,490	5,600	5,270	156,000
Between Valencia Boulevard and McBean Parkway	10.6	5,310	5,430	6,420	6,050	179,000
Between McBean Parkway and Pico Canyon Road/Lyons Avenue	10.1	5,730	5,560	6,450	6,610	189,000
Between Pico Canyon Road/ Lyons Avenue and Calgrove Boulevard	9.5	6,320	5,620	6,460	7,020	199,000
Between Calgrove Boulevard and SR-14	9.4	6,610	5,600	6,410	6,970	202,000
South of SR-14[2]	8.6	13,270	7,390	9,180	13,710	325,000

Source: Traffic Study, October 2007.
[1] This segment of I-5 is north of the project limits.
[2] This segment of I-5 is south of the project limits.
ADT = average daily traffic
NB = northbound
SB = southbound

The existing LOS during the a.m. and p.m. peak hours for the project segment of I-5 are summarized in Table 1.C. From this table, it can be seen that northbound I-5 from SR-14 to Magic Mountain Parkway operates at LOS C during the a.m. peak hour and at LOS C and D during the p.m. peak hour. Traffic conditions along southbound I-5 during the a.m. and p.m. peak hours operate at LOS E between Calgrove Boulevard and Pico Canyon Road/Lyons Avenue and at LOS F between the Truck Route Bypass and Calgrove Boulevard. During the p.m. peak hour, Pico Canyon Road/Lyons Avenue to Valencia Boulevard in the northbound direction operates at LOS D.

Table 1.C LOS Summary–Existing Conditions

I-5 Segment	AM Peak Hour LOS	PM Peak Hour LOS
Northbound		
Lake Hughes Road to Parker Road	A	A
Parker Road to Hasley Canyon Road	A	B
Hasley Canyon Road to SR-126	B	B
SR-126 to Rye Canyon Road	B	B
Rye Canyon Road to Magic Mountain Parkway	B	B
Magic Mountain Parkway to Valencia Boulevard	C	C
Valencia Boulevard to McBean Parkway	C	C
McBean Parkway to Pico Canyon Road	C	D
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	C	D
Calgrove Boulevard to Truck Route Bypass	C	D
Truck Route Bypass to SR-14 on-Ramp	C	D
SR-14 on-Ramp to SR-14 off-Ramp	C	D
Southbound		
Lake Hughes Road to Parker Road	A	A
Parker Road to Hasley Canyon Road	A	A
Hasley Canyon Road to SR-126	A	B
SR-126 to Rye Canyon Road	B	B
Rye Canyon Road to Magic Mountain Parkway	B	C
Magic Mountain Parkway to Valencia Boulevard	C	C
Valencia Boulevard to McBean Parkway	C	D
McBean Parkway to Pico Canyon Road/Lyons Avenue	C	D
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	E	E
Calgrove Boulevard to Truck Route Bypass	F	F
Truck Route Bypass to SR-14 on-Ramp	C	C
SR-14 on-Ramp to Balboa Road	C	C

Source: Traffic Study, October 2007.

Observation of the four-lane southbound segment of I-5 between Pico Canyon Road/ Lyons Avenue and the start of the Truck Route Bypass at SR-14 indicates that the outside lane is used exclusively by trucks. This segment was evaluated as a three-lane segment, with the fourth lane serving as the truck climbing lane for approximately 80 percent of trucks. The method indicates LOS E for each peak-hour time period for the segment between Pico Canyon Road/Lyons Avenue and Calgrove Boulevard, and LOS F between Calgrove Boulevard and SR-14.

1.2.1.2 Future Traffic Projections

The Santa Clarita Valley is a rapidly growing portion of the southern California area and is likely to continue due to the ongoing new land use development that is anticipated to continue as the valley builds out over the next 25 years. This growth

would increase both truck and general automobile traffic on I-5. Table 1.D summarizes land use and vehicle trip generation statistics for 2004 and buildout (2030) conditions. Table 1.D shows that ADT generation within the Santa Clarita Valley is forecast to increase by 99 percent between the present day and valley-wide buildout.

Table 1.D Land Use and Trip Generation Projections–Santa Clarita Valley

Land Use Type	Units	2004		2030	
		Amount	ADT	Amount	ADT
Single-Family Residential	DU	51,300	501,000	92,000	903,000
Multifamily Residential	DU	25,600	203,000	54,800	423,000
Commercial, Retail, Office, and Industrial	MSF	31.8	696,000	81.9	1,539,000
Other	–	–	170,000	–	256,000
Total	–	–	1,570,000	-	3,121,000 (+99%)

Source: Traffic Study, October 2007.
DU = Dwelling Unit
MSF = Million Square Feet
ADT = Average Daily Traffic

The daily number of vehicles traveling the project segment of I-5 is forecast to increase over time, which will increase traffic congestion in the project area under the existing lane configuration. As discussed below, without any improvements to the existing facility, traffic volumes in the project area are forecast to increase by 2030, resulting in a decrease in LOS.

1.2.1.3 Future Traffic Volumes

Future traffic demand was forecast using the Santa Clarita Valley Consolidated Traffic Model prepared to reflect the actual flow of traffic volumes south of the I-5/ SR-14 interchange, which is constrained by the available (existing and planned) capacity for that heavily traveled section of freeway. The Constrained Flow Model provides a realistic peak-hour volume for the freeway segments north of the I-5/ SR-14 interchange by taking into account the constraints that determine the flow rates south of the interchange. The predicted future traffic conditions using both models are shown in Tables 1.E and 1.F for the project segment of I-5.

Table 1.E 2030 (Santa Clarita Valley Buildout) Peak-Hour Traffic Volumes–Constrained Flow Model

I-5 Segment	AM Peak Hour		PM Peak Hour		ADT
	SB	NB	SB	NB	
North of Parker Road[1]	5,200	4,100	6,500	6,800	207,000
Between Parker Road and Hasley Canyon Road	6,700	4,900	7,600	8,200	240,000
Between Hasley Canyon Road and SR-126	7,200	6,500	9,100	8,700	251,000
Between SR-126 and Rye Canyon Road	7,000	6,900	9,200	7,700	234,000
Between Rye Canyon Road and Magic Mountain Parkway	7,200	6,900	10,100	7,700	255,000
Between Magic Mountain Parkway and Valencia Boulevard	7,300	7,100	9,800	7,900	263,000
Between Valencia Boulevard and McBean Parkway	8,100	7,600	10,000	8,300	268,000
Between McBean Parkway and Pico Canyon Road/Lyons Avenue	7,800	7,500	9,600	8,400	283,000
Between Pico Canyon Road/ Lyons Avenue and Calgrove Boulevard	7,300	7,000	8,900	8,400	281,000
Between Calgrove Boulevard and SR-14	7,400	6,400	8,800	8,200	290,000
South of SR-14[2]	17,700	9,200	11,500	16,700	617,000

Source: Traffic Study, October 2007.

[1] This segment of I-5 is north of the project limits.

[2] This segment of I-5 is south of the project limits.

Table 1.F LOS Summary–2030 No-Build Conditions (Constrained Flow Model)

I-5 Segment	AM Peak Hour (LOS)	PM Peak Hour (LOS)
Northbound		
Lake Hughes Road to Parker Road	B	D
Parker Road to Hasley Canyon Road	C	E
Hasley Canyon Road to SR-126	D	F
SR-126 to Rye Canyon Road	D	E
Rye Canyon Road to Magic Mountain Parkway	D	E
Magic Mountain Parkway to Valencia Boulevard	D	E
Valencia Boulevard to McBean Parkway	E	E
McBean Parkway to Pico Canyon Road/Lyons	E	F
Pico Canyon Road/Lyons Avenue to Calgrove	D	E
Calgrove Boulevard to Truck Route Bypass	D	E
Truck Route Bypass to SR-14 Ramp (On)	C	E
SR-14 Ramp (On) to SR-14 Ramp (Off)	C	D
Southbound		
Lake Hughes Road to Parker Road	C	D
Parker Road to Hasley Canyon Road	D	E
Hasley Canyon Road to SR-126	D	F
SR-126 to Rye Canyon Road	D	F
Rye Canyon Road to Magic Mountain Parkway	D	F
Magic Mountain Parkway to Valencia Boulevard	E	F
Valencia Boulevard to McBean Parkway	F	F
McBean Parkway to Pico Canyon Road/Lyons	E	F
Pico Canyon Road/Lyons Avenue to Calgrove	F	F
Calgrove Boulevard to Truck Route Bypass	F	F
Truck Route Bypass to SR-14 Ramp (On)	C	D
SR-14 Ramp (On) to Balboa Road	D	E

Source: Traffic Study, October 2007.

As shown in Tables 1.E and 1.F, without the project, the southbound a.m. and p.m. peak-hour traffic volumes are expected to range from 6,700 to 8,100 vph and 7,600 to 10,100 vph, respectively. The northbound a.m. and p.m. peak-hour traffic volumes are expected to range from 4,900 to 7,600 vph and 7,700 and 8,700 vph, respectively. ADT is expected to range from approximately 234,000 to 290,000 vehicles in the project segment of I-5. The corresponding LOS for the northbound direction ranges from C to E in the a.m. peak hour and from D to F in the p.m. peak hour. Similarly, the corresponding LOS for the southbound direction ranges from D to F in the a.m. peak hour and from E to F in the p.m. peak hour (with the exception of the Truck Route Bypass to the SR-14 ramp, which is projected to operate at LOS C in the a.m. peak hour and LOS D in the p.m. peak hour). As shown from Tables 1.B and 1.E, the average daily traffic (ADT) volumes are expected to increase from approximately one and a half times to more than triple from the existing (2006) to the 2030 forecast

volumes. As shown in Tables 1.C and 1.F, the existing (2006) LOS of A, B, C, and D would be degraded to LOS E and F in many locations if no action is taken.

1.2.1.4 Safety

A summary of accident rates for the project area is provided in Table 1.G with a comparison to the statewide average. This data, which is for the 36-month period of June 2005 through May 2008, indicates that the study area has a total accident rate lower than the statewide average, with the exception of the northbound direction, which has a fatality rate equal to the statewide average.

Table 1.G Accident Rate Summary–June 2005 through May 2008

Post Mile	Name	Segment Accident Rates*			Statewide Accident Rates		
		Fatal Accidents	Fatal + Injury	Total Accidents	Fatal Accidents	Fatal + Injury	Total Accidents
Northbound							
R45.500–R59.299	Junction Route 14 to Lake Hughes Road	0.009	0.18	0.60	0.009	0.28	0.90
Southbound							
R45.500–R59.299	Junction Route 14 to Lake Hughes Road	0.008	0.20	0.68	0.009	0.28	0.09

Source: Transportation Systems Network Report, Traffic Accident Surveillance and Analysis System (TSN - TASAS), June 2009.
* Note: Accidents per million vehicle miles traveled.

The causes for most of the accidents were speeding and improper turning movements. These accidents occurred at various times of the day and resulted mostly in rear-end collisions (over 37 percent). Hitting objects (over 25 percent) and sideswiping (over 21 percent) were the second and third most common collision results.

Over the 36-month accident review period, 22 fatalities occurred within the limits of the proposed project. This section of roadway is generally an eight-lane freeway. A review of the accidents indicate the following: (1) over 34 percent of the accidents occur during congested periods when slower-moving vehicles are present, and (2) over 48 percent of the accidents involve trucks.

1.2.1.5 Operational Deficiencies

The topography in the project area is mountainous or hilly, which, when combined with the large volume of trucks and passenger vehicles, results in conflicts and inefficient operations along the project segment of I-5. Due to the grades within the

project area, slow-moving trucks and vehicles must share existing travel lanes with other vehicles and can obstruct the flow of traffic, thereby increasing congestion and reducing mobility. According to the Traffic Study (October 2007), the greatest grade occurs between Calgrove Boulevard and SR-14 and through the SR-14 interchange, with ±5 percent and ±4.5 percent northbound/southbound, respectively. These areas also experience the greatest speed reduction, to less than 50 miles per hour (mph).

As described in Table 1.B, the percentage of truck traffic along this stretch of I-5 ranges from 9.4 percent to 20.8 percent of the total traffic volume. Truck percentages along the study area are higher than other freeway facilities, which generally average between 5 and 8 percent. With this level of truck traffic, delays and accidents can be attributed to slower-moving vehicles, especially in sustained grades south of the Pico Canyon Road/Lyons Avenue interchange.

Given the high percentage of trucks and the conflict and inefficient operations as mentioned above, there is a need to separate trucks from passenger vehicles to improve congestion and delay associated with the interaction of these vehicle types.

1.2.1.6 Modal Interrelationships and System Linkages

As the greater metropolitan area of Los Angeles County continues to grow to the north, the freeways will continue to be more and more congested. HOV lanes are an effective method of increasing the capacity of the freeway system. In the city of Santa Clarita, annual ridership of the Metrolink commuter rail service has more than doubled in the past 10 years. During this time, annual ridership on the local fixed bus route network grew from 1.1 million annual riders to 3.3 million annual riders, while annual ridership on the express buses increased from 107,000 to 314,000.

1.2.1.7 District 7 HOV Lane Program

Caltrans District 7 has a district-wide HOV Lane Program in place to provide HOV lanes on most of the freeways in Los Angeles County. An HOV project on I-5 from State Route 118 (SR-118) to SR-14 has recently been opened to traffic. The proposed HOV projects on I-5 from State Route 170 (SR-170) to SR-118 and from State Route 134 (SR-134) to SR-170 are currently in the design stage. The SR-14/I-5 HOV Direct Connector project is currently under construction.

According to the *North County Combined Highway Corridors Study* (June 24, 2004), long-distance trips of 25 mi or more make up a high percentage of the trips on this

segment of I-5. Trips of this length are very suitable for ridesharing if HOV lanes are available to be utilized for significant travel time advantage.

1.2.1.8 Goods Movement

SCAG has identified goods movement as a critical component of transportation system planning within southern California. In March 2005, SCAG adopted the Southern California Strategy for Goods Movement: A Plan for Action, which identified the existing and projected volume of goods being transported through the Ports of Los Angeles and Long Beach and identified strategies to address movement of these goods through both rail and surface transportation facilities. According to SCAG's Action Plan, over one-third of waterborne freight containers traffic at United States ports are handled by the Ports of Los Angeles and Long Beach, with 50 to 60 percent of this freight then transported to destinations outside the Southern California region.

Provision of truck lanes on this portion of I-5 to facilitate goods movements is currently under further review as part of the Multi-County Goods Movement Action Plan (MCGMP). Metro, in partnership with the County Transportation Commissions; SCAG; and Caltrans Districts 7, 8, 11, and 12, is developing a plan that would address the multi-county goods movement challenges and identify solutions. The goal of the MCGMP is to identify a program of planned improvements/strategies to facilitate goods movement throughout the southern California region.

1.2.2 Purpose of the Proposed Project

The purpose of the project is to achieve the following objectives:

- Reduce delays to vehicles caused by slower-moving trucks through the hilly southern portion of this segment of I-5.
- Improve operational and safety design features to facilitate the movement of people, freight, and goods on the project segment.
- Reduce existing and forecast traffic congestion on the project segment of I-5 to accommodate planned growth within the study area.

1.3 Project Description

This section describes the Proposed Action and the design alternatives that were developed by a multidisciplinary team to achieve the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) purpose and need while avoiding or minimizing environmental impacts. The alternatives are Alternative 1 (No Build Alternative), Alternative 2 (Reduced Median Alternative), and Alternative 3 (Full Median Alternative).

The project is located in Los Angeles County on I-5 from State Route 14 (SR-14) on the south to Parker Road on the north and covers a distance of approximately 13.6 mi (PM R45.4/R59.0). Within the limits of the project, I-5 currently provides generally four mixed-flow lanes in each direction, with the exception of three mixed-flow lanes in each direction at the I-5/SR-14 interchange. In the project area, two truck lanes are separated from the mainline freeway south of Weldon Canyon Overcrossing. This truck bypass route begins/ends just north of the I-5/SR-14 interchange. As stated in Section 1.2, the purpose of the project is to reduce delays to other vehicles caused by slower-moving trucks through the hilly southern portion of the project area, improve persons and goods throughput, and reduce existing and forecast traffic congestion.

The project is being evaluated in three segments. Segment One extends from the I-5/ SR-14 interchange to north of the Pico Canyon Road/Lyons Avenue/I-5 interchange. Segment Two extends from north of the Pico Canyon Road/Lyons Avenue/I-5 interchange to north of the State Route 126 (SR-126) interchange. Segment Three extends from north of SR-126 to south of Parker Road.

Extending the proposed HOV lanes from SR-14 to Parker Road will maximize the HOV potential in this portion of the I-5 corridor, consistent with the existing planned development in north Los Angeles County, and are logical termini for the proposed project. For optimum HOV operations, it is preferable to end or begin HOV lanes in a lane that enables the HOV traffic to continue their travel without forcing those vehicles to exit an HOV lane and merge into a general-purpose lane. Connection to the existing HOV lanes at the I-5/State Route 24 (SR-24) interchange will maintain continuous flow of traffic north into the Santa Clarita Valley. Extending the HOV lanes through the I-5/SR-126 interchange will allow traffic to merge with the mainline without interfering with the HOV traffic.

1.4 Project Alternatives

1.4.1 Build Alternatives

Both Build Alternatives (Alternatives 2 and 3) propose to widen the center median and the outside shoulder of the northbound and southbound lanes between SR-14 and south of Parker Road to accommodate HOV, additional auxiliary, and truck lanes. Both Build Alternatives would provide one HOV lane in each direction from the I-5/ SR-14 interchange to south of the Parker Road interchange. Both Build Alternatives would extend one northbound truck lane from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 overcrossing to the Calgrove Boulevard/I-5 interchange. Southbound truck climbing lanes are proposed between the Weldon Canyon Road overcrossing and Calgrove Boulevard interchange (two truck lanes) and from Calgrove Boulevard to south of the Pico Canyon Road/Lyons Avenue interchange (one truck lane).

Both Build Alternatives propose adding and/or extending auxiliary lanes in the northbound direction from SR-14 to the northbound truck lane merge, Calgrove Boulevard to Pico Canyon Road/Lyons Avenue, and Valencia Boulevard to Magic Mountain Parkway, and in the southbound direction between SR-126 and Rye Canyon Road, Rye Canyon Road and Magic Mountain Parkway, and Valencia Boulevard and McBean Parkway.

1.4.1.1 Alternative 2 (Reduced Median Alternative) – Preferred Alternative

Alternative 2 proposes median and inside shoulder widths that are less than the California Department of Transportation (Caltrans) standard (48-foot [ft] median and less than 10 ft inside shoulders at median structure columns) within a maximum 210 ft cross section. The reduced minimum median width of 48 ft is measured from inside the Mixed Flow Lane (MFL), Edge of the Traveled Way (ETW), to inside the MFL ETW. Additional widening beyond the 48 ft minimum in the median area would be provided when necessary for horizontal stopping sight distance requirements. See Figure 1.2 for a typical cross section of Alternative 2. A 48 ft median would accommodate a 1 ft buffer, a 12 ft HOV lane, and a 10 ft inside shoulder. Shoulder widths along freeway ramps would be 8 ft. Alternative 2 would not provide for a 10 ft continuous inside shoulder (at column locations) or a 4 ft buffer between HOV and adjacent mixed-flow lanes. The HOV buffer would be 1 ft. The maximum cross

section width under Alternative 2 (210 ft) is intended to accommodate the proposed HOV and truck climbing lanes within the existing Caltrans right of way to the extent feasible to limit the number of right of way acquisitions.

Per Caltrans HOV lane guidelines, California Highway Patrol (CHP) enforcement areas are recommended every 2 mi. Based on Caltrans criteria, approximately five enforcement areas would be required within the 13.6 mi project limit. Additional width in the median (beyond the proposed 48 ft) is required to provide for those CHP enforcement areas and has been included in the design of the Reduced Median Alternative.

1.4.1.2 Alternative 3 (Full Median Alternative)

The Full Median Alternative (Alternative 3) proposes construction of the truck climbing and HOV lanes consistent with Caltrans standards. The standard full median width of 62 ft is measured from inside MFL ETW to inside MFL ETW. The only exception to the 62 ft median width occurs in two areas north of the Pico Canyon Road/Lyons Avenue interchange, where the existing median is 60 ft wide. Previous improvements in this area were constructed based on a previous standard of 60 ft. The typical cross section for this alternative is a maximum of 245 ft, which includes 12 ft travel lanes, a 10 ft outside shoulder, and a continuous CHP enforcement area in the median. See the typical cross section provided in Figure 1.3 for an example of this design. The standard median width of 62 ft would accommodate a 4 ft buffer, a 12 ft HOV lane, a 10 ft inside shoulder, and an additional 4 ft inside shoulder for continuous CHP enforcement. The only exception to the 62 ft median width would be in two areas north of the Pico Canyon Road/Lyons Avenue interchange where the median width would be 60 ft. The additional width for the continuous enforcement area provides for continuous 10 ft inside shoulders at the structure column locations.

1.4.1.3 Common Design Features of the Build Alternatives

Project features are shown in Figures 1.4, Alternative 2, and 1.5, Alternative 3, respectively. Common design features of both alternatives are described below.

Permanent Project Components

Mainline Improvements (HOV, Truck, and Auxiliary Lanes)

Both Build Alternatives propose:

- One HOV lane in the median in each direction from the I-5/SR-14 interchange (southern project limit) to south of the Parker Road interchange (northern project limit).
- One southbound truck lane south of Pico Canyon Road/Lyons Avenue and Calgrove Boulevard, and two southbound truck lanes from Calgrove Boulevard to just south of Weldon Canyon Road, where the truck bypass lanes (2) begin.
- Addition of one northbound truck lane from the I-5/SR-14 interchange to Calgrove Boulevard. All truck lanes would be built along the outside edge of the freeway.
- Auxiliary lanes in the northbound direction from SR-14 to Weldon Canyon Road, Calgrove Boulevard to Pico Canyon Road/Lyons Avenue, McBean Parkway to Valencia Boulevard, and Valencia Boulevard to Magic Mountain Parkway.
- Auxiliary lanes in the southbound direction between SR-126 and Rye Canyon Road, Rye Canyon Road and Magic Mountain Parkway, and Valencia Boulevard and McBean Parkway.
- Additional widening to provide standard horizontal stopping sight distance (SSD) (70 mph) on all 13 mainline horizontal curves.

Bridges

Several bridge structures require widening and/or replacement under both Build Alternatives. Both Alternatives would require the replacement of Weldon Canyon Bridge. In addition, both Build Alternatives would require the widening of the following seven bridges: Gavin Canyon undercrossing, Calgrove Boulevard undercrossing, Butte Canyon Bridge, I-5/SR-26 Separation (Magic Mountain Parkway overcrossing), Santa Clara Overhead, Rye Canyon undercrossing, and Castaic Creek Bridge.

Both Build Alternatives propose to improve the vertical clearance and provide SSD (70 mph) for the southbound I-5 lanes at the Pico Canyon Road/Lyons Avenue overcrossing structure.

Major Drainage Facilities

Drainage facilities are proposed at locations identified in the Preliminary Drainage Report to provide additional capacity for the existing drainage facilities based on the design flows established for the crossings. These facilities include the upsizing or replacement of existing culverts.

Water quality treatment devices include numerous vegetated swales to provide biofiltration, three detention basins, one gross solids removal device, and two Austin sand media filters. Depending on actual groundwater elevations, the detention basins may be able to function as infiltration basins. The locations of water quality treatment facilities will continue to be refined during final design.

Retaining Walls

Retaining walls are required to retain fill or cut slopes to avoid impacts and additional right of way throughout the corridor.

Retaining walls are required in the median where the elevation differences between the northbound and southbound lanes exceed 2 ft. Median retaining walls are generally required between SR-14 and Valencia Boulevard and between SR-126 and Parker Road. The heights of the median retaining walls vary from 2 ft to 18 ft.

Retaining walls are also required along the outside shoulder in many locations throughout the project to reduce impacts and minimize additional right of way requirements. These wall locations for Alternative 2 are shown in Figure 1.4, and the wall locations for Alternative 3 are shown on Figure 1.5. The outside shoulder retaining walls' heights range from 2 ft to 39 ft.

Sound Barriers

The project includes construction of sound barriers (SB) to reduce traffic noise associated with the proposed project. The following sound walls are considered reasonable and feasible on the basis of cost and effectiveness for both Alternatives 2 and 3:

- 10 ft sound barrier outside of Caltrans right of way adjacent to homes along Foxtail Court (SB No. 1-2).
- 6 ft sound barrier outside of Caltrans right of way adjacent to homes along The Old Road (SB No. 1-6).
- 10 ft sound barrier outside of Caltrans right of way, adjacent to homes along Los Arqueros and Playa Serena Drive (SB No. 2-1).
- 8 ft sound barrier for Alternative 2 and 12 ft sound wall for Alternative 3 outside of Caltrans right of way, adjacent to homes along Baviera Way (SB No. 2-2).
- 12 ft sound barrier outside of Caltrans right of way, adjacent to homes along Sycamore Meadow Drive (SB No. 2-3) for Alternative 2, and 14 to 16 ft for Alternative 3.

- 12 ft sound barrier outside of Caltrans right of way, adjacent to homes along Silver Aspen Way (SB No. 2-4).
- 16 ft sound barrier along the edge of shoulder within Caltrans right of way, adjacent to homes on Sandwedge Lane (SB No. 2-5)
- 6 ft sound barrier outside of Caltrans right of way, adjacent to homes along Altos Drive (SB No. 2-6).
- 6 ft sound barrier outside of Caltrans right of way, adjacent to the homes along Romeo Canyon Road (SB No. 3-3).
- 12 ft sound barrier outside of Caltrans right of way for Alternative 2, and 10 ft barrier for Alternative 3, adjacent to homes along Holmby Court (SB No. 3-7).
- 16 ft sound barrier along the edge of Caltrans right of way, adjacent to homes along Daisy Court (SB No. 3-11a).

Additional input from affected property owners would be obtained before the start of final design to confirm whether the walls would be constructed.

On- and Off-Ramps

Modifications to all the on- and off-ramps in the project limits are required to transition to the mainline widening.

Utilities

Utility relocations would be required in local roadways primarily at the transverse crossing of the mainline and, in some cases, adjacent to the Caltrans right of way to allow widening of the mainline. In general, the utility relocations are limited to areas where the local roadways cross I-5 at the interchanges and other structures and adjacent to the I-5 right of way where the widening encroaches onto the local roadway. Utilities to be relocated include general telephone cable, water lines, communication conduits, sewer lines, gas pipes, electrical lines, and oil transmission pipes.

Intelligent Transportation System (ITS) Facilities

Both Build Alternatives would include the addition of the following ITS facilities:

- Five new Closed Circuit Television (CCTV) cameras
- Nine new Ramp Metering Stations/Traffic Monitoring Stations (RMS/TMS)
- A new communication conduit throughout the project from SR-14 to Parker Road
- The upgrading of four CCTV cameras
- The upgrading of 19 RMS/TMS stations

- Upgrading three Changeable Message Signs (CMS)
- Upgrading a Weigh-in-Motion system (WIM)

These elements would provide needed links and fill data gaps in the current ITS system and provide for more comprehensive corridor management.

Landscaping and Irrigation Systems

Landscaping and irrigation systems would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or mitigation planting for the project. The areas available for planting would be identified and coordinated with operations and maintenance to ensure consistency with their objectives and requirements. New irrigation systems would be designed to use reclaimed water (if available).

Design Exceptions

Both Build Alternatives would require mandatory design exceptions for the spacing between interchanges from Rye Canyon Road to Magic Mountain Parkway and from Rye Canyon Road to SR-126. The spacing between these interchanges would be less than 1 mi.

The following advisory design exceptions would be required for both Build Alternatives: (1) 2:1 sideslopes instead of the standard 4:1 sideslopes; (2) a 26 ft standard between the outer edge-of-travel-way (ETW) of I-5 and the ETW of the frontage road for both Build Alternatives at various locations; (3) a median width of 22 ft under Alternative 2 and 30 to 36 ft under Alternative 3 rather than the standard 36 ft median; (4) outer separation distance, with guardrails and/or walls proposed where the separation distance is less than 26 ft; and (5) use of the Rye Canyon Interchange as a partial interchange, with all ramps not connecting to a single cross street.

Temporary Project Components

Construction

A preliminary Transportation Management Plan has been developed and included in the Project Report.

Staging of the construction would be required for all ramp reconstruction, freeway widening, and profile adjustments. The number of through lanes would be maintained by restriping and shifting traffic on the existing lanes to maintain the existing

capacity. Closure of I-5 is not anticipated; however, temporary ramp closures are expected at various interchanges within the corridor.

The majority of the project involves widening the median area and the outside shoulder area of I-5 in two stages. Stage 1 involves placing temporary railing in the median area, constructing the median retaining walls and widening the median. Stage 2 involves placing temporary railing near the outside edge of traveled way, constructing outer retaining walls, and widening the proposed outside pavement. Widening of existing structures would be constructed in a similar sequence, with interior widening completed first, followed by exterior widening. Late-night closures in each direction may also be necessary for removal of the existing and construction of the new Weldon and Biscailuz Drive Overcrossings. Reconstruction at the ramp exit and entrances may require short-term closures.

The southbound lanes at the westbound to southbound loop on-ramp at the Pico Canyon Road/Lyons Avenue interchange would be closed for three to five months during the reconstruction of the profile of southbound I-5 to provide standard vertical clearance and improved SSD. The ramp provides access from westbound Pico Canyon Road to southbound I-5. The reconstruction of the profile would require shifting of the mainline travel lanes to the east to allow for the removal of material to lower the profile. During the closure period, the existing southbound on-ramp that serves eastbound Pico Canyon Road would be temporarily reconfigured to also allow left turns from westbound Pico Canyon Road to maintain the vehicle movement affected by the ramp closure. To allow left turns from westbound Pico Canyon Road onto the ramp, the westbound approach would require temporary restriping and a temporary two-phase traffic signal would be required to control the left turns and conflicting eastbound traffic.

All construction activities would be closely coordinated with other construction projects that are occurring. Existing state facilities such as changeable message signs, traffic cameras, and traffic count stations would also be protected during construction. Close coordination would also be needed with the City, the County, Caltrans, and the public to ensure that traffic along I-5 and surrounding streets remains at an acceptable level of operation during construction.

Construction activities are anticipated to occur between 2011 and 2015.

Construction Vehicle Access and Material Staging

Construction vehicle access and staging of construction materials would occur within disturbed or developed areas inside the existing right of way or the proposed additional right of way. Vehicle access and materials staging during construction of walls adjacent to Caltrans right of way would occur in approved designated areas. All construction vehicle access, materials staging and storage, and other construction activities would occur within the defined disturbance limits for the project.

Construction Lighting

The project would require nighttime construction activities in some parts of the project area, which would require use of portable equipment to light up the work areas.

Temporary Construction Easements

Temporary construction easements (TCEs) would be necessary for constructing walls along the right of way, for the extension of major drainage facilities, for widening bridges, and for water quality improvements that extend outside of the existing right of way. Alternative 2 would require 18 TCEs and Alternative 3 would require 26 TCEs.

Early Implementation Project (EIP)

Partial funding of the truck lanes component allows these lanes to be constructed as an early phase of the project. Construction of these truck lane improvements have been identified as the Early Implementation Project (EIP). The EIP consists of construction of truck lanes from the SR-14 Interchange to south of the Pico Canyon Road/Lyons Avenue (Pico/Lyons) overcrossing. The construction of the truck lanes would be accomplished generally through widening into the existing median and shifting lanes to utilize the available width in the median and defer the major outside widening until the construction of the HOV lanes. Minor outside widening would be required to accommodate retaining walls or drainage features in some locations.

There are currently five lanes on northbound I-5 north of the State Route 14 (SR-14) interchange. Two are separated truck lanes. After the merge of the truck lanes to the I-5 mainline, the existing outside lane drops approximately 1,600 feet (ft) north of the Weldon Canyon/I-5 overcrossing. The EIP improvements in the northbound direction would include widening into the existing median to maintain five northbound lanes after the merge of the separated truck lanes just north of the Weldon Canyon Road/I-5 overcrossing to the Calgrove Boulevard interchange. The outside lane would become

the truck climbing lane as the general-purpose lanes would be shifted toward the median. The inside lane would be dropped south of the Calgrove Boulevard undercrossing structure to join the existing four northbound lanes. Dropping the inside lane rather than the outside lane is proposed to avoid weaving conflicts in advance of the northbound off-ramp to Calgrove Boulevard between exiting vehicles and slower trucks in the outside lanes.

On southbound I-5, there are currently five lanes south of the Pico/Lyons interchange. The existing outside lane drops immediately after the southbound on-ramp from the Pico/Lyons interchange. The EIP improvements in the southbound direction would include widening into the existing median to maintain five southbound lanes from south of the Pico/Lyons interchange to Calgrove Boulevard. The truck lanes would become the truck climbing lane and the general-purpose lanes would be shifted toward the median.

At the Calgrove Boulevard southbound on-ramp, a sixth lane would be added on southbound I-5. Six southbound lanes would continue over The Old Road on the Gavin Canyon undercrossing structures, which would also be widened. Two of the six southbound lanes would be dropped at the existing SR-14 interchange truck bypass lanes, while four lanes would join the existing I-5 lanes before the SR-14 general-purpose lane connector.

For the EIP, retaining walls would be constructed along the centerline of I-5, from north of Weldon Canyon Road to approximately 1,600 ft south of the Pico Canyon/Lyons interchange, to accommodate the grade difference between the northbound and southbound inside median widening. The wall heights would range from 5.9 to 18.3 ft, with an average height of 11 ft.

Minor outside widening is proposed along southbound I-5, north of Weldon Canyon Road overcrossing, which will require reconstruction of an existing retaining wall along an existing cut slope. Reconstruction of this retaining wall would also be required for the Build Alternatives.

Drainage improvements identified for the full project would be constructed with the EIP unless alternative analysis and justification is provided to defer the improvements until the full project is constructed. These drainage improvements would include an additional 12 ft by 12 ft box culvert (or alternative with equal capacity) at Drainage 39 (located east of I-5 just north of Calgrove Boulevard that receives flows from Drainage 40 via two 11 ft wide box culverts and a 4 ft diameter concrete pipe, as

well as several small corrugated metal pipes) and a 30-inch reinforced concrete pipe (RCP) at Drainage 53 (a series of earthen drainages and v-ditches located where The Old Road passes under I-5, south of Calgrove Boulevard). These drainage improvements would also be required for the Build Alternatives. All of the proposed improvements would be constructed within the grading limits previously identified for the Build Alternatives in the EIR/EA.

1.4.1.4 Unique Features of the Build Alternatives

The following text discusses additional features to those discussed above that are unique to the two Build Alternatives.

Permanent Project Components

Mainline Improvements

Alternative 2 would have a reduced median width of 48 ft, no continuous CHP enforcement area, and nonstandard interchange ramp tapers.

Alternative 3 would have a standard median width of 62 ft (except in two areas north of the Pico/Lyons interchange where the existing median is 60 ft), a continuous CHP enforcement area, and standard interchange ramp tapers.

Improvements to Adjacent Roadways

Alternative 2 would not require the realignment of any adjacent roadways.

Alternative 3 would require the realignment of a portion of Coltrane Avenue and the restriping of a portion of The Old Road.

Bridges

In addition to modifications to the bridges discussed in Section 1.4.1, under Alternative 3 the Santa Clara River Bridge would be widened and Biscailuz Drive Overcrossing would be replaced.

Sound Barriers

In addition to the sound barriers discussed above under Section 1.4.1, the additional sound barriers are proposed to reduce traffic noise associated with either Alternative 2 or 3 only.

The following sound barrier is considered reasonable and feasible on the basis of cost and effectiveness for Alternative 2 only:

- A 10 ft sound barrier outside of Caltrans right-of-way, adjacent to homes along Desert Rose Drive (SB No. 3-8).

The following sound barrier is considered reasonable and feasible on the basis of cost and effectiveness for Alternative 3 only:

- A 16 ft sound barrier outside of Caltrans right of way, adjacent to homes along Saguaro Street and Apache Court (SB No. 3-9).

Additional input from affected property owners would be obtained before the start of final design to confirm whether the walls would be constructed.

Right-of-Way Acquisition

Alternative 2 would require acquisition of two parcels for additional right of way. The acquisition would be limited to one partial parcel take and one full parcel take.

Alternative 3 would require acquisition of four parcels for additional right of way. The acquisition would be limited to three partial parcel takes and one full parcel take.

Both alternatives would require TCEs to provide access to construct the improvements.

Castaic Commercial Vehicle Enforcement Facility

Alternative 3 would permanently remove one of three lanes at the Castaic Commercial Vehicle Enforcement Facility (Castaic CVEF) that is used to inspect vehicles/trucks, reducing the total number of lanes available to two. Modifications to the exiting facility would be needed to restore the existing available truck inspection capacity. Improvements would include expansion to the east to generate more usable area for the facility. This expansion would require conversion of the existing open channel into a covered pipe system to provide room for the ramps to be widened. Retaining walls would also be necessary.

Design Exceptions

In addition to the design exceptions discussed in Section 1.4.1, Alternative 2 would require a mandatory design exception to the standard 10 ft inside shoulder at structure columns (a minimum 7.4 ft shoulder is proposed) and the standard 8 ft outside shoulder at the Magic Mountain Parkway northbound on-ramp (a 4 to 8 ft shoulder is proposed).

In addition, an advisory design exception is required where the entrance and exit convergence/divergence geometry is not met under Alternative 2 at ramps at SR-14, Calgrove Boulevard, Pico Canyon Road/Lyons Avenue, and Hasley Canyon. This design exception is needed to avoid reverse curves along ramps to tie back into existing ramps, realignment of frontage roads, higher or increased retaining walls and/or existing ditch reconstruction.

Soil Balance

Alternative 2 would result in approximately 216,000 cubic yards (cy) of excess soil material that would require disposal.

Alternative 3 would result in approximately 296,000 cy of excess soil material that would require disposal.

The preference is that the contractor would be responsible for determining where the soil would be exported/imported. Excess material would be recycled into the project as feasible. In the worst case, the soil would be exported to a landfill. The nearest two landfills that accept construction material are in Sun Valley, California.

Cost

The estimated cost for Alternative 2 is $456 million and the estimated cost for Alternative 3 is $590 million.

Temporary Project Components

Construction

Under Alternative 3, the Biscailuz Drive/Honor Ranch Overcrossing would be constructed using a half width construction to maintain traffic flow on the overcrossing during construction. The three phases of a half width construction would be as follows: (1) Half of the new bridge would be constructed just north of the existing structure. Because the existing bridge structure is not impacted during this stage; it remains open to traffic. (2) The existing bridge would be removed and the remaining half of the proposed bridge would be constructed. Traffic would be shifted to the portion of the new bridge that was previously constructed. (3) The two halves of the newly constructed bridge would be joined.

1.4.2 No Build Alternative (Alternative 1)

The No Build Alternative would maintain the current configuration of the existing freeway. There would be no improvements to the mainline freeway, only approved/

pending local interchange improvements. Some of the known projects include the following:

- **Hasley Canyon Road/I-5 Interchange Improvements:** Construction ongoing, anticipated completion in 2009.
- **Rye Canyon Road/I-5 Southbound Ramp Improvements:** Construction anticipated to begin in 2009/2010 Fiscal Year.
- **Rye Canyon Road Widening:** Construction anticipated to begin in 2009/2010.
- **Magic Mountain Parkway/I-5 Interchange Improvements:** Phase 1 completed in April 2006. Phase 2 construction is ongoing and expected to be complete in 2009. Phase 3 currently has no funding.
- **The Old Road improvement projects (Widening of The Old Road from Magic Mountain Parkway to Turnberry Lane):** Draft Environmental Impact Report (EIR) anticipated for public review in early 2011. Phase I (Magic Mountain Parkway to Rye Canyon Road and replacement of the Santa Clara River Bridge) construction anticipated to begin in 2013. Phase II (Rye Canyon Road to Turnberry Lane) construction anticipated to begin as early as 2013.
- **The Old Road Widening (Parker Road to Hillcrest Parkway):** Project Study Report (PSR) equivalent approved January 25, 2007. Los Angeles County is currently performing environmental studies. Public review of the environmental document is tentatively scheduled for early 2010 . Schedule is contingent upon securing additional funding for the project.
- **I-5/SR-14 HOV Direct Connector Project:** Construction anticipated from 2008 to 2011.
- **I-5 HOV lanes from SR-118 to SR-14:** Construction completed. HOV lanes opened in April 2008.
- **I-5 Pavement Rehabilitation:** One project programmed with construction to begin in 2012/2013. Other projects to follow as funding becomes available.
- **Upgrade I-5 Median Barrier from South of Weldon Canyon Road to 530 ft north of Weldon Canyon:** Construction to begin in 2011.
- **Corridor ITS Improvements:** No project currently programmed. To be implemented with projects as appropriate until complete.
- **I-5 at Castaic Weight Station; Upgrade Weigh Station Facility:** Final Project Report/Environmental Document (PR/ED) approved in October 2008. Construction to begin in October 2010.

Under the No Build Alternative, the HOV and truck lanes would not be added and the congestion and operational problems in this segment would not be alleviated.

The No Build Alternative provides a baseline for comparing the impacts associated with the Build Alternatives since environmental reviews must consider the effects of not implementing the project.

1.4.3 TSM and Mass-Transit Alternatives

The Build Alternatives are part of a comprehensive strategy to address existing and forecast traffic congestion within north Los Angeles County. In June 2004, the North County Combined Highway Corridors Study was completed and provided a multimodal transportation plan for the northern portion of Los Angeles County, addressing both short- (2010) and long-range (2025) requirements to accommodate a variety of trip purposes, including travel (highways and transit) and goods movement (trucks) within and through the Study Area. This study was conducted by the Los Angeles Metropolitan Transportation Authority (Metro) in cooperation with the Cities of Lancaster, Los Angeles, Palmdale, and Santa Clarita and the County of Los Angeles.

The study developed a list of 11 conceptual alternatives for I-5 and SR-14 based on the results of a comprehensive scoping process conducted between October 2001 and March 2002. The process involved the study team, several dozen key study stakeholders, representatives from participating agencies, and a Technical Advisory Committee (TAC) composed of representatives of the sponsoring agencies, Caltrans, SCAG, and the FHWA and FTA.

The North County Transportation Coalition, composed of elected officials from Los Angeles County, north Los Angeles County cities, and the California State Legislature, provided policy oversight for the study.

Through a comprehensive public outreach process, the study identified and screened 11 conceptual scenarios to a short list of six feasible alternatives.

A locally preferred corridor strategy was developed through this process and includes both short-term and long-term recommendations.

The recommended short-term locally preferred strategy consists of:

- Adding an initial HOV lane in each direction between SR-14 and SR-126 and extending truck lanes north of SR-14 to Calgrove Avenue. This strategy increases capacity just north of the I-5/SR-14 interchange by nearly 50 percent.
- Increased Metrolink commuter rail and express bus services will be made available for I-5 travelers. The short-term strategy would triple the existing peak-hour express bus service and increase Metrolink commuter rail service from two peak-hour trains with a total of eight cars to three peak-hour trains with a total of 18 cars, more than doubling Metrolink commuter rail capacity in the corridor.

The recommended long-term locally preferred strategy as modified for corridor integration includes:

- Doubling the current four lanes to eight lanes in each direction between SR-14 and SR-126. This would provide two lanes for HOV use, two lanes for trucks and four lanes for general use. The increase in the number of lanes would accommodate the forecast for a doubling of I-5 travel demand by 2025.
- North of SR-126, one new HOV lane would be extended to Lake Hughes and a new truck lane would be added to the existing four lanes in each direction. Sizing of I-5 north of Lake Hughes was largely governed by anticipated through traffic rather than suburban development, and includes four general-purpose lanes and one truck climbing lane in each direction north to the Kern County Line.
- Transit service in the I-5 corridor would be tripled, with twice the number of Metrolink train departures and three times the number of commuter rail cars. Express bus departures in the peak period would increase fourfold over current levels.

This project proposes to complete portions of the identified highway improvements of the short- and long-range strategies consistent with other improvements in the corridor. The Transportation System Management (TSM) and transit elements of the locally preferred strategy within the corridor are being pursued and developed separately by Metro and other local agencies as part of the North County Combined Highway Corridor Study multimodal transportation plan.

Existing and Future Transit Opportunities

The study area contains a variety of public transit options, including fixed-route and express bus services, park-and-ride lots, dial-a-ride, paratransit services, and Metrolink commuter rail, to address existing demand for public transit. Amtrak bus service links the Antelope Valley to the rail system in Bakersfield, where the

Southwest Chief line leaves for Victorville, and eastward through Las Vegas, Kansas City, and Chicago.

Transit operators in North County are aggressively expanding services and facilities to meet short-term demand, especially for north/south commuter express service. However, funded improvements are insufficient to address transit's emerging long-range role (which could be significantly greater if increased transit capacity receives priority) as a cost-effective remedy to some of the regional mobility challenges. Congestion will continue, requiring public transportation to carry more of the burden. A comprehensive multimodal transit framework that is an appropriate mix of rail and bus services is needed to support future urban growth, provide a backup to travel by automobile, and support a lifestyle less dependent on the automobile.

Various rail and bus services currently serve the north Los Angeles County area and many short- and long-term improvements are planned and programmed. The transit infrastructure includes transit centers, maintenance facilities, park-and-ride facilities, and transportation coordination. Many improvements to facilities and the service are proposed. The following discussion identified existing and programmed/proposed transit facilities within the north Los Angeles County area.

Passenger Rail

The Southern California Regional Rail Authority (SCRRA) operates Metrolink, a five-county commuter rail network of over 400 mi. In the vicinity of the project area, Metrolink operates the Antelope Valley Line, which connects Palmdale/Lancaster and Santa Clarita to the Los Angeles Union Station and points in between, including San Fernando Valley, Burbank, and Glendale. Twelve weekday trains operate in each direction on the Antelope Valley Line. There are three Metrolink stations within the City of Santa Clarita: the Jan Heidt Newhall Metrolink Station, Santa Clarita Metrolink Station and Princessa Metrolink Station.

Metrolink's Short Range Plan includes improvements to the Antelope Valley line, which will allow more trains to serve the Newhall Metrolink Station and will also allow faster train travel (included in the 2008 RTIP). The Santa Clarita Transportation Development Plan indicates that Metrolink anticipates increasing the 24-train weekday schedule to 28 trains by 2010 and 32 trains by 2015. In addition, the number of cars and seats per trip will also expand. Track and facility improvements are proposed at the Sylmar, Santa Clarita, Vincent Grade, and Lancaster Metrolink stations. Signal upgrades are also proposed for the Antelope Valley Line. SCAG's

2008 RTP includes funding for the right of way procurement for additional land at the Santa Clarita Metrolink station and purchase of land and construction of a regional park-and-ride lot adjacent to the McBean Regional Transit Center park-and-ride.

Bus Services

Within the project area, various agencies provide regional express service and local bus service. The City of Santa Clarita operates 10 regional express routes between Santa Clarita and the San Fernando Valley, West Los Angeles, and Downtown Los Angeles. In addition to the Santa Clarita and Newhall Metrolink Stations, the McBean Transfer Station (MTS) was recently developed to provide a transfer point. Antelope Valley Transit operates three commuter routes and a commuter service to Los Angeles International Airport (LAX). Nine park-and-ride lots are provided within the study area.

Santa Clarita operates seven local routes connecting various attractors in the City. Metrolink Station Link Series 500 Feeder buses operate between the Metrolink Stations and Magic Mountain, Central Valencia, Valencia Industrial Center, and Valencia Commerce Center. In addition to the local service routes, a Commuter Express Service is available Monday through Friday. The Commuter Express Service operates between Santa Clarita, downtown Los Angeles, various cities within northern Los Angeles County, Lancaster, and Palmdale.

Transit use has greatly increased in the north Los Angeles County area, and thus a number of improvements are planned. Several buses would be purchased for Santa Clarita. Additions to the University of California at Los Angeles (UCLA)/Century City and Downtown service are proposed. Additionally, the City is considering a North Hollywood and Universal City route, which would connect Santa Clarita to Metro's Red and Orange Line Stations. New routes between Canyon Country and Castaic and Downtown Los Angeles are also proposed.

In Antelope Valley, there are proposals to expand the existing passenger service as well as add new routes to Universal City where riders could connect to the Metro Red Line or Metro Rapid and to Pasadena that would connect to the Metro Gold Line. An additional route to serve Westwood and Wilshire only and reserve the existing route to serve only Century City and West Hollywood have been identified..

In addition to providing additional service and coaches, a number of system improvements are planned, including bus maintenance facilities, advanced

communications and monitoring systems, a Universal Fare System, ITS enhancements, transit priority strategies, and computer-aided dispatching.

The City of Santa Clarita is proposing to expand the existing park-and-ride lots and to consider a new park-and-ride lot in the Castaic area.

Other TSM/TDM Improvements

Currently, there is existing ramp metering at the on-ramps at Valencia Boulevard and on the northbound ramps at Pico Canyon Road/Lyons Avenue. With construction of the approved/pending projects listed in Section 1.4.1.5, ramp metering would be added at Magic Mountain Parkway, Hasley Canyon Road, and the southbound ramp at Rye Canyon Road. The project would maintain the existing and planned ramp metering.

As described above, the proposed project is a component of an integrated strategy for addressing long-term transportation issues in north Los Angeles County that includes commuter rail, regional and local bus, and roadway/freeway improvements. The proposed HOV lane would enhance the existing, programmed, and planned transit service within the north Los Angeles County, consistent with the overall transportation plan for this portion of the County. Upon completion of the project, a continuous HOV lane in each direction would extend from Parker Road to SR-134. Commuter buses would be able to access these lanes, speeding their commute and reducing auto trips as they continue to attract more riders. HOV lanes enhance the commuter bus experience by reducing travel time and providing more reliability in meeting their schedules. Given that the Build Alternatives are part of an integrated transportation program that includes passenger rail, and regional and local bus service improvements to address projected travel demand within north Los Angeles County, evaluation of TSM/TDM improvements beyond those identified in the North County Study and the local planning efforts of METRO and City of Santa Clarita Transit are not appropriate.

1.4.4 Comparison of the Alternatives

Table 1.H provides a summary/comparison of the design features of the project alternatives.

Table 1.H Comparison of Alternatives

Feature	Alternative 1 (No Build)	Alternative 2 (Reduced Median Alternative) – Preferred Alternative	Alternative 3 (Full Median Alternative)
HOV Lanes	No addition of HOV lanes	One HOV lane in each direction from the I-5/SR-14 interchange to south of the Parker Road interchange	One HOV lane in each direction from the I-5/SR-14 interchange to south of the Parker Road interchange
Truck Lanes	No addition of truck lanes	One truck lane northbound from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 interchange to the Calgrove Boulevard/I-5 interchange. Southbound truck climbing lanes are proposed between the Weldon Canyon Road and Calgrove Boulevard interchanges (two truck lanes) and from Calgrove Boulevard to the Pico Canyon Road/Lyons Avenue interchange (one truck lane).	One truck lane northbound from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 interchange to the Calgrove Boulevard/I-5 interchange. Southbound climbing lanes are proposed between Weldon Canyon Road and Calgrove Boulevard interchanges (two truck lanes) and Calgrove Boulevard to the Pico/Lyons interchange (one truck lane).
Auxiliary Lanes	No additional auxiliary lanes	Northbound: • SR-14 to the northbound truck lane merge • Calgrove Boulevard to Pico Canyon Road/Lyons Avenue • Valencia Boulevard to Magic Mountain Parkway Southbound • SR-126 to Rye Canyon Road • Rye Canyon Road to Magic Mountain Parkway • Valencia Boulevard to McBean Parkway	Northbound: • SR-14 to the northbound truck lane merge • Calgrove Boulevard to Pico Canyon Road/Lyons Avenue • Valencia Boulevard to Magic Mountain Parkway Southbound: • SR-126 to Rye Canyon Road • Rye Canyon Road to Magic Mountain Parkway • Valencia Boulevard to McBean Parkway
Median and inside shoulder widths	No improvements	48 ft; less than 10 ft at structure columns	62 ft; 10 ft
CHP enforcement area	No improvements	Five individual enforcement areas within the median	One continuous enforcement area in the median
Stopping site distance	No improvements	Standard horizontal SSD on all mainline curves	Standard horizontal SSD on all mainline curves

Table 1.H Comparison of Alternatives

Feature	Alternative 1 (No Build)	Alternative 2 (Reduced Median Alternative) – Preferred Alternative	Alternative 3 (Full Median Alternative)
Bridges	No bridge replacement or widening	Replacement: • Weldon Canyon Bridge Widening: • Gavin Canyon • Calgrove • Butte Canyon • Magic Mountain (Route 5/126 Separation) • Santa Clara Overhead • Rye Canyon • Castaic Creek Standard vertical clearance at Pico/Lyons	Replacement: • Weldon Canyon Bridge • Biscailuz Drive Overcrossing Widening: • Gavin Canyon • Calgrove • Butte Canyon • Magic Mountain (Route 5/126 Separation) • Santa Clara Overhead • Rye Canyon • Castaic Creek • Santa Clara River Bridge Standard vertical clearance at Pico/Lyons
Drainage facilities	No modification of drainage facilities	• Gavin Canyon Tributary: Replace 30 in CMP with 30 in RCP • Gavin Canyon Culvert : Add one 12 x 12 ft RCB or three 36 in RCP • South Fork Santa Clara River Tributary: Add two 3 x 8 ft RCB or three 36 in RCP • Tributary to Santa Clara River: Add 48 in reinforced concrete pipe (RCP) • Tributary to Santa Clara River: Add 42 in RCP • Tributary to Santa Clara River: Add 42 in RCP • Tributary to Santa Clara River: Add two 8 x 6 ft RCB • Tributary to Castaic Creek: Replace 30 in RCP with 42 in RCP • Tributary to Castaic Creek: Replace 30 in RCP with	• Gavin Canyon Tributary: Replace 30 in CMP with 30 in RCP • Gavin Canyon Culvert : Add one 12 x 12 ft RCB or three 36 in RCP • S. Fork Santa Clara River Tributary: Add two 3 x 8 ft RCB or three 36 in RCP • Tributary to Santa Clara River: Add 48 in RCP • Tributary to Santa Clara River: Add 42 in RCP • Tributary to Santa Clara River: Add 42 in RCP • Tributary to Santa Clara River: Add two 8 x 6 ft RCB • Tributary to Castaic Creek: Replace 30 in RCP with 42 in RCP • Tributary to Castaic Creek: Replace 30 in RCP with

Table 1.H Comparison of Alternatives

Feature	Alternative 1 (No Build)	Alternative 2 (Reduced Median Alternative) – Preferred Alternative	Alternative 3 (Full Median Alternative)
		42 in RCP	42 in RCP
Water quality treatment	No water quality treatment	Vegetated swales, detention basins, gross solids removal device, Austin sand media filters, and possibly infiltration basins	Vegetated swales, detention basins, gross solids removal device, Austin sand media filters, and possibly infiltration basins
Retaining walls	No additional retaining walls	Median retaining walls between SR-14 and Valencia Boulevard and between SR-126 and Parker Road Retaining walls along outside shoulder (shown in Figure 2.1); height ranging from 2 ft to 39 ft	Median retaining walls between SR-14 and Valencia Boulevard and between SR-126 and Parker Road Retaining walls along outside shoulder (shown in Figure 2.1); height ranging from 2 ft to 39 ft
Sound walls	No additional soundwalls	Sound walls outside of Caltrans right-of-way adjacent to homes along Foxtail Court, Old Road, Los Arqueros and Playa Serena Drive, Baviera Way, Sycamore Meadow Drive, Silver Aspen Way, Altos Drive, Holmby Court, and Romeo Canyon Road. For Alt. 2 only, Desert Rose Drive.	Sound walls outside of Caltrans right-of-way adjacent to homes along Foxtail Court, Old Road, Los Arqueros and Playa Serena Drive, Baviera Way, Sycamore Meadow Drive, Silver Aspen Way, , Altos Drive, Holmby Court, and Romeo Canyon Road. For Alt. 3 only, Saquaro Street and Apache Court
Ramps	No improvements	Modification of all on- and off-ramps	Modification of all on- and off-ramps
Utilities	No utility relocation	Relocation of general telephone cable, water lines, communication conduits, sewer lines, gas pipes, electrical lines, and oil transmission pipes.	Relocation of general telephone cable, water lines, communication conduits, sewer lines, gas pipes, electrical lines, and oil transmission pipes.
ITS Facilities	No ITS facilities proposed	• 5 new Closed Circuit Television (CCTV) cameras • 9 new Traffic Monitoring Stations/Ramp Metering Stations (TMS/RMS) • New communication conduit throughout the project from SR-14 to Parker Road • Upgrading of 4 CCTV cameras • Upgrading of 19 TMS/RMS stations • Upgrading of 3 Changeable Message Signs (CMS)	• 5 new Closed Circuit Television (CCTV) cameras • 9 new Traffic Monitoring Stations/Ramp Metering Stations (TMS/RMS) • New communication conduit throughout the project from SR-14 to Parker Road • Upgrading of 4 CCTV cameras • Upgrading of 19 TMS/RMS stations • Upgrading of 3 Changeable Message Signs (CMS)
Landscaping and irrigation systems	No improvements	Landscaping and irrigation systems would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or mitigation	Landscaping and irrigation systems would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or

Table 1.H Comparison of Alternatives

Feature	Alternative 1 (No Build)	Alternative 2 (Reduced Median Alternative) – Preferred Alternative	Alternative 3 (Full Median Alternative)
		planting for the project.	mitigation planting for the project.
Construction	No construction activities	• Closure of southbound lanes at the westbound to southbound loop on-ramp at Pico Canyon Road/Lyons Avenue interchange • Construction staging areas • Nighttime construction lighting	• Closure of southbound lanes at the westbound to southbound loop on-ramp at Pico Canyon Road/Lyons Avenue interchange • Construction staging areas • Nighttime construction lighting
Temporary construction easements	No temporary construction easements	18 temporary construction easements for: • Construction of walls along the right of way • Extension of major drainage facilities • Bridge widening • Water quality improvements that extend outside the right of way	26 temporary construction easements for: • Construction walls along the right of way • Extension of major drainage facilities • Bridge widening • Water quality improvements that extend outside the right of way
Right of way acquisition	No right of way acquisition	• 1 partial parcel takes • 1 full parcel take	• 3 partial parcel takes • 1 full parcel take
Soil balance	No change in soil balance	Approximately 216,000 cy of exported material	Approximately 296,000 cy of exported material

1.4.5 Identification of the Preferred Alternative

The Draft EIR/EA was circulated for public review between December 17, 2008, and February 17, 2009. A public hearing was held on February 5, 2009. All comments from the public hearing and those received during the public review period were reviewed by Caltrans.

After comparing and weighing the benefits and impacts of all of the feasible alternatives, as summarized in Summary Table S.2, the project development team has identified Alternative 2 (Reduced Median Alternative) as the Preferred Alternative for the I-5 HOV/Truck Lanes project. Caltrans has made the final determination of the project's impact on the environment based on the comments and concerns expressed during the public review period and the results of the engineering and environmental technical analysis, and the Preferred Alternative would attain the purpose of the project.

Alternative 2 would achieve the project's purpose by providing the same operational benefits to the freeway as Alternative 3, but it would have fewer impacts because of its smaller environmental footprint. The design of Alternative 2 does not include widening of the Santa Clarita River Bridge, encroachment into the Castaic CVEF, or reconstruction of the Biscailuz Drive/Honor Ranch Overcrossing. All three of these components are part of Alternative 3 and would result in greater environmental and/or community impacts than Alternative 2.

With the construction of Alternative 2, the proposed truck climbing lanes would reduce the delays to vehicles caused by the slower-moving trucks; improve the operational and safety design features with the addition of the HOV lanes, which would allow traffic to use the lanes more efficiently; and facilitate the movement of people, freight, and goods in the project area. Alternative 2 would reduce traffic congestion because of the improved traffic flow and would accommodate the planned growth within the project area. The HOV lanes provided in Alternative 2 would also lead to other enhanced transit options, such as an express bus facility.

As shown in Table S.2, Summary of Impacts, Alternative 2 would have fewer impacts to environmental resources than Alternative 3 since it has a smaller footprint design. Substantial difference in impacts between Alternatives 2 and 3 are highlighted below:

- Reduced number of partial acquisitions (one parcel for Alternative 2 versus three parcels for Alternative 3).
- No impacts occurring to Farmlands with Alternative 2. Alternative 3 affects 3.02 ac of Prime Farmland or Farmland of Statewide Importance.
- Reduced community and law enforcement impacts, as Alternative 2 maintains the CVEF, operated by the CHP, in its existing configuration and does not include reconstruction of the Biscailuz Drive overcrossing (which provides access to the Pitchess Detention Center).
- Reduced permanent impacts to oak woodland and individual oaks with Alternative 2 compared to Alternative 3.
- Reduced permanent impacts to jurisdictional waters/wetlands with Alternative 2 compared to Alternative 3.
- Reduced cumulative impacts associated with the temporal loss of oak trees.

After careful consideration of all the aforementioned concerns, and in further consideration of all other environmental analyses contained in the EIR/EA, Alternative 2 (Reduced Median Alternative) has been selected as the Preferred Alternative.

1.4.6 Alternatives Considered but Eliminated from Further Discussion

During preliminary studies, four project alternatives were identified and studied in the Project Study Report/Project Development Support (PSR/PDS) and Preliminary Environmental Assessment Report (PEAR). The four alternatives included Alternative 1 (No Build Alternative), Alternative 2 (Reduced Median Alternative), Alternative 3 (Full Median Alternative), and Alternative 4 (Transportation Concept Report [TCR] Alternative). As discussed below, the TCR Alternative (Alternative 4) was considered but dropped from consideration.

TCR Alternative (Alternative 4)

Alternative 4 would build out this roadway section to full buildout as considered in the TCR approved by Caltrans in November of 1998. Alternative 4 proposed adding two HOV lanes in each direction from the I-5/SR-14 interchange to a transition point north of Valencia Boulevard and south of Magic Mountain Parkway. From there, up to the northern project limit at the Parker Road interchange, it proposed the addition of one HOV lane. Alternative 4 also proposed extending the existing truck lanes in each direction from the I-5/SR-14 interchange to the northern project limit at the

Parker Road interchange. Alternative 4 proposed standard median and shoulder widths and CHP enforcement areas. This widening would require substantially more property acquisitions than the other Build Alternatives, resulting in greater disruption to the local community.

Given the larger footprint, impacts to biological resources and jurisdictional waters would be greater than the other Build Alternatives due to the larger roadway width, grading requirements, structure widening, and utility extensions. As the two Build Alternatives can be implemented with minimal additional right of way, Alternative 4 would require additional right of way and have major impacts beyond the two Build Alternatives brought forward for review.

In addition to the community and resource impacts described above, Alternative 4 is inconsistent with the segment of I-5 to the south. Currently, HOV lanes are being constructed south and through the SR-14 interchange. The current I-5 HOV lane project, immediately south of SR-14, is constructing only one HOV lane in each direction. Without two HOV lanes in each direction south of the I-5/SR-14 interchange, the double HOV lanes to the north would be inconsistent with the corridor improvements and cause operational issues at the transitions.

Given the greater level of environmental impacts and inconsistency with corridor improvements to the south of the project study area, the TCR Alternative has been withdrawn from further consideration.

Truck Lanes Only

This alternative includes construction of one northbound and one southbound truck lane within the study corridor. These truck lanes would connect to the existing truck lanes located south of the project area. Implementation of this alternative would reduce the existing congestion that currently results from truck/vehicle conflicts (i.e., slow-moving vehicles and weaving limitations). Although congestion would be improved through the separation of trucks from mixed-flow traffic, construction of the truck lanes only would not completely address existing and forecast congestion within the study corridor previously described in Section 1.4.1, since the majority of vehicles are passenger cars, not trucks. As this alternative does not reduce congestion, it does not meet the purpose and need for the proposed project.

HOV Lanes Only

This alternative includes construction of one northbound and one southbound HOV lane within the study corridor. These HOV lanes would connect to the HOV lanes

currently under construction south of the I-5/SR-14 interchange. Implementation of this alternative would address existing and forecast traffic congestion by reducing the number of vehicles using the facility. Congestion associated with truck/vehicle conflicts (i.e., slow-moving vehicles and weaving limitations) would not be addressed by this alternative. Construction of the HOV lanes only would address existing and forecast congestion within the study corridor but not the truck/vehicle conflicts previously described in Section 1.4.1. As this alternative does not improve goods movement in the corridor, it does not meet the purpose and need for the proposed project.

HOV Lanes with One Northbound and Southbound Truck Lane

This alternative would construct two HOV lanes (one northbound and one southbound) and two truck lanes (one northbound and one southbound) within the project study area. Construction of the second truck lane from Calgrove Boulevard to SR-14 would be eliminated from the project. The construction of one versus two truck lanes was evaluated in the Traffic Analysis (October 2007).

As described in the Traffic Analysis, the operation of the truck lanes would be reduced by one Level of Service (LOS) (A to B) with the provision of one truck lane instead of two. Conversely, by providing two truck lanes, the LOS of the truck lanes improves by one LOS (from B to A).

A single truck lane in the uphill grade section is only able to accommodate the slowest trucks since the faster (e.g., unloaded) trucks, will use the outside mixed-flow lane to pass the slower trucks. Observed conditions indicate that due to the grade the faster trucks travel at a speed slower than the free-flow speed of passenger vehicles, thus reducing the average speeds in the mixed-flow lanes. Providing two truck lanes would allow the faster trucks to pass the slower trucks without impacting the adjacent mixed-flow lanes, and improved LOS for both the trucks and the vehicles in the mixed-flow lanes would result. The analysis indicates that providing two truck lanes improves the LOS of the mixed-flow lanes by one LOS from D to C. Since provision of one truck lane did not provide the same operational improvements identified for the Build Alternatives, it was determined to be less effective at achieving the purpose and need and was withdrawn from further consideration.

Mixed-Flow Lanes

This alternative would construct one northbound and one southbound mixed-flow lane within the study corridor. Construction of the mixed-flow lanes would result in a

cross section consisting of five mixed-flow lanes in each direction. South of the project area, I-5 has four mixed-flow lanes in each direction. North of the study area, I-5 has four mixed-flow lanes in each direction. Thus, construction of the mixed-flow lanes would result in bottlenecks at the northerly and southerly ends of the project area, where the widened mainline would have to merge with the smaller facility width. Currently, there are no plans to widen I-5 north and south of the project area. Given that chokepoints would be generated at the northern and southern termini of the project area due to the lane limitations, construction of mixed-flow lanes within the study corridor was determined not feasible.

Directional-Flow HOV Lane

This alternative provides for one HOV lane in the median of the freeway, which would allow traffic use in a southerly direction during the a.m. peak hour and a northerly direction in the p.m. peak hour, the general commuting pattern out of and into the Santa Clarita Valley. Provision of a directional-flow HOV lane would not be feasible given the topographic constraints within the existing median and the design of the existing bridge structures within the study corridor. Currently, the existing median is in a split-grade configuration in several areas, which would not be conducive to construction of a single HOV lane. Additionally, all of the bridges in the study area have center columns located in the median. To provide for a single HOV lane, these bridges would need to be redesigned to remove/alter the center column or the lane would have to weave through the bridges to avoid the columns. Given the existing topographic and structural constraints in the corridor, construction of a directional-flow HOV lane was determined not to be feasible.

1.5 Anticipated Permits and Approvals Needed

Table 1.I identifies the permits and/or approvals that are or may be required prior to or during construction of the project.

Table 1.I Permits and/or Approvals Needed

Permit/Approval	Agency	Status
Encroachment Permit	County of Los Angeles	Coordination will occur after environmental document approval.
Streambed Alteration Agreement (Section 1600)	California Department of Fish and Game (CDFG)	Application will be submitted after environmental document approval.
Section 402 NPDES (Construction Activity)	Los Angeles Regional Water Quality Control Board	Application will be submitted prior to construction.
Section 402 NPDES (Groundwater Dewatering)	Los Angeles Regional Water Quality Control Board	Application will be submitted prior to construction.
Section 401 Permit	Los Angeles Regional Water Quality Control Board	Application will be submitted after environmental document approval.
Section 404 Permit (Individual or Nationwide[1])	United States Army Corps of Engineers (ACOE)	Application will be submitted after environmental document approval.
Section 7 Informal Consultation for Threatened and Endangered Species	United States Fish and Wildlife Service	Completed
Flood Control Permit	County of Los Angeles	Coordination will occur after environmental document approval.

[1] After receipt of the Section 404 Permit application, the ACOE will determine whether an Individual or Nationwide Permit is applicable.

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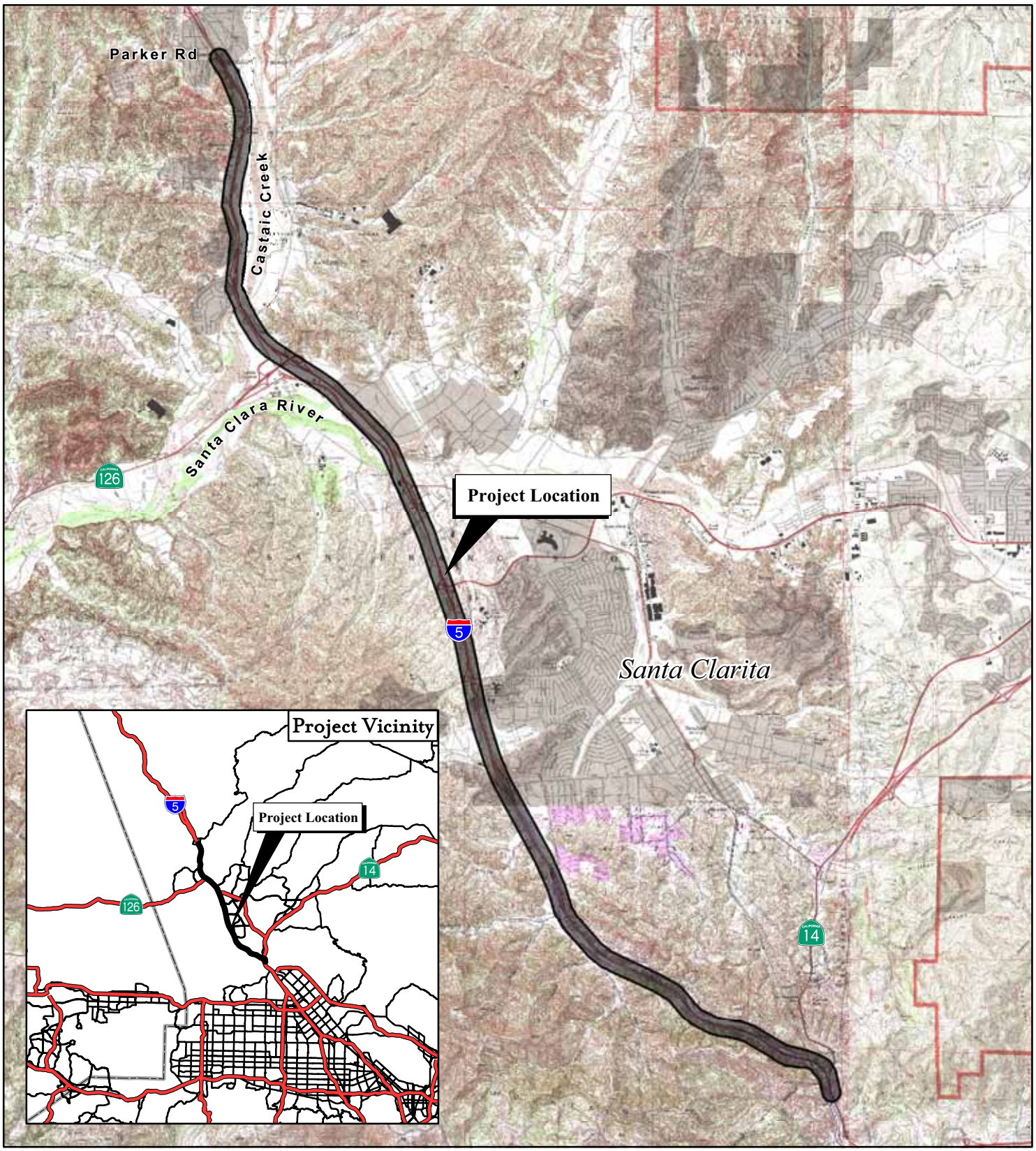

FIGURE 1.1

Legend

Project Location

N

0 3,750 7,500 Feet

SOURCE: USGS 7.5' QUAD, CALIF.

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I-5 HOV / Truck Lanes Project

Project Location

07-LA-5 PM R45.4/R59.0

EA 2332E0

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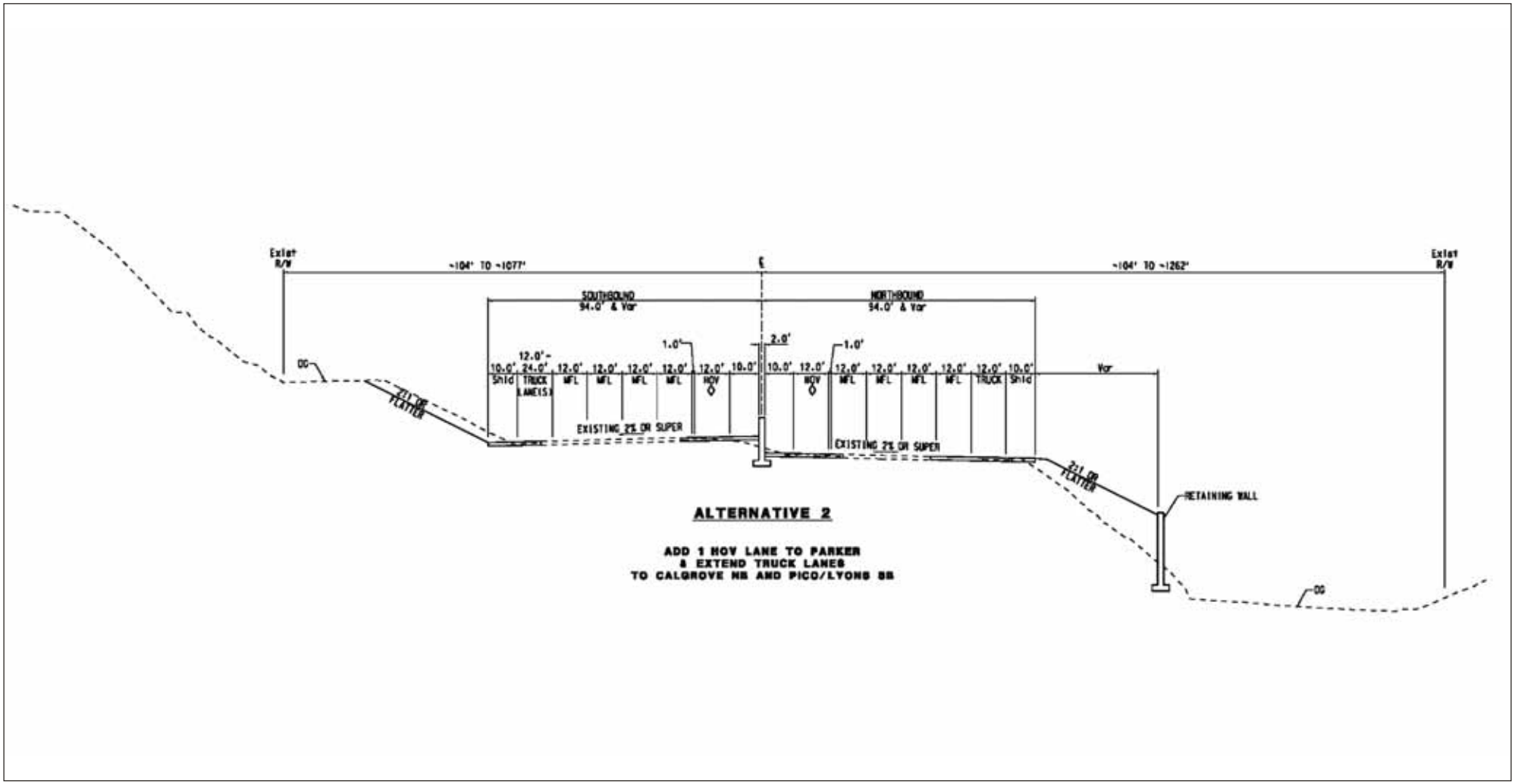

FIGURE 1.2

I-5 HOV / Truck Lanes Project

Alternative 2 Typical Cross Section

07-LA-5 PM R45.4/R59.0

EA 2332E0

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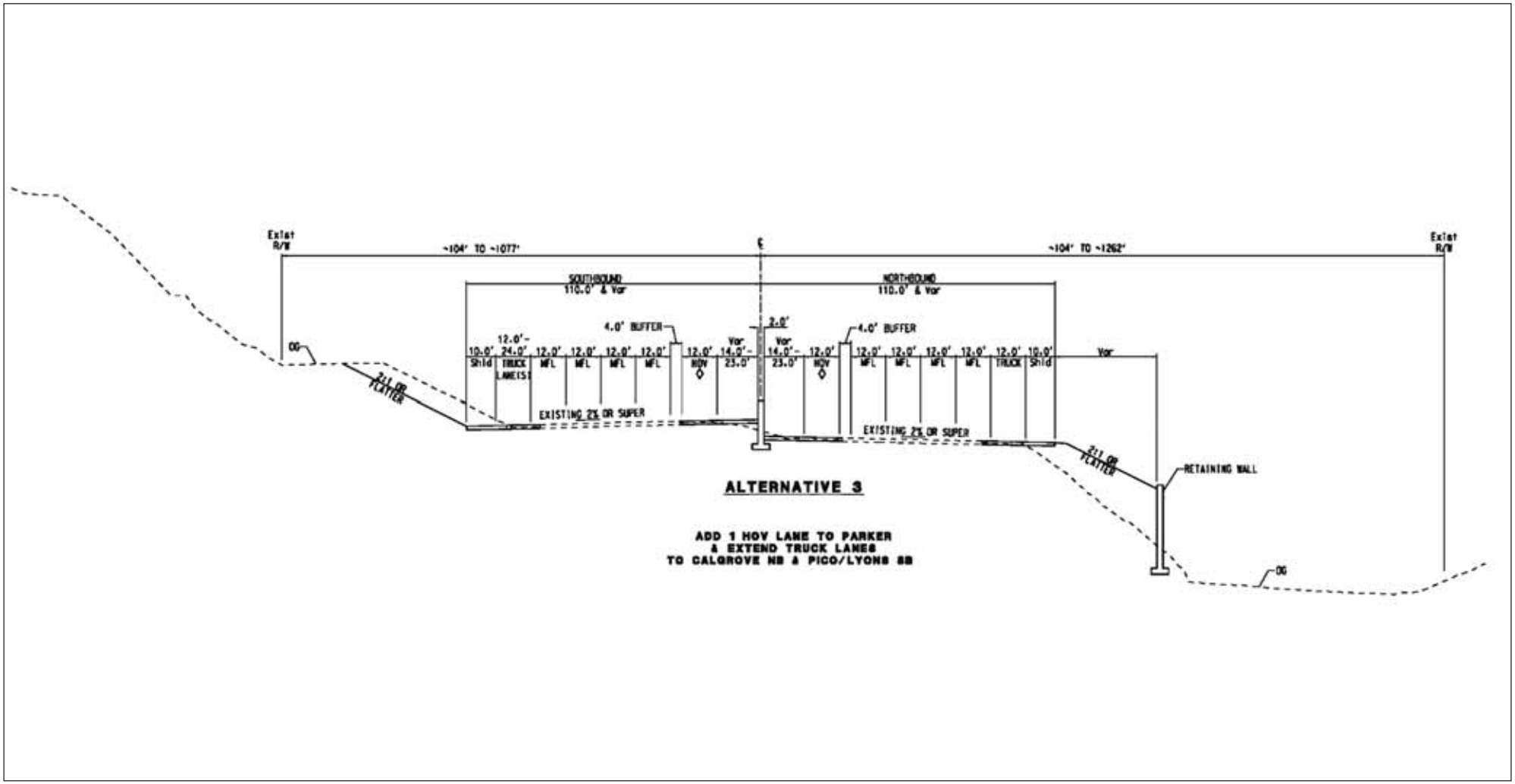

FIGURE 1.3

I-5 HOV / Truck Lanes Project
Alternative 3 Typical Cross Section
07-LA-5 PM R45.4/R59.0
EA 2332E0

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Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line

Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Potential Retaining Wall
Existing Retaining Wall
Proposed Drainage Improvements

Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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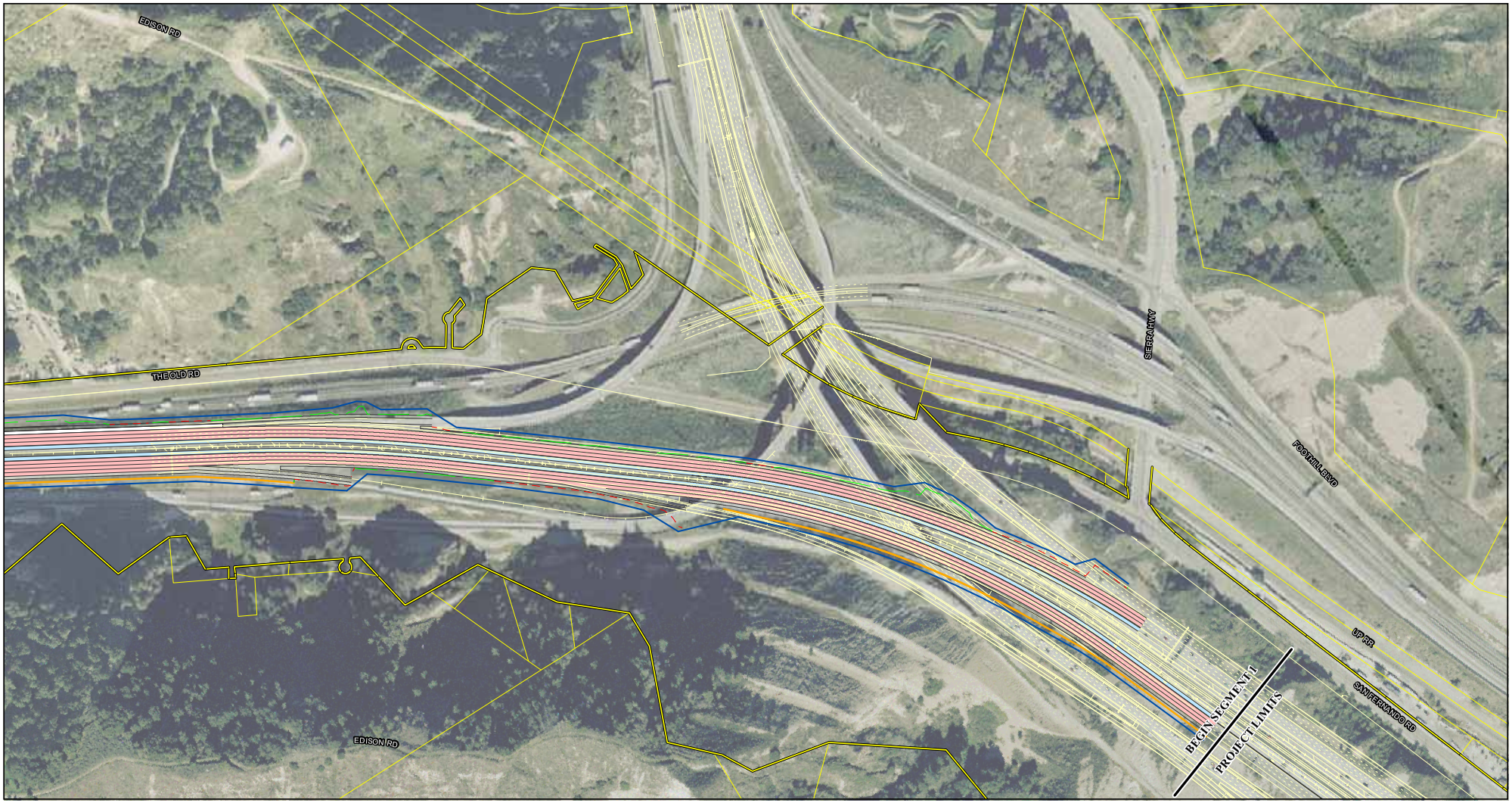
FIGURE 1.4
Sheet 1 of 17

I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line

Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
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Existing Retaining Wall
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Improvements by Others
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HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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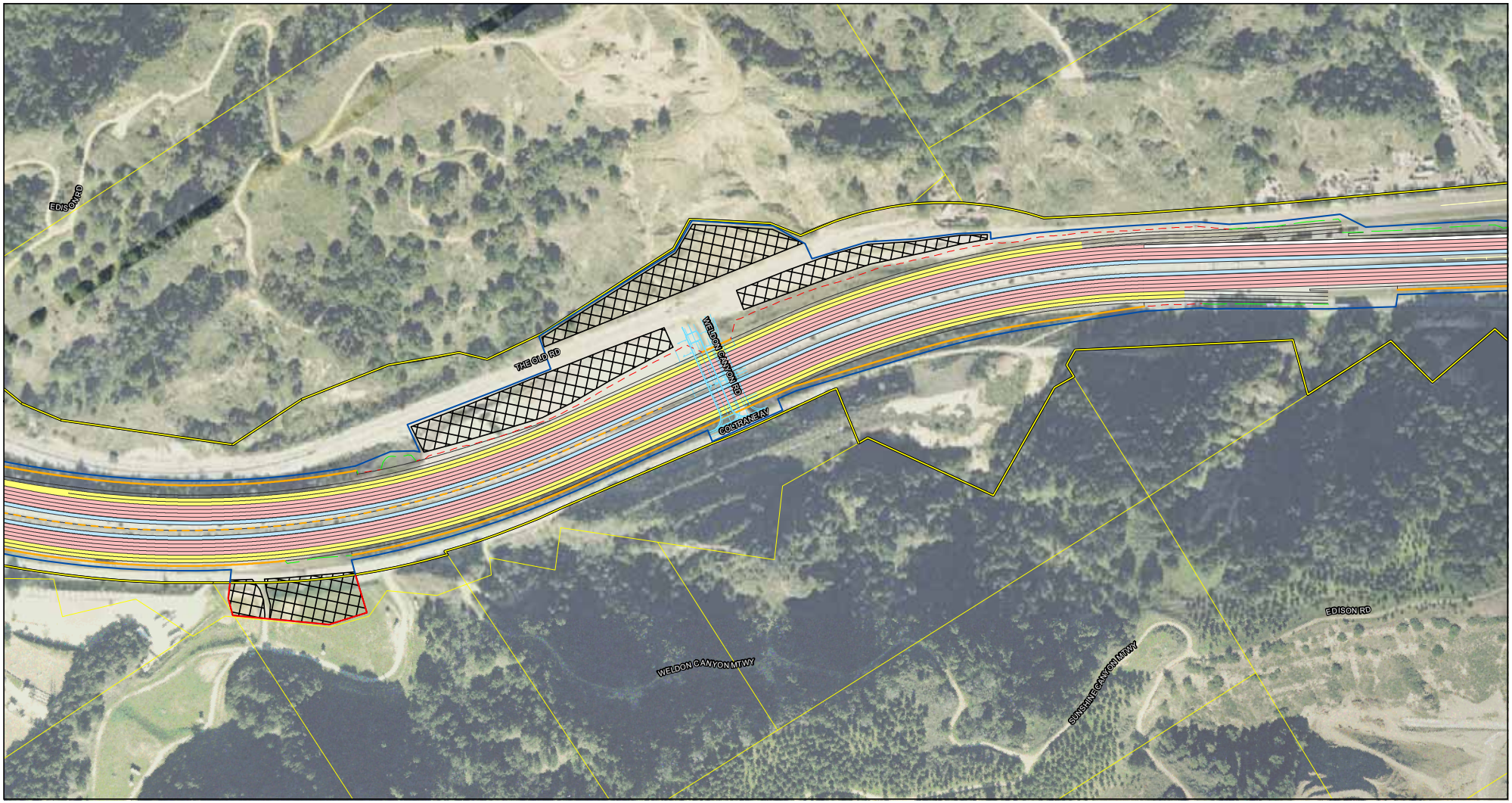
FIGURE 1.4
Sheet 2 of 17

I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Proposed Right-of-Way
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Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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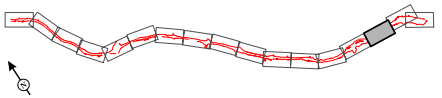
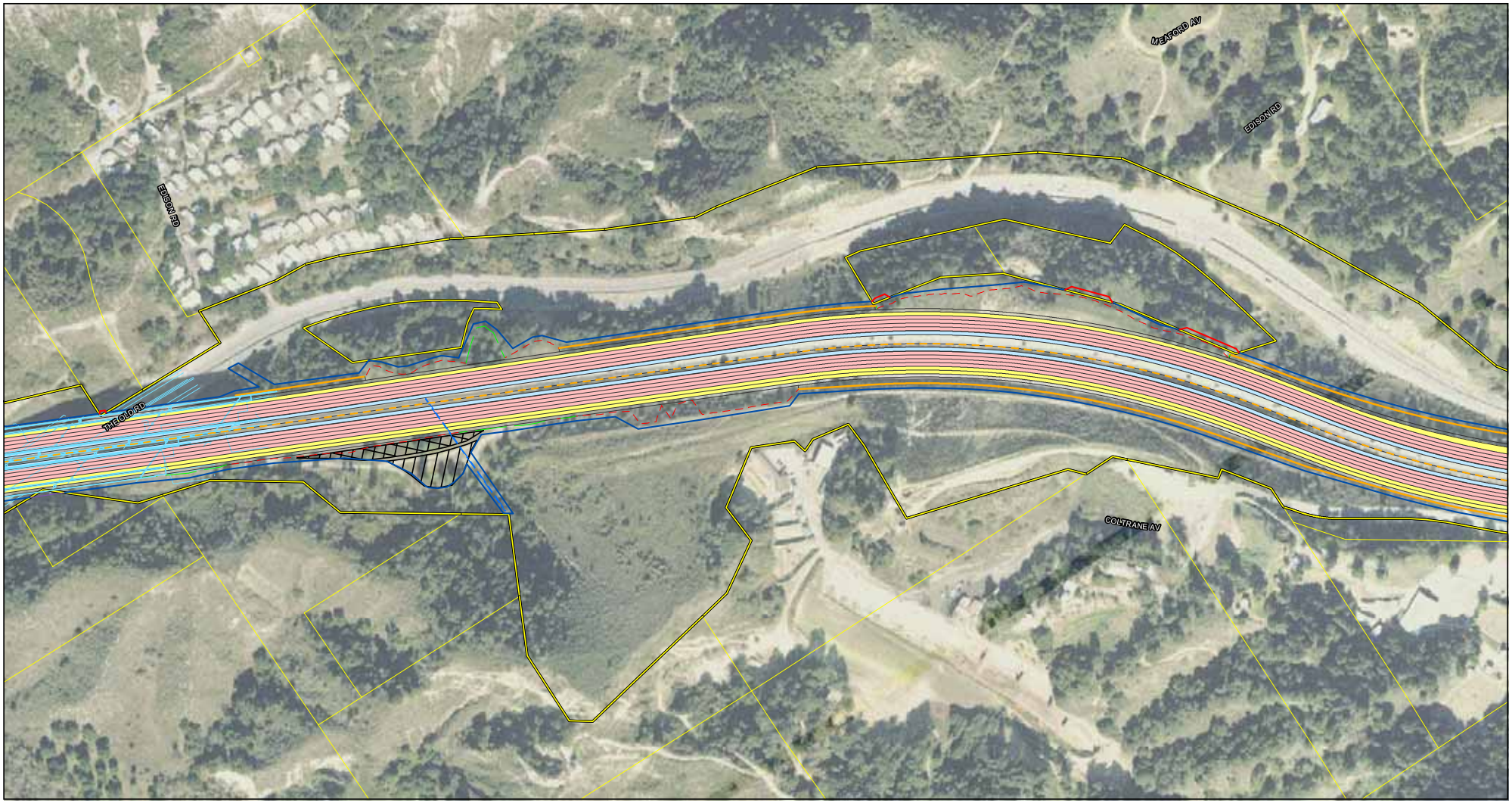


FIGURE 1.4
Sheet 3 of 17

I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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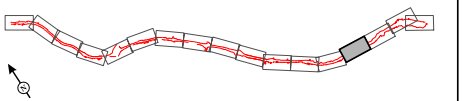

FIGURE 1.4
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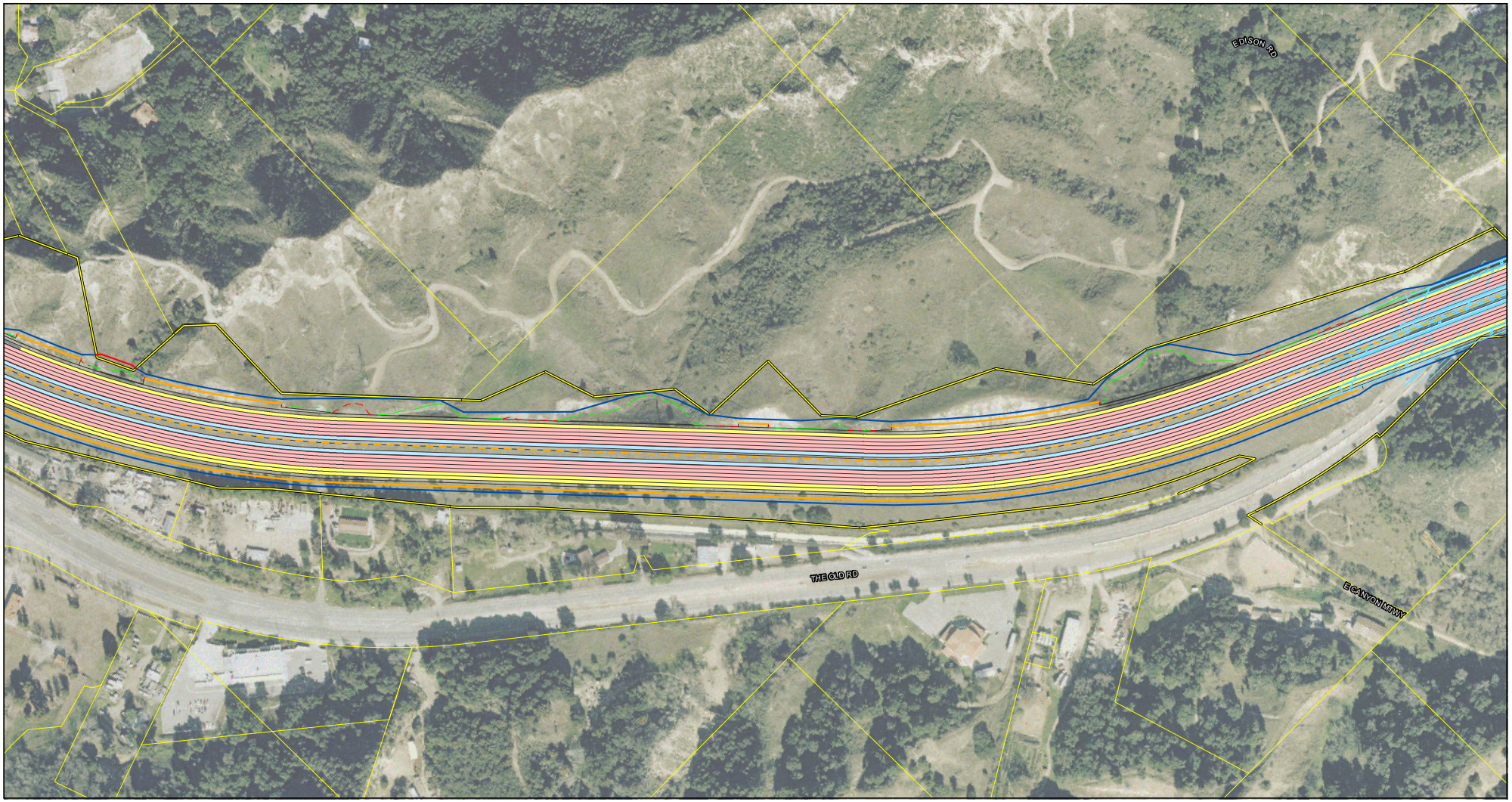
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Proposed Right-of-Way
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Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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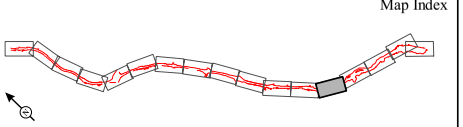

FIGURE 1.4
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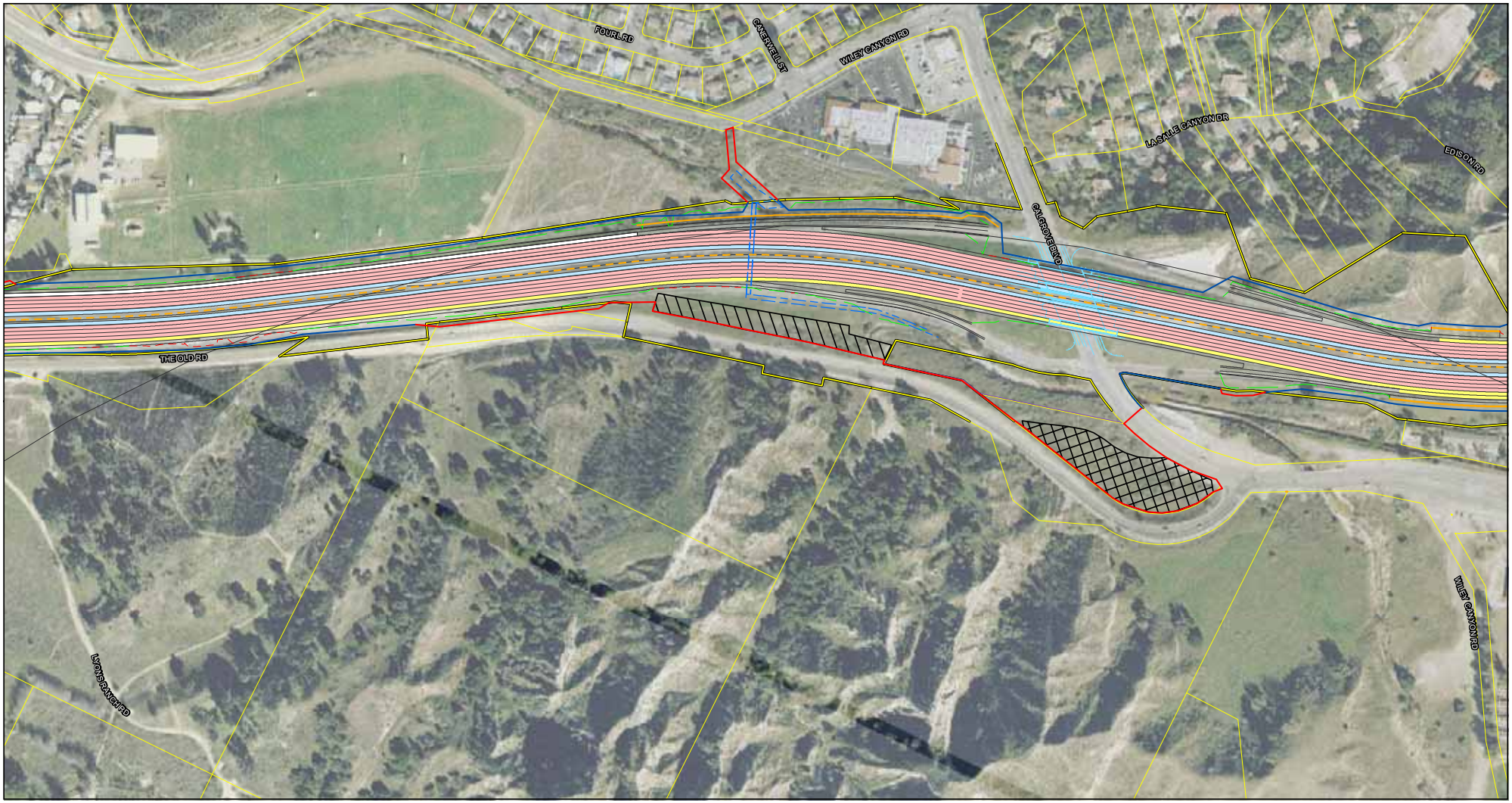
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
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Proposed Right-of-Way
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Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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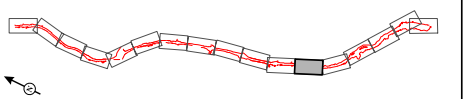

FIGURE 1.4
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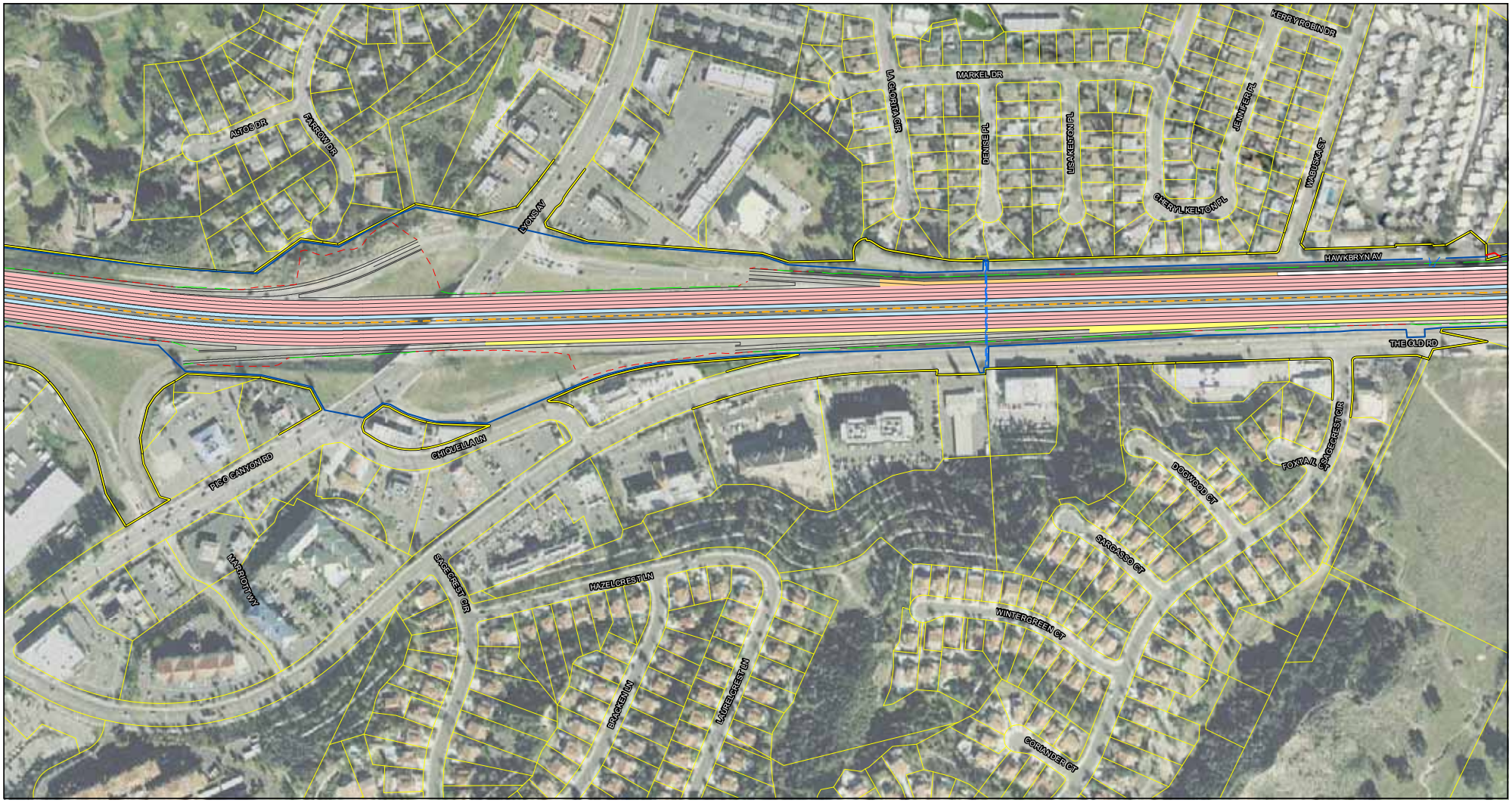
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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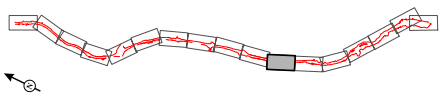

FIGURE 1.4
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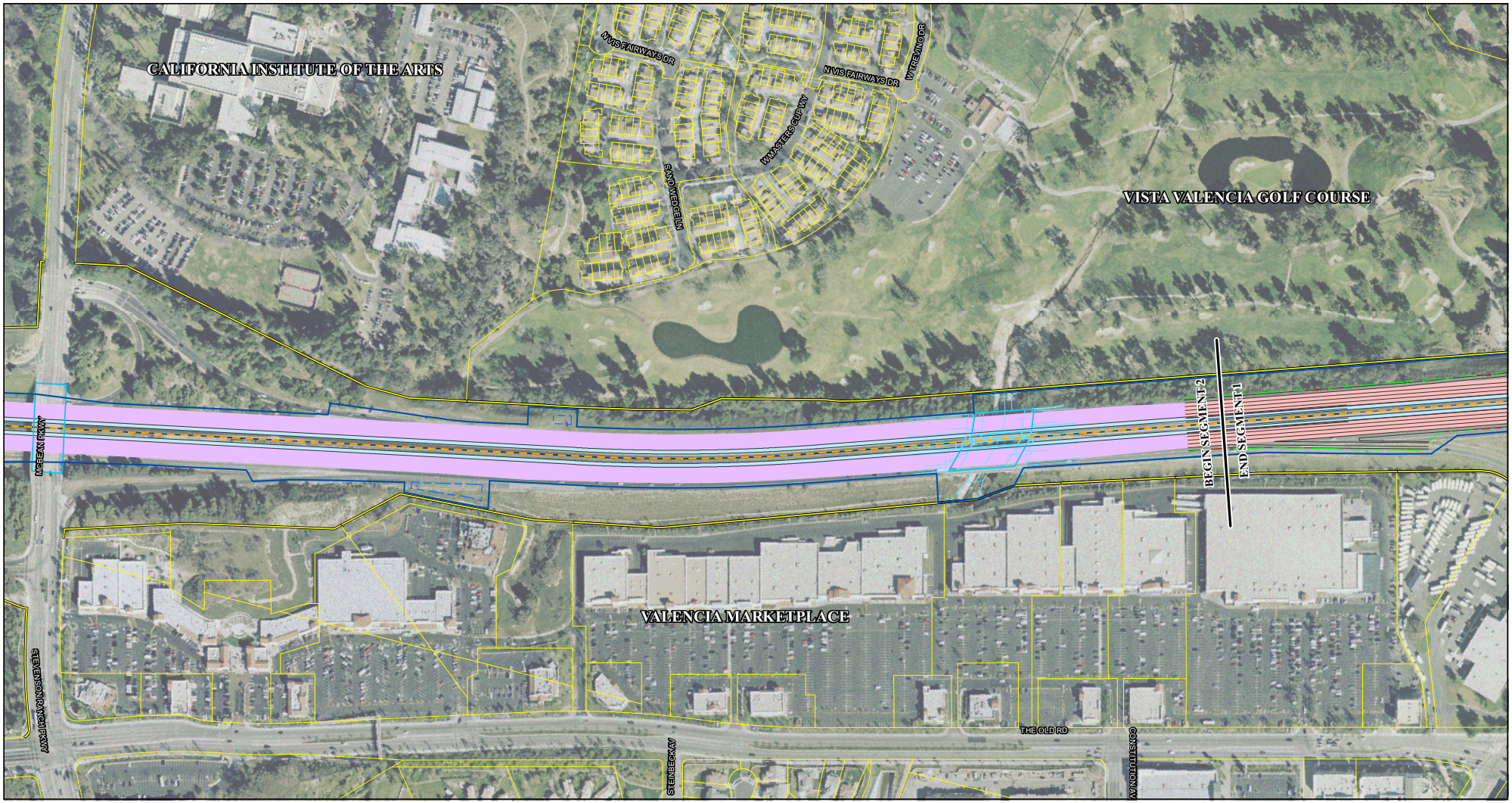
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Truck Lanes
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0 150 300 Feet

SOURCE: Psomas (2008).

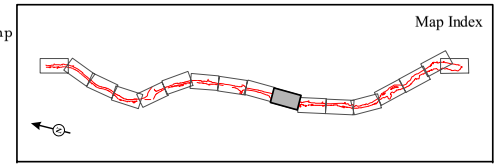

FIGURE 1.4
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I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

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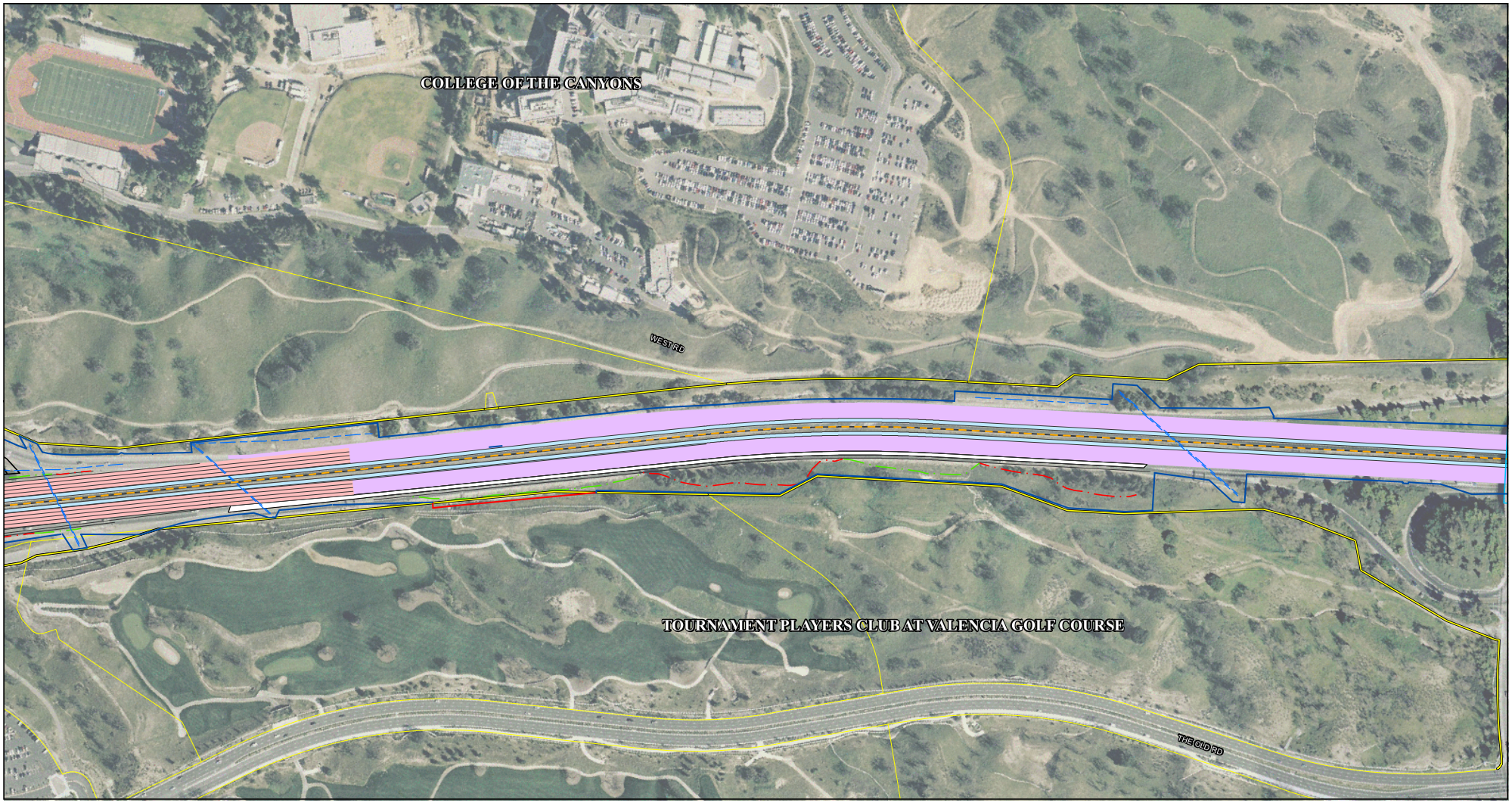

Potential Water Treatment Basin
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MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.4
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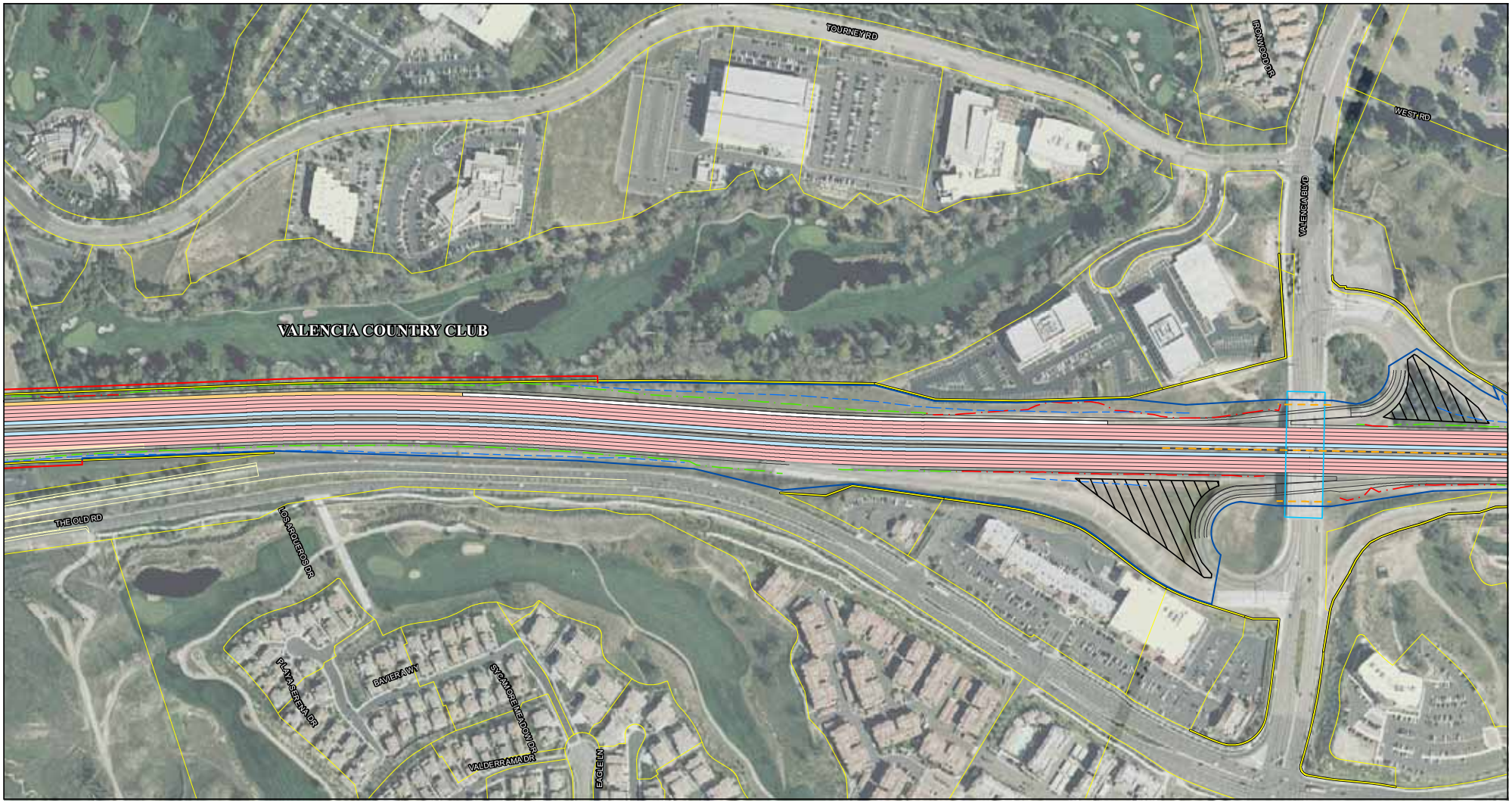
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
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Temporary Construction Easement (TCE)
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HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.4
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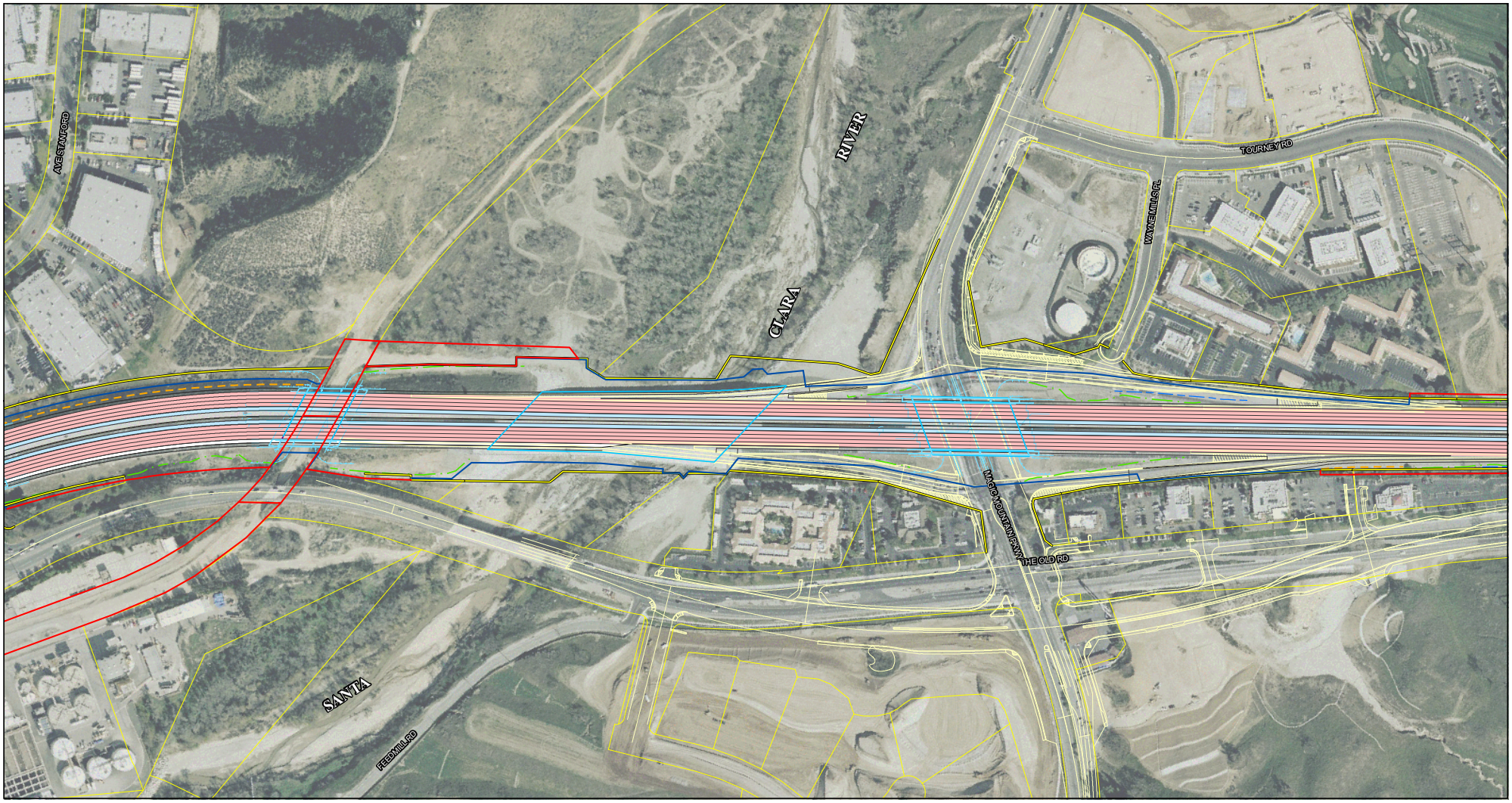
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
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Proposed Right-of-Way
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MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.4
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I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

Potential Water Treatment Basin
Potential Construction Staging Area
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Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.4
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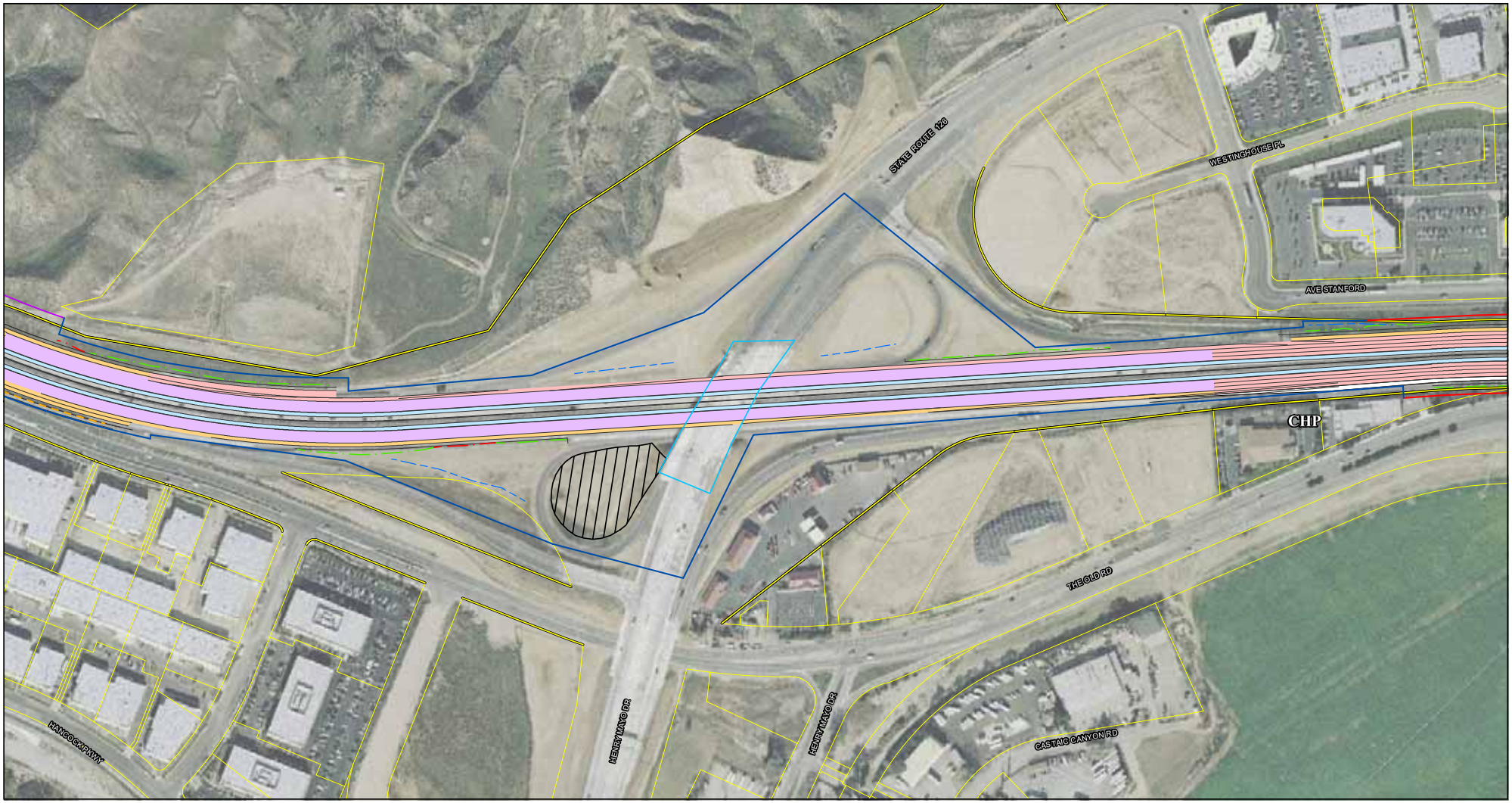
I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.4
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I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

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- Potential Water Treatment Basin
- Potential Construction Staging Area
- Proposed Alignment
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- HOV Lanes
- MFL Lanes
- Proposed AUX Lanes
- Truck Lanes
- Unimproved Lanes/No Improvements

N

0 150 300 Feet

SOURCE: Psomas (2008).

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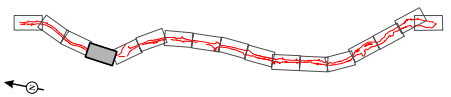

FIGURE 1.4
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I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

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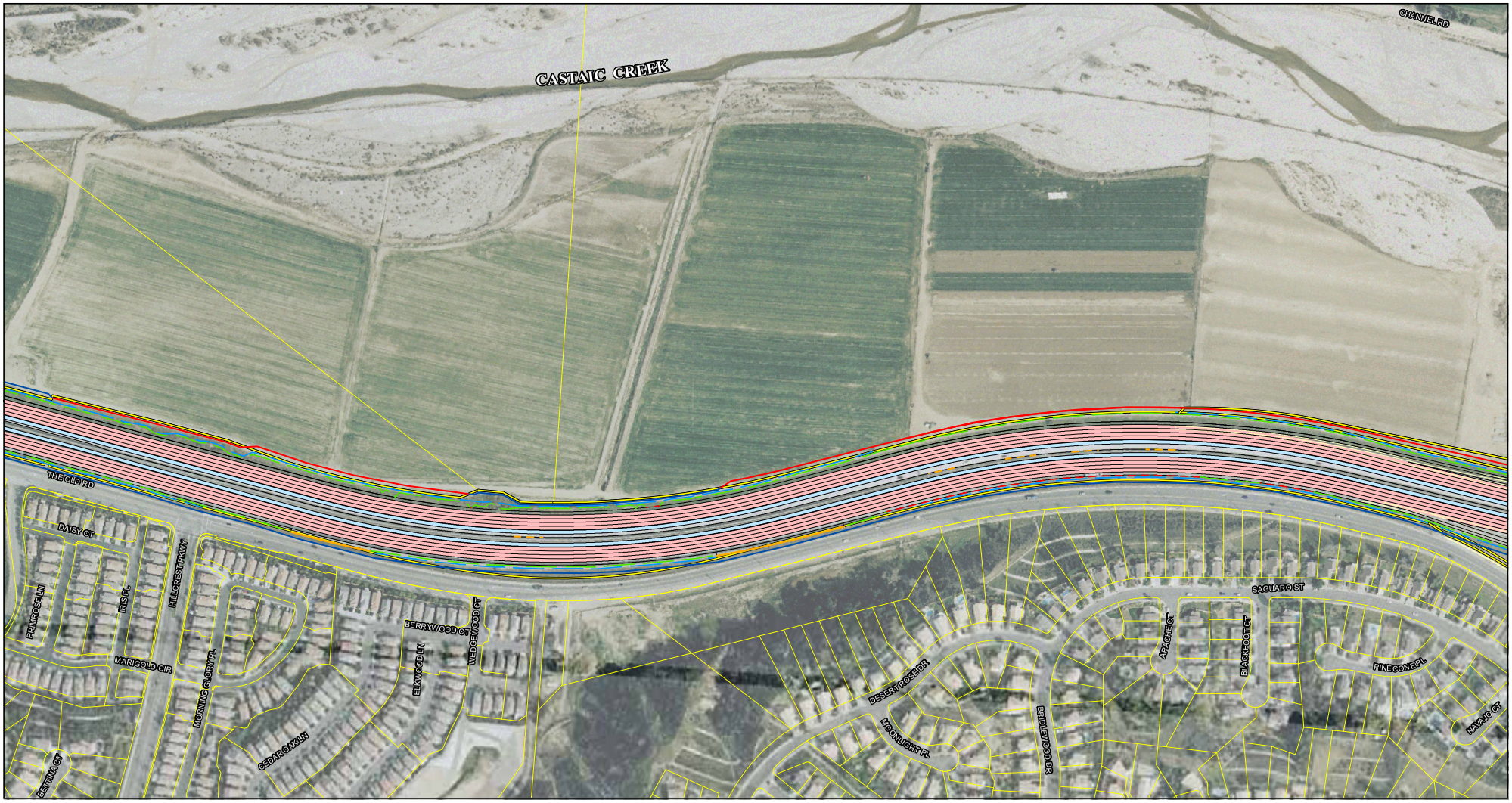

- Potential Water Treatment Basin
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- Truck Lanes
- Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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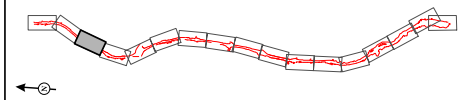

FIGURE 1.4
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I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

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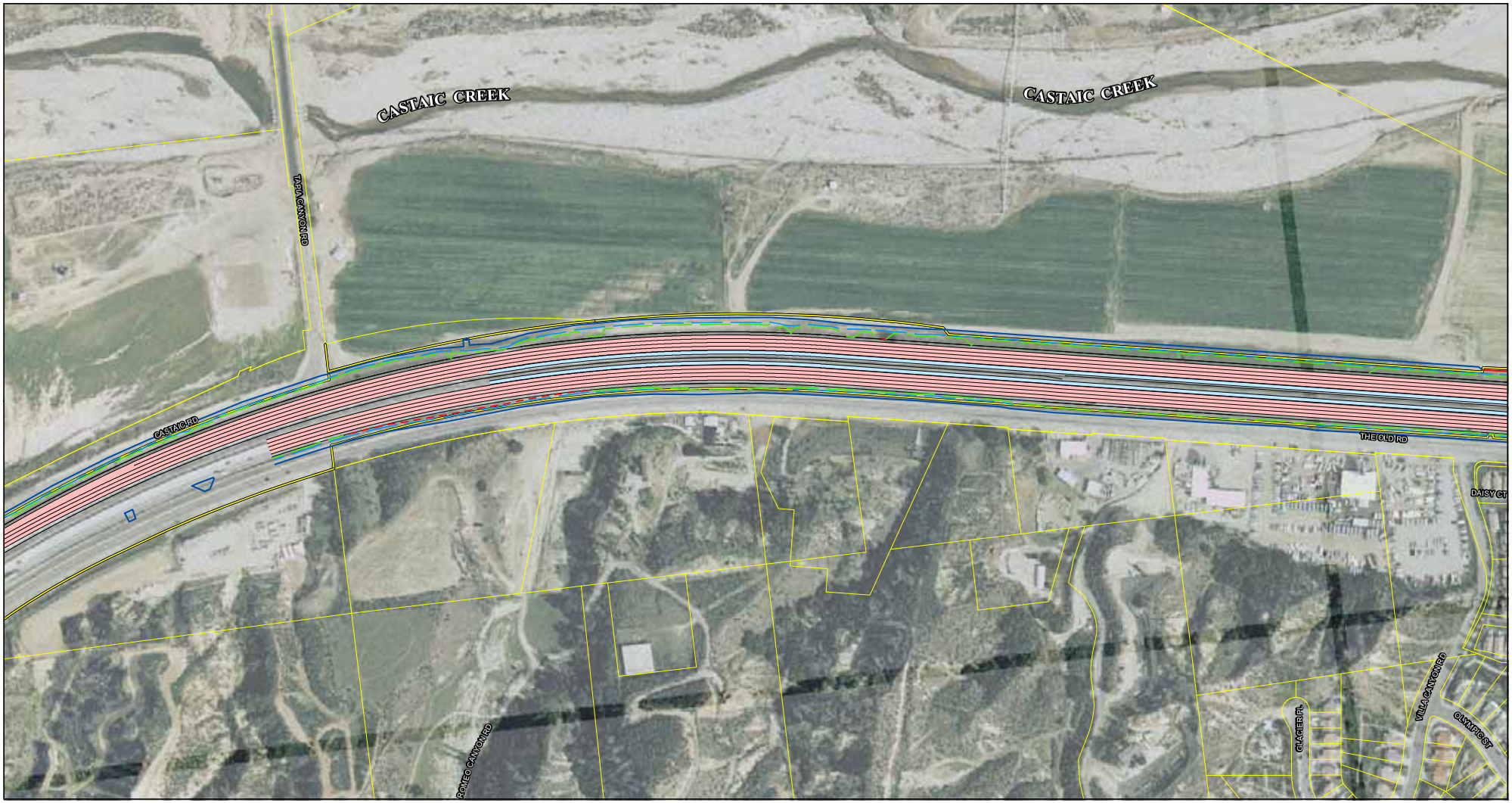

Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line
Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Potential Retaining Wall
Existing Retaining Wall
Proposed Drainage Improvements
Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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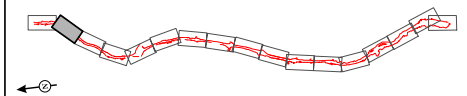

FIGURE 1.4
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I-5 HOV/Truck Lanes Project
Alternative 2 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

Potential Water Treatment Basin
Potential Construction Staging Area
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Proposed Right-of-Way
Parcel Boundary
Disturbance Line

Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Potential Retaining Wall
Existing Retaining Wall
Proposed Drainage Improvements

Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.4
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I-5 HOV/Truck Lanes Project
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Potential Water Treatment Basin
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HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.5
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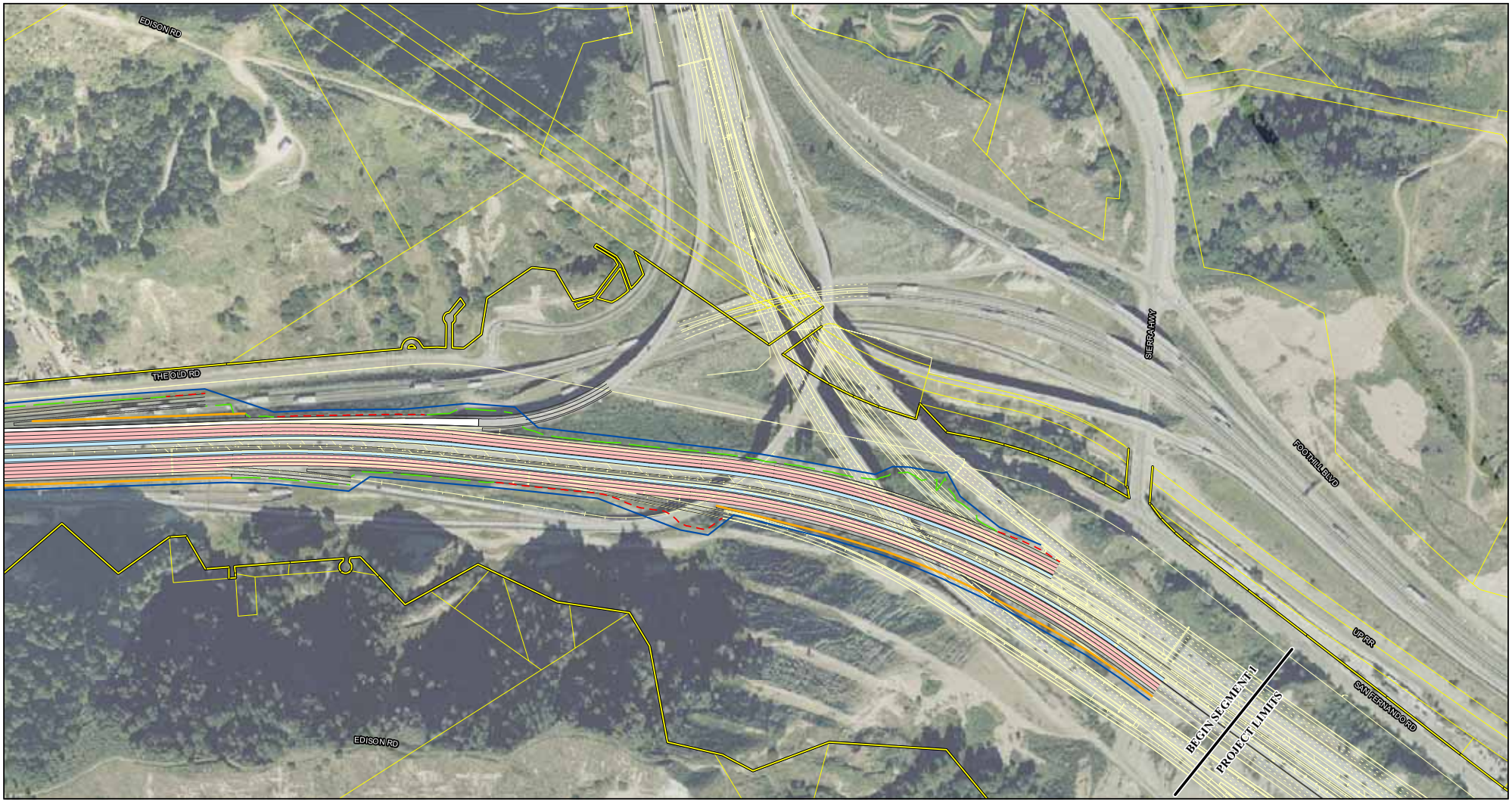
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



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MFL Lanes
Proposed AUX Lanes
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Frontage Road Improvements

0 150 300 Feet

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SOURCE: Psomas (2008).

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FIGURE 1.5
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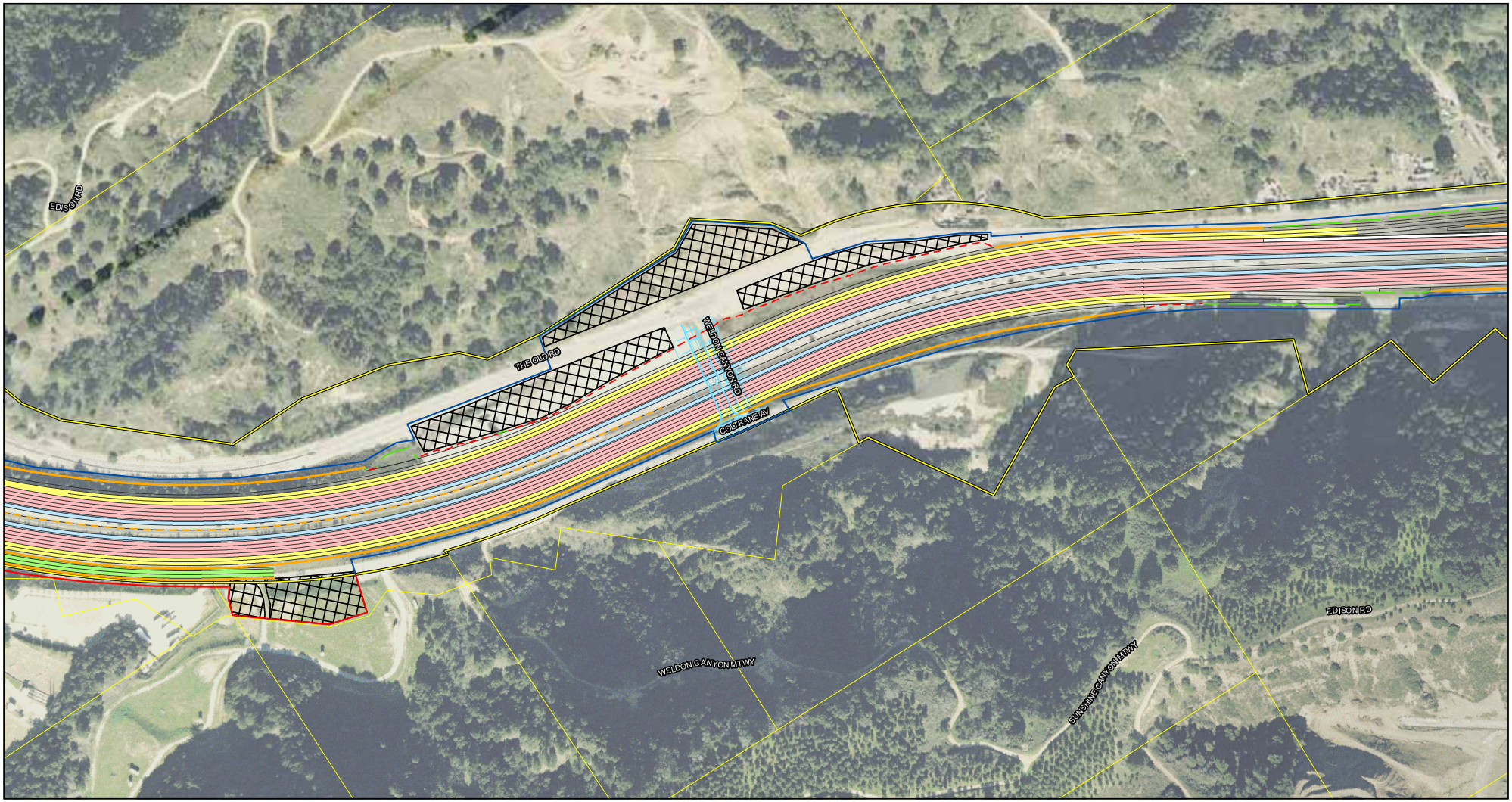
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
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0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.5
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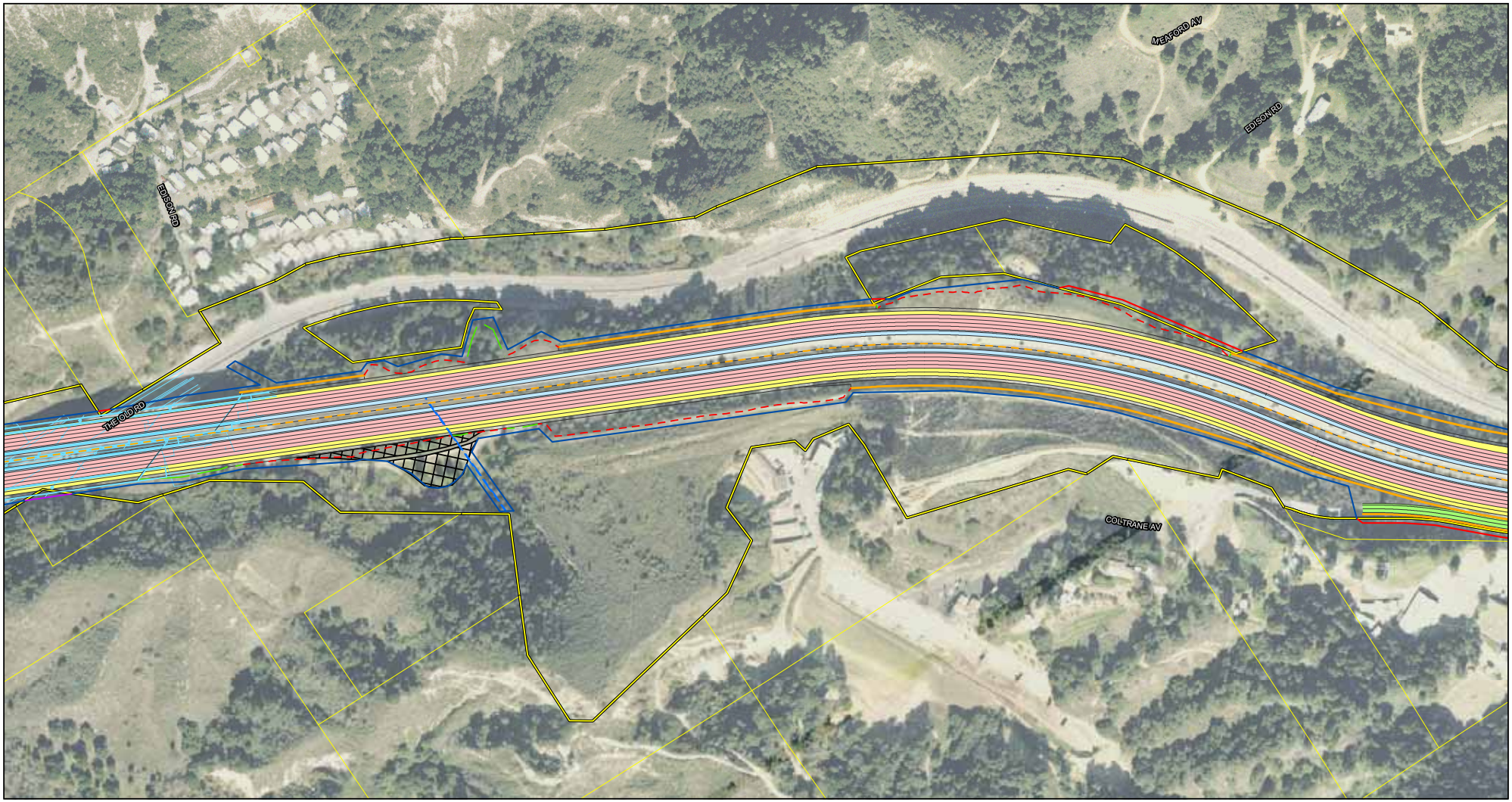
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
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Proposed Right-of-Way
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MFL Lanes
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Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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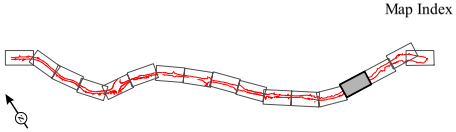

FIGURE 1.5
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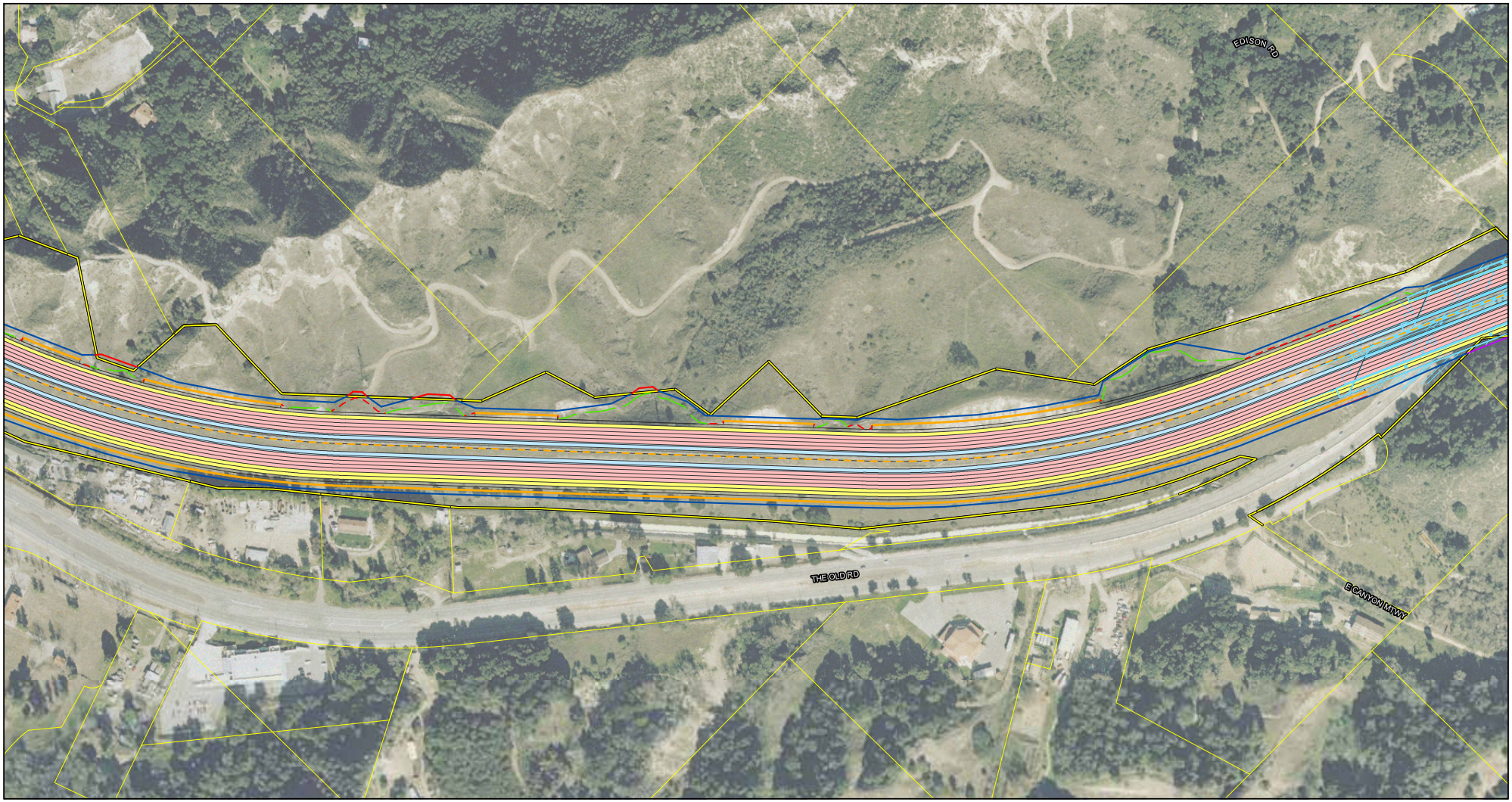
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Proposed Alignment
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Proposed Right-of-Way
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Truck Lanes
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Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.5
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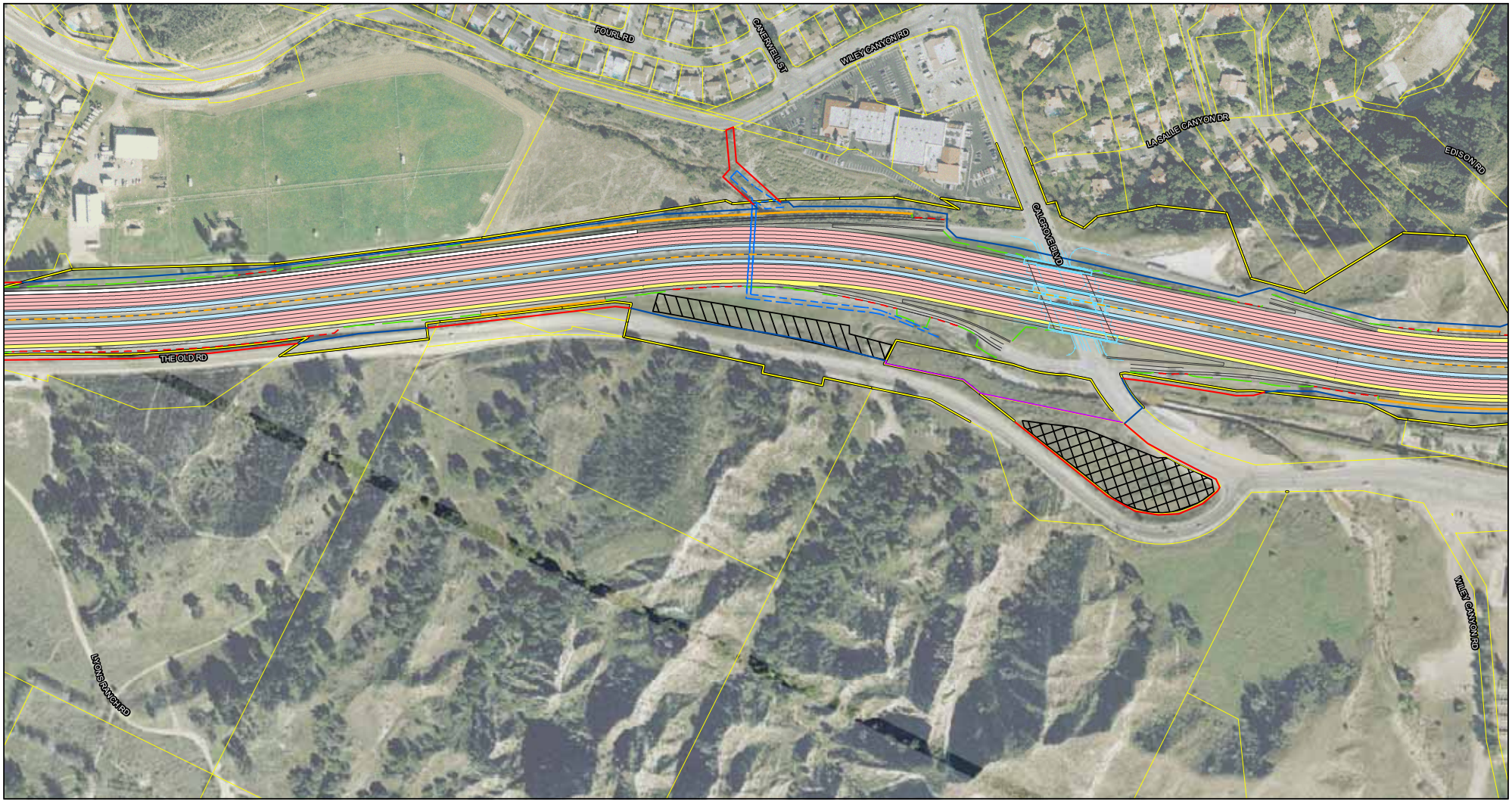
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
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Proposed Alignment
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Truck Lanes
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Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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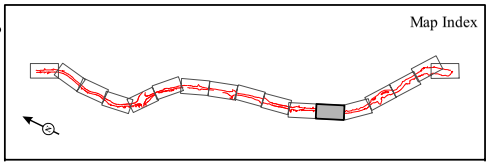

FIGURE 1.5
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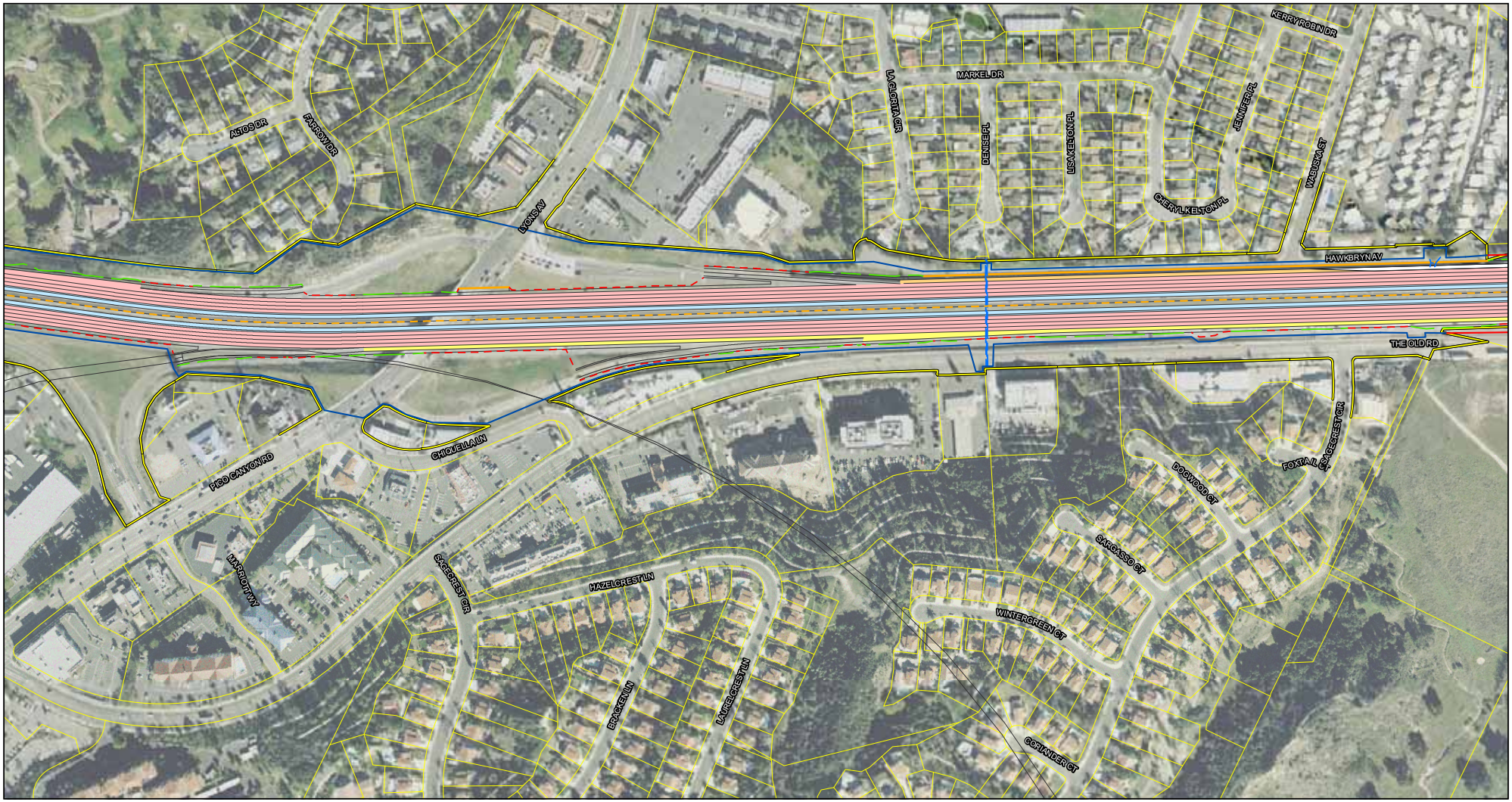
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
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HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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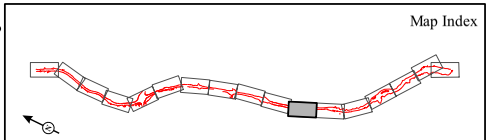

FIGURE 1.5
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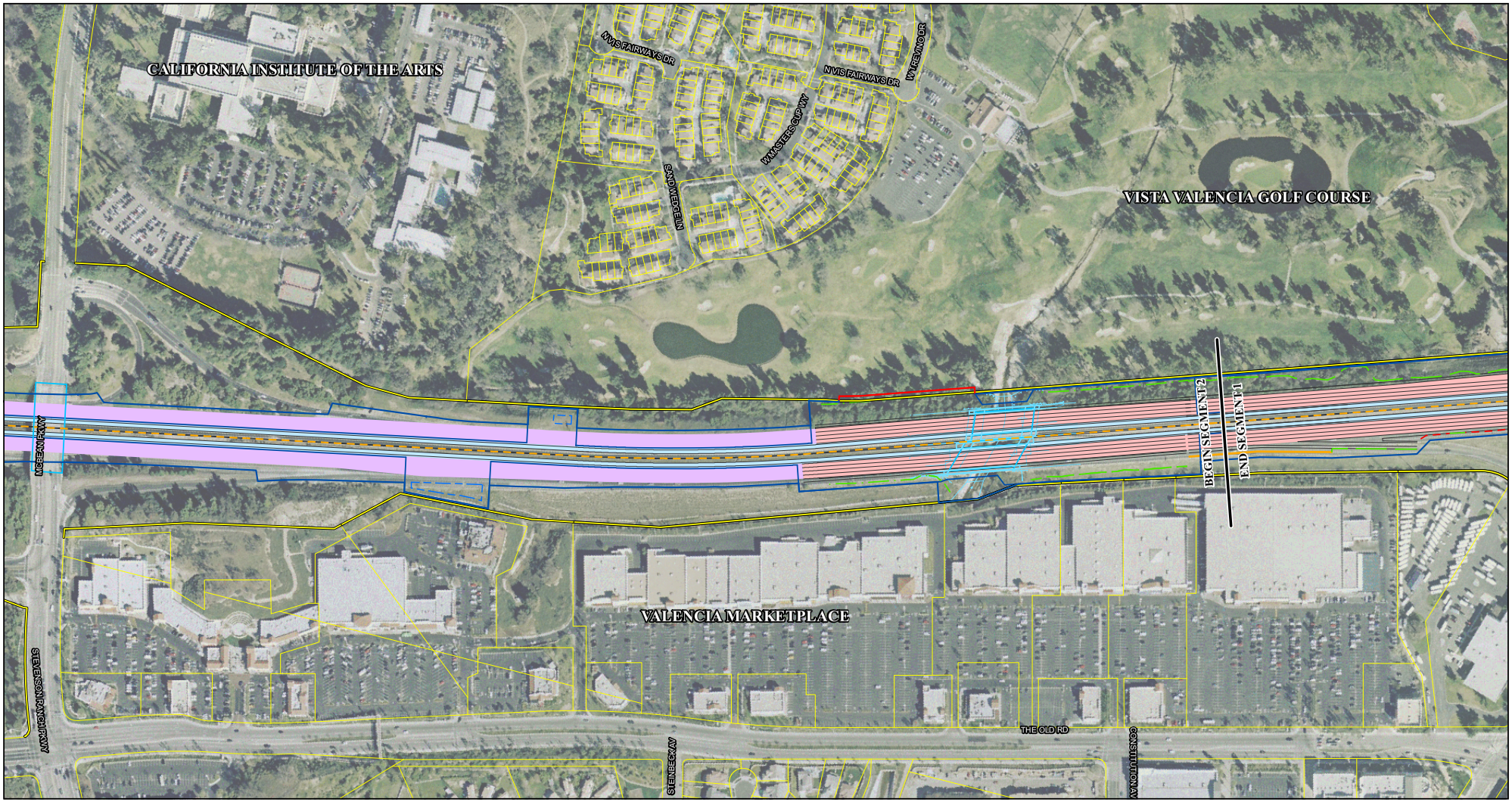
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



- Potential Water Treatment Basin
- Potential Construction Staging Area
- Proposed Alignment
- Existing Right-of-Way
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- MFL Lanes
- Proposed AUX Lanes
- Truck Lanes
- Unimproved Lanes/No Improvements
- Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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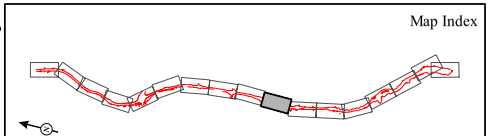

FIGURE 1.5
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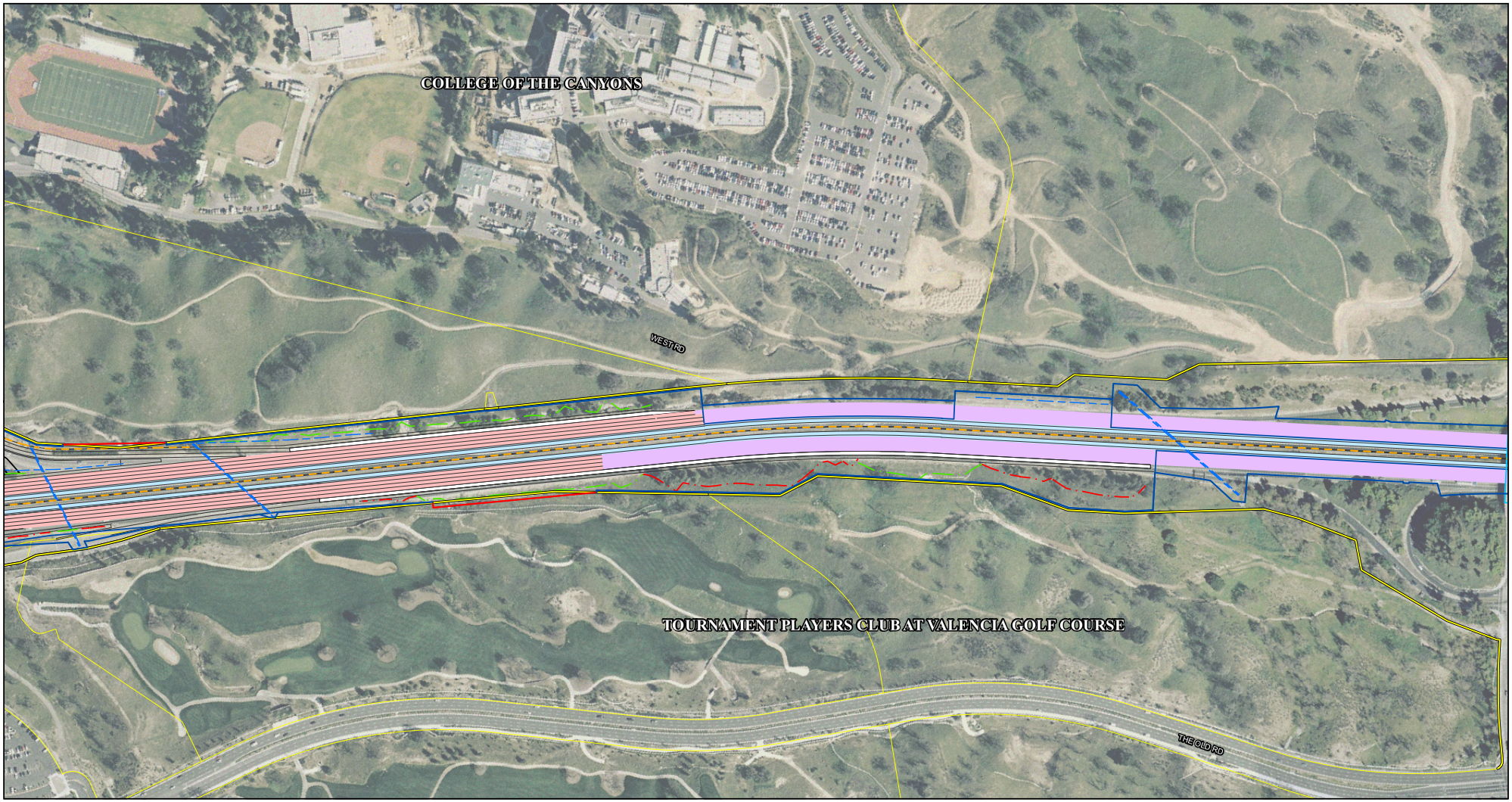
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line
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MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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FIGURE 1.5
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I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
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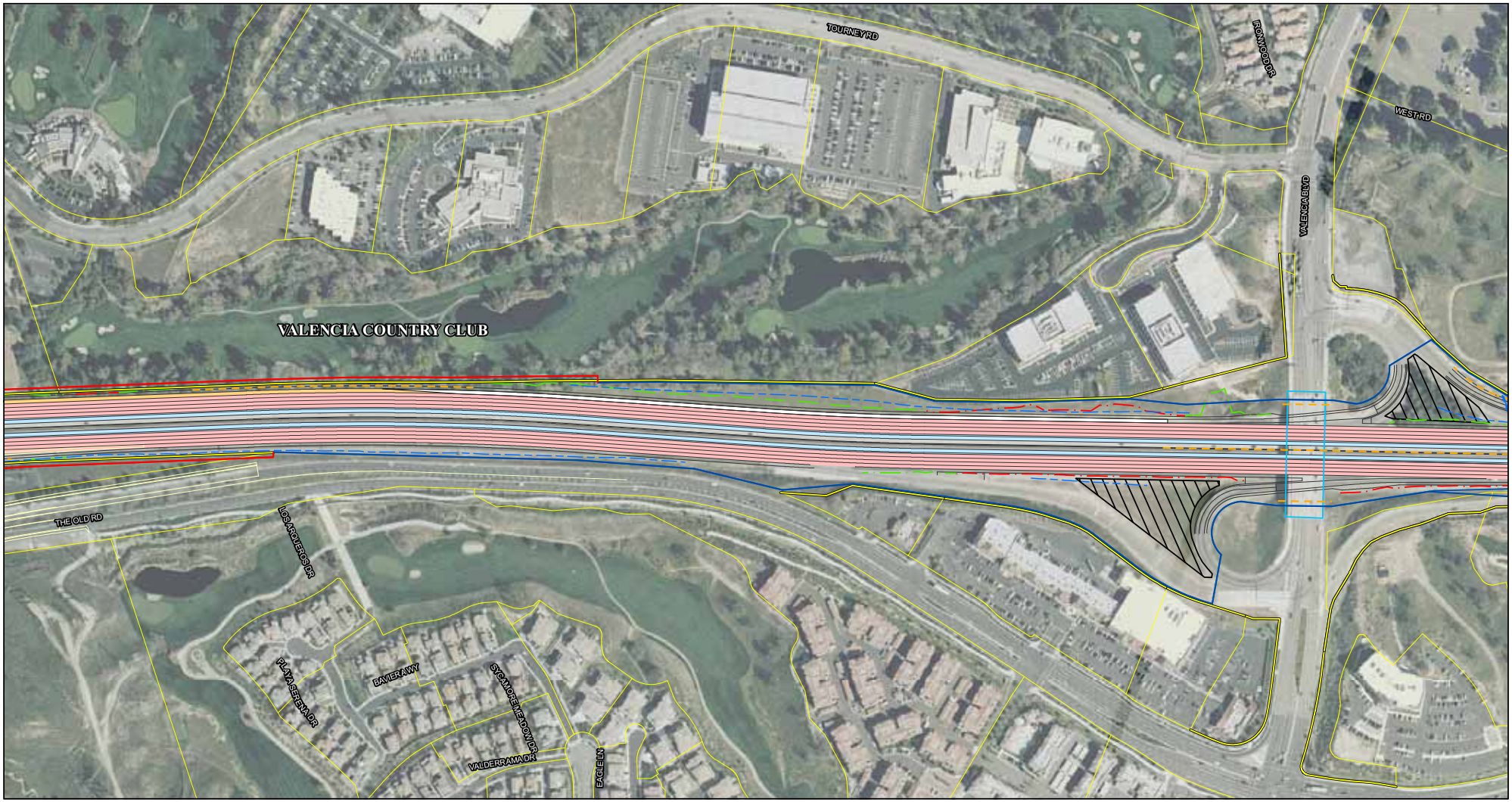

Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
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Proposed Right-of-Way
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Temporary Construction Easement (TCE)
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Truck Lanes
Unimproved Lanes/No Improvements
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0 150 300 Feet

SOURCE: Psomas (2008).

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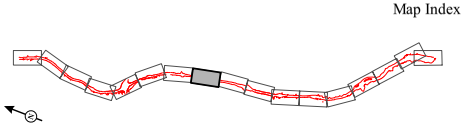

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I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
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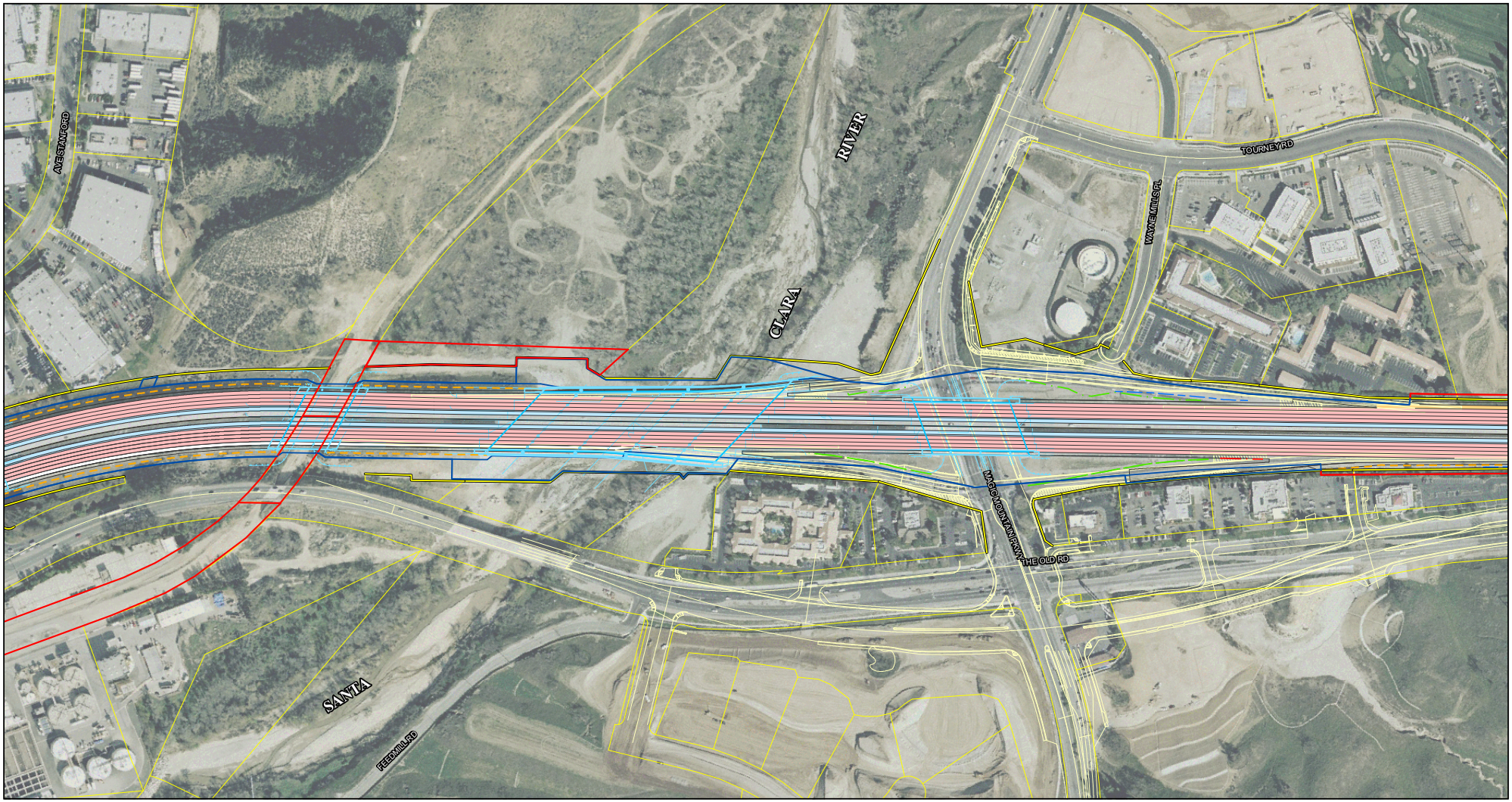

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0 150 300 Feet

SOURCE: Psomas (2008).

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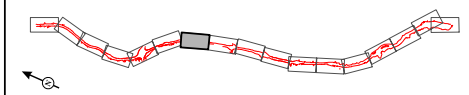

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I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
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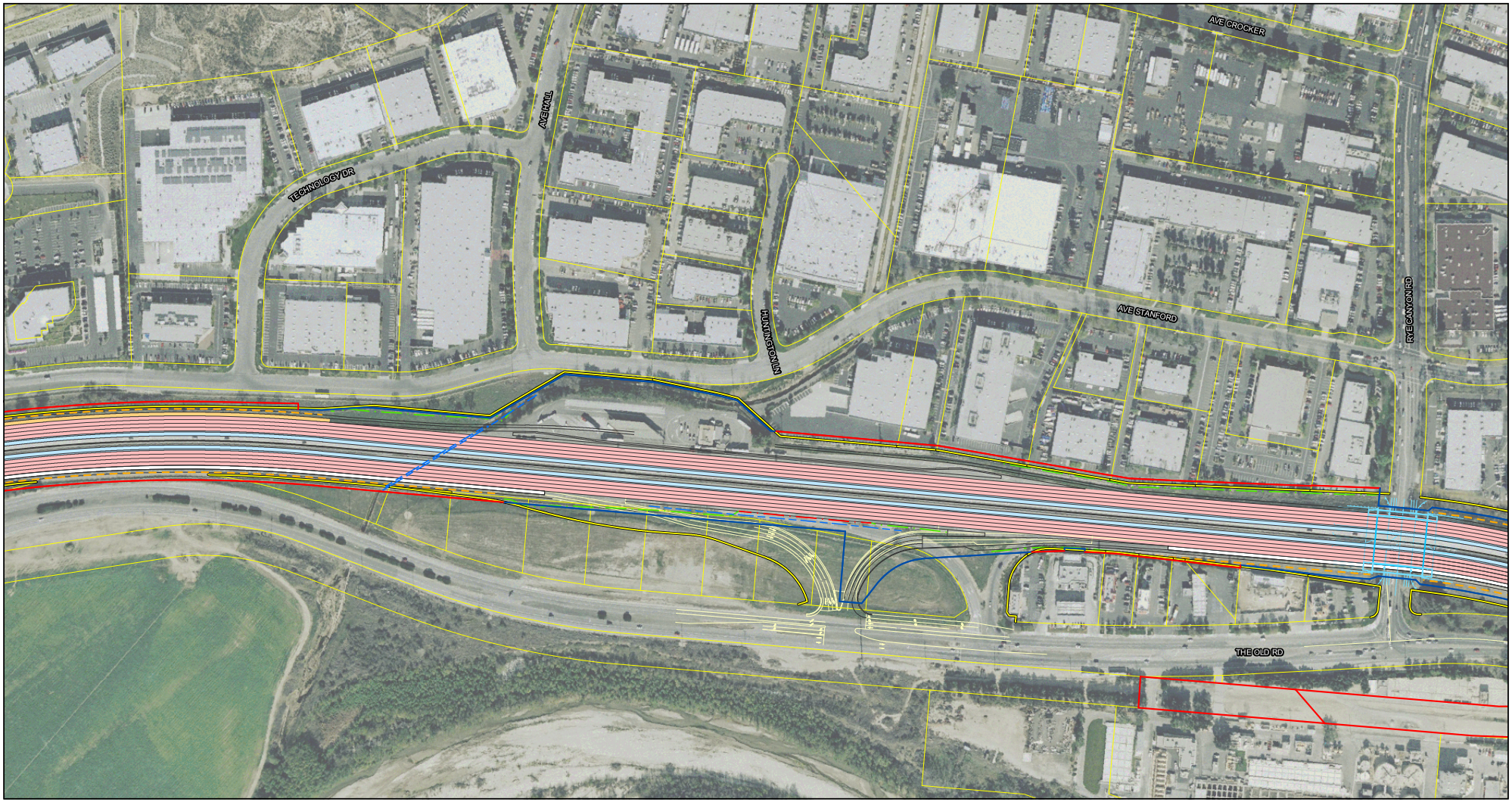

Potential Water Treatment Basin
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Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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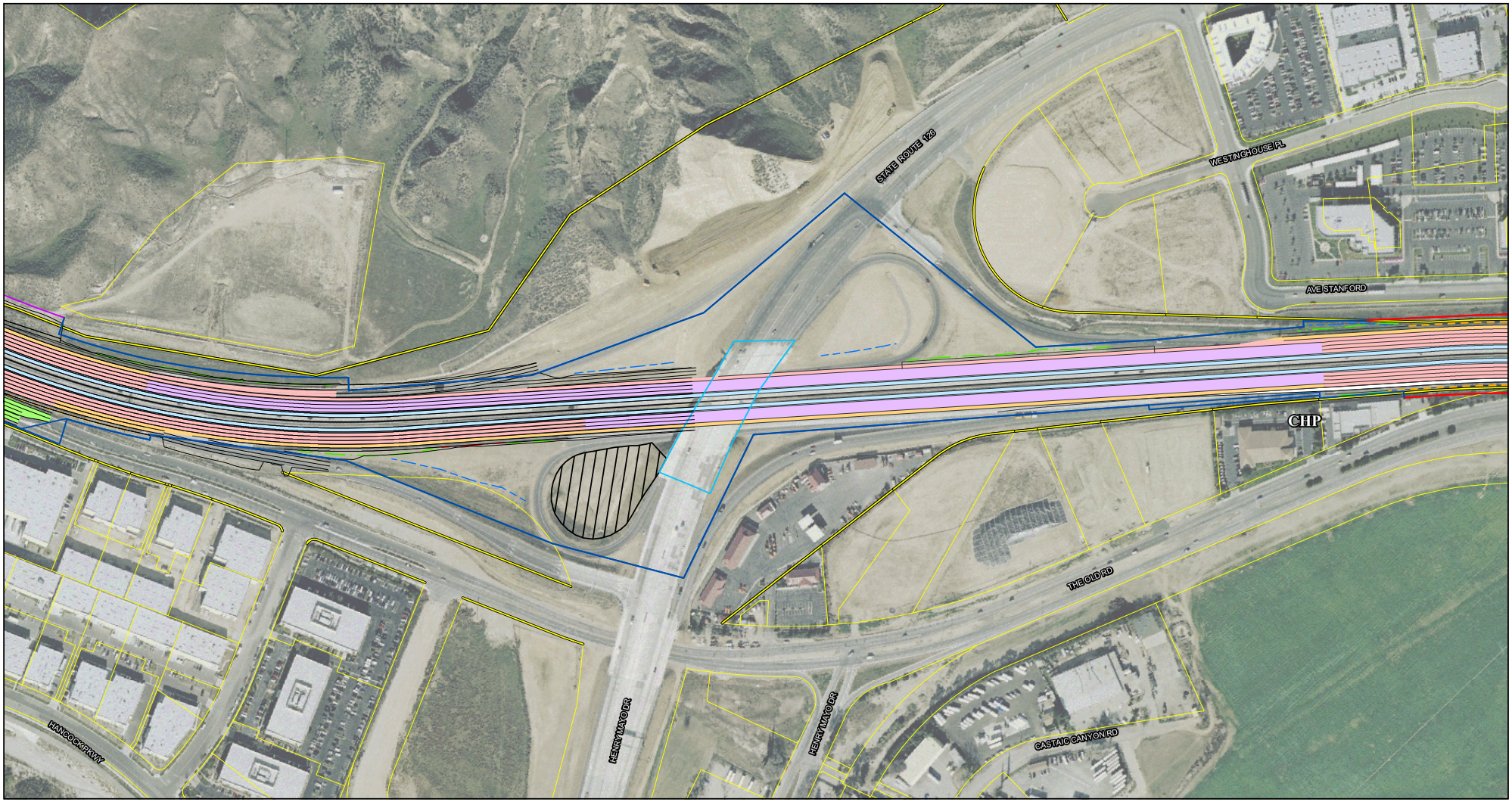

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Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
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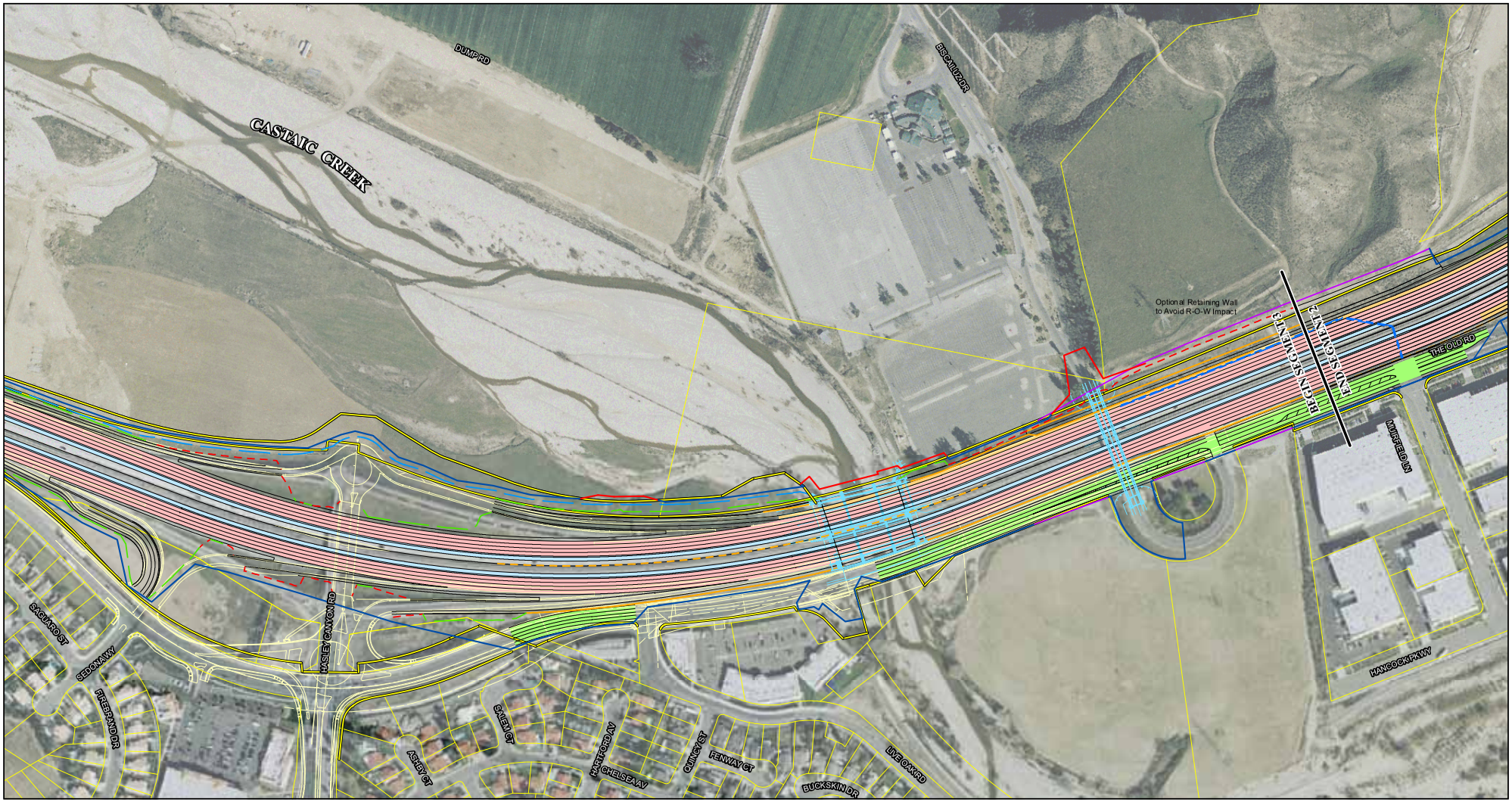

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0 150 300 Feet

SOURCE: Psomas (2008).

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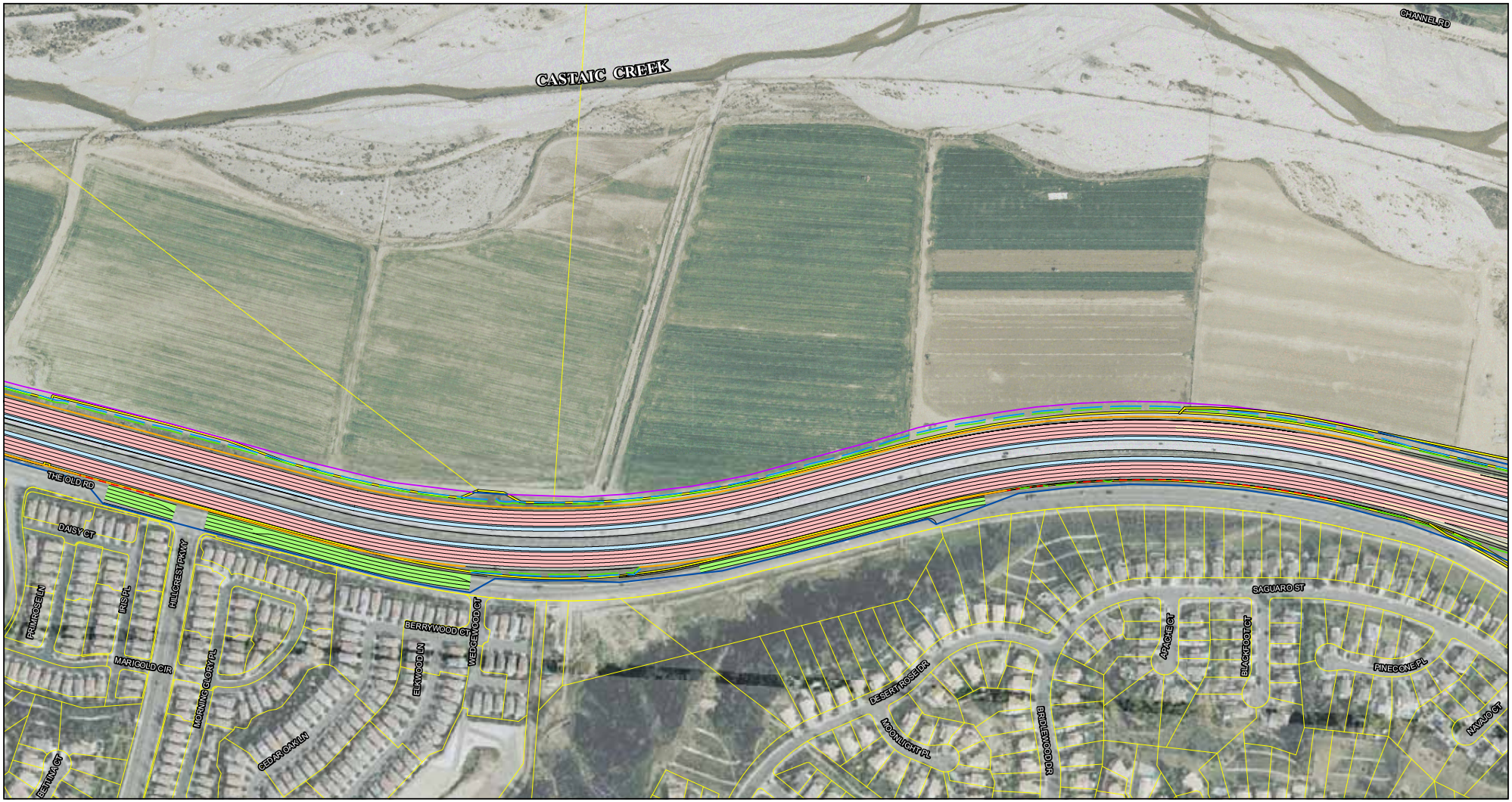
I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0



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- Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

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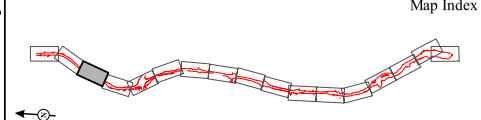


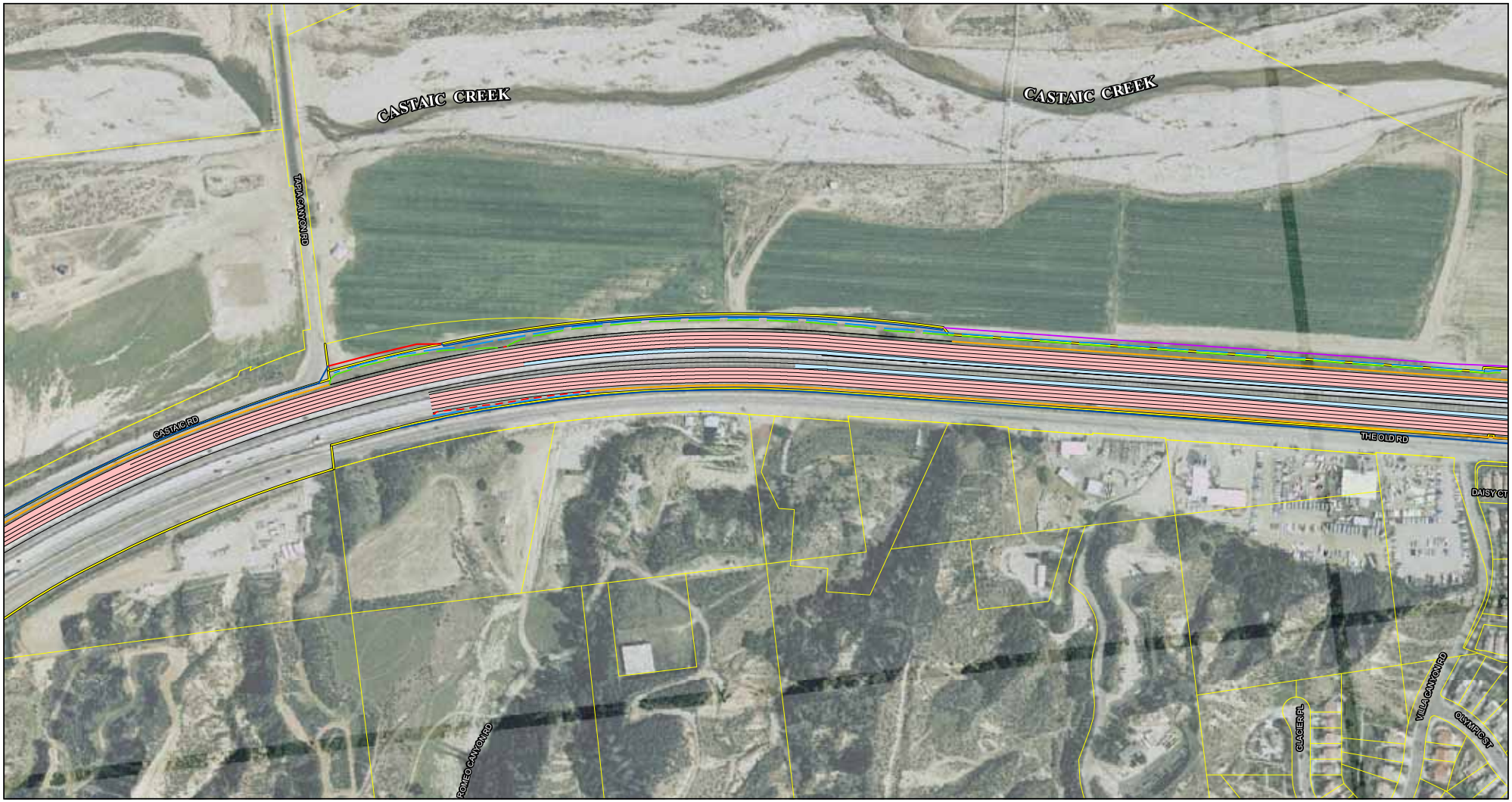
FIGURE 1.5
Sheet 15 of 17

I-5 HOV/Truck Lanes Project

Alternative 3 - Project Features

07-LA-5 PM R45.4/R59.0

EA 2332E0



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line
Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Proposed Retaining Wall
Existing Retaining Wall
Proposed Drainage Improvements
Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

Map Index

FIGURE 1.5
Sheet 16 of 17

I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

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Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line

Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Proposed Retaining Wall
Existing Retaining Wall
Proposed Drainage Improvements

Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Psomas (2008).

I:\SIB0601\GIS\Project_Features_Alt3_Figl-5.mxd (12/11/2008)

Map Index

FIGURE 1.5
Sheet 17 of 17

I-5 HOV/Truck Lanes Project
Alternative 3 - Project Features
07-LA-5 PM R45.4/R59.0
EA 2332E0

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Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

Chapter 2 describes the existing affected environment for the areas potentially affected by the proposed alternatives. The affected environment is the base environmental condition on which potential environmental effects of the alternatives are evaluated in this Final Environmental Impact Report/Environmental Assessment (EIR/EA).

The sections in Chapter 2 also include the regulatory setting applicable to the environmental topic, the methodology of impact analysis; potential impacts; and avoidance, minimization, and/or mitigation measures to avoid or substantially reduce adverse impacts of the alternatives. Photographs, graphic exhibits, and data matrices are included at the end of each chapter where applicable to support the impact analyses.

The National Environmental Policy Act (NEPA) uses the terms impact, effect, and consequences synonymously. For an action to affect the environment it must have a causal relationship with the environment. NEPA distinguishes three types of causal effects: direct, indirect, and cumulative. Cumulative effect is defined and the potential for the proposed alternatives to contribute to cumulative effects is analyzed in Section 2.23 of this Draft EIS/EA, and direct and indirect effects are defined below and analyzed in Sections 2.1 through 2.22 of this Final EIR/EA.

- Direct effects are caused by the action and occur at the same time and place (40 Code of Federal Regulations [CFR] 1508.8).
- Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered, but no potential for adverse impacts to these resources was identified. Consequently, there is no further discussion regarding these resources in this Final EIR/EA:

- Coastal Resources, Coastal Barriers, and Coastal Zone Impacts. The project site is approximately 40 miles east of the Pacific Ocean and would, therefore, not have an effect on any coastal resources.
- Fisheries. There are no fisheries in the project vicinity.
- Wild and Scenic Rivers. There are no rivers listed in the National Inventory of Wild and Scenic Rivers located near the project vicinity.
- Timberlands. There are no timberlands located near the project vicinity.

Human Environment

2.1 Land Use

The information in this section is based on the *Community Impact Assessment* (CIA) (Caltrans, September 2008).

2.1.1 Study Area Definition

The proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) is located in a fast-growing area within Santa Clarita Valley, which is located in the northernmost portion of Los Angeles County (North County) where I-5 meets the Antelope Valley Freeway (SR-14). The topography of the Valley consists of rolling hills within the middle of the Valley, with the Santa Clara River flowing through the center to steep hillsides and canyons stretching to the north, south, and east. The Angeles National Forest contains much of the Valley to the far north and south, with the west bordering Ventura County and the east following the SR-14 to Acton and Antelope Valley.

The Santa Clarita Valley covers about 590 square miles and combines two primary geographical areas, the City of Santa Clarita's corporate limits and the unincorporated area of the County of Los Angeles within the Santa Clarita Valley, which surrounds it. The City of Santa Clarita, which was incorporated on December 15, 1987, and encompasses approximately 48.1 square miles, includes most of the communities of Valencia, Newhall, Saugus, and Canyon Country, and the subcommunities of San Canyon and Placerita Canyon. The communities within the unincorporated areas of Los Angeles County include Agua Dulce, Castaic, Stevenson Ranch, and Val Verde.

The communities affected by the proposed project include the City of Santa Clarita and unincorporated areas of Los Angeles County, namely Valencia, Newhall, Stevenson Ranch, and Castaic, as shown in Figure 2.1.1. The potential effects to these communities are discussed in Section 2.4.

2.1.2 Study Area Census Tracts

The study area for the proposed project comprises 11 tracts from the 2000 Census that are adjacent to or encompass I-5 within the project area. The study area census tracts remain the same for both Build Alternatives. As illustrated in Figure 2.1.2, there are five census tracts located in unincorporated Los Angeles County, and six in the City of Santa Clarita.

2.1.3 Regulatory Setting

Public Resources Code 21083 and 21087 and California Environmental Quality Act Guidelines Section 15126.2(a) require Lead Agencies to assess the impact of a proposed project by examining alternations in the human use of the land, including population distribution and population concentration, and commercial and residential development. Section 15131 allows public agencies to consider economic and social impacts when determining the significance of an environmental impact.

Council on Environmental Quality (CEQ) regulation 40 CFR 1502.16(c) requires environmental documents to identify possible conflicts between the project and local land use plans.

2.1.4 Existing and Future Land Use

Land use is addressed in terms of existing and planned land uses. Existing land uses are defined as those uses of the project study area and adjacent areas that existed at the time the Community Impact Assessment was conducted. Existing land uses were determined through aerial photograph interpretation and field reconnaissance.

Planned land uses are future land uses that will occur as a result of land use designations and policies contained in applicable land planning documents. The applicable land use planning documents for the project study area are the City of Santa Clarita General Plan (June 1991) and County of Los Angeles Santa Clarita Valley Area Plan (updated in 1990). In addition to the General Plans mentioned above, the Technical Background Report (TBR), completed in February 2004 for the One Valley One Vision (OVOV) Santa Clarita Valley General Plan, was also reviewed.

2.1.4.1 Affected Environment

Existing Land Use Patterns

Current land use patterns within the proposed project area reflect a mixture of open space, residential, industrial and commercial uses (Figure 2.1.3).

The southern portion of the study area to the west of I-5, from SR-14 intersection to Calgrove Boulevard, is undeveloped and within the jurisdiction of the unincorporated Los Angeles County community of Stevenson Ranch. The Santa Clarita Woodlands State Park, a 4,000-acre (ac) public park, is included in this area. Camelot Riding Club is a small commercial use area adjacent to Coltrane Avenue immediately north

of Weldon Canyon Road. East of I-5 in this segment is mostly vacant land with a small residential use area of mobile homes south of Calgrove Boulevard adjacent to The Old Road.

This central portion of the project limits between Calgrove Boulevard and Magic Mountain Parkway account for most of the development in the project area. The community of Stevenson Ranch consists of both single and multifamily residential areas, with pockets of commercial/office uses. Stevenson Ranch is a master planned community, and was approved by the county in 1987. A retail center and a golf course are located between Pico Canyon Road and Stevenson Ranch Parkway.

The city of Santa Clarita lies east of I-5 with the communities of Newhall to the south of Lyons Avenue and Valencia to the north, which consist primarily of residential uses with a small proportion of commercial and industrial uses. The I-5 Horse Ranch property is located in Newhall, immediately adjacent to I-5 north of Calgrove Boulevard, and is used to board horses. Residential land uses between Calgrove Boulevard and Lyons Avenue include a mobile home park and single-family residences. Commercial developments are located along Lyons Avenue and Magic Mountain Parkway at the I-5 intersection. Several recreation facilities and the California Institute of the Arts, and the College of the Canyons occupy the undeveloped Open Space areas between Lyons Avenue and Magic Mountain Parkway.

Six Flags Magic Mountain Theme Park is located west of I-5 and south of the Santa Clara River in the unincorporated Los Angeles County portion of Valencia and is a major commercial and amusement use. The Santa Clara River crosses the project area north of Magic Mountain Parkway. The Valencia Industrial Center, a large concentration of light industrial uses, is located east of I-5 within Santa Clarita city limits. Agricultural land uses exist west of I-5 close to the SR-126 intersection.

The northern portion of the project area is within the area of unincorporated Los Angeles (Castaic) with the exception of a small amount of vacant land east of I-5 between SR-126 and Castaic Creek. Immediately north of this vacant land is a large area of agricultural use adjacent to I-5. Also at this area, within the community of Castaic is the Peter J. Pitchess Detention Center (Wayside Honor Rancho), a recently downsized Los Angeles incarceration facility. The Castaic County Sports Complex is located at the northern end of this segment. The area to the west of I-5 in Castaic consists mostly of residential uses, including a mobile home park, and vacant land

with small areas of agricultural, industrial and commercial uses. Valencia Commerce Center, located at the junction of SR-126 and I-5, contributes significantly to industrial used in the unincorporated County areas of the Santa Clarita Valley.

Future Land Use Patterns

County of Los Angeles

Figure 2.1.4 displays the land use designations under the existing adopted County of Los Angeles General Plan.

Designated land use patterns along I-5 reflect a mixture of open space, residential, industrial, and commercial use. Areas designated as Hillside Management are located northwest of I-5 and SR-126, east of I-5 and Castaic, and west of I-5 surrounding Stevenson Ranch. The Santa Clara River and its tributaries are designated as floodplains and Significant Ecological Areas (SEA). An area west of I-5 between McBean Parkway and Valencia Boulevard and a small section in the Michael D. Antonovich Open Space are also designated as SEAs.

Significant Ecological Areas (SEAs) within Los Angeles County were originally designated in 1972 to identify areas of high biological resource value, which should receive special consideration during the formulation of the 1973 Los Angeles County General Plan. The SEA study was updated in 1976, and is currently undergoing another update. of general in nature and broadly outline the biotic resources of concern. The Los Angeles County General Plan allows development in SEAs as long as development is “highly compatible” with the identified resources (CDFG and ACOE 1999).

The Los Angeles County General Plan provides a set of Design Compatibility Criteria to which developments in SEAs must conform, as well as an SEA Performance Review Procedure for proposed developments that require discretionary approval by the County of Los Angeles. The procedure includes review of “biota reports” on proposed projects by the County’s Significant Ecological Area Technical Advisory Committee (SEATAC), followed by SEATAC recommendations to the decision-making body. The County General Plan states that development of transportation facilities within SEAs, if found essential, “shall be constructed in the most environmentally sensitive manner.” A Conditional Use Permit is required for discretionary development approvals in an SEA as set forth in Section 22.56.215 of the County Code.

Currently the County is in the process of updating the General Plan. Along with this process several SEAs are currently being proposed for expansion. Because the General Plan update is currently being updated, final SEA boundaries are not defined. Furthermore, the 1976 SEA boundaries were somewhat crudely drawn on USGS topographic maps at a scale of 1 in= 200 ft, and thus are not precise enough to provide a detailed assessment at the design level for the proposed project.

City of Santa Clarita

Figure 2.1.5 displays the land use designations under the existing adopted City plan.

Designated land use along I-5 south of McBean Parkway is mostly residential, with pockets of commercial, private education, and open space areas. The Valencia area north of McBean Parkway is mostly designated for commercial use as Commercial Town Center. A Commercial Town Center designation permits a wide range of retailing, service, and related activities located in and around a large regional shopping center.

Development Trends in the Project Area

Table 2.1.A provides a list of development projects in close proximity to the proposed project. The locations of these projects are shown on Figure 2.1.6.

Substantial residential and commercial development has occurred within the City of Santa Clarita (east of I-5) and within unincorporated Los Angeles County (both east and west of I-5). Future commercial and residential development has been approved and proposed within the Santa Clarita Valley. The Southern California Association of Governments (SCAG) projects an increase of almost 70,000 dwelling units and 50.1 million square feet of commercial, retail, office, and industrial use within the Santa Clarita Valley between 2004 and 2030.[1] As of 2008, 42,000 dwelling units had received land use approval, including 36,000 units in the County and 6,000 units within the City. Several thousand more had land use applications pending.[2]

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1 Austin-Foust Associates, Inc., *I-5 PA&ED HOV and Truck Lanes-SR-14 to Parker Road Traffic Study,* October 2007.

2 City of Santa Clarita, County of Los Angeles, *Santa Clarita Valleywide General Plan One Valley One Vision: Draft Land Use Element,* July 2008.

Table 2.1.A Development Projects

Figure ID No	Project Name Jurisdiction/Location	Proposed Uses	Status
1	Las Lomas Los Angeles County/Northeast of I-5 and SR-14 Interchange	5,800 residential units, 2.3 million sq ft office space, 225,000 sq ft retail, 3 public schools	Not approved
2	Warner Ranch /Lyons Canyon Los Angeles County/Northwest of I-5 and SR-14 Interchange	93 single-family units, 92 senior condos, 5 open spaces, 6 public facilities, 1 fire station, 1 park	Pending
3	Westridge Los Angeles County/North and south of Valencia Blvd., West of Old Road	1,232 single-family units, 997 multifamily units, 526 condominium units	Built out
4	Magic Mountain Entertainment/Entrada Los Angeles County/West of Magic Mountain Parkway and McBean Parkway	454-acre business park, 428 single-family units, 2,959 condominium units	Pending
5	Commercial Development Los Angeles County/Henry Mayo Drive and Old Road	134,898 sq ft shopping center	Pending
6	Valencia Commerce Center Los Angeles County/ Northwest of I-5 and SR-126	1,600-acre business/light industrial park	In various stages of construction
7	Newhall Ranch Los Angeles County/Southwest of I-5 and SR-126	21,000 home, 12,000-acre development	Expected to begin in 2009
8	Residential Development Los Angeles County/West of I-5 between Sedona Way and Hillcrest Parkway	35 single-family detached condos	Pending
9	Lakeview Estates Los Angeles County	70 single-family units	Under construction

Source: Community Impact Assessment, September 2008.

New construction that occurs within the project area is subject to the plans and policies set out in the regional, state, and local plans discussed in Section 2.1.3. These plans address land use plans and growth policies for the area, provide future growth projections, and formulate a strategy for dealing with the impacts of growth.

2.1.4.2 Environmental Consequences

Temporary Impacts

Construction of the Build Alternatives is expected to last approximately six years. Typical roadway construction activities would result in some temporary, localized impacts to land uses in the area, including additional truck traffic, pollutant emissions from construction activities, increased noise and vibration, temporary delays and/or detours. However, such potential construction impacts would be temporary and intermittent, and would not result in changes in existing land uses or General Plan land use designations in this area.

Both Build Alternatives would require Temporary Construction Easements (TCEs) to provide access to construct the improvements. The TCEs for both Alternatives are identified on the Project Features Maps provided in Section 1. TCEs would not affect

existing or designated land uses, except for temporary loss of parking spaces, storage space, and field road access.

Early Implementation Project (EIP)

One Temporary Construction Easement (TCE) would be necessary during EIP construction activities. This TCE would also be required for the Build Alternatives. The TCE requirements for the EIP improvements would be less than this maximum acreage.

Similar to the Build Alternatives, there would be no temporary impacts to land use patterns or distribution within the limits of the EIP.

Permanent Impacts

Alternative 1: No Build Alternative

This alternative would not result in any changes to existing or proposed land use nor would it conflict with land use plans or planned development in the study area. Therefore, this alternative would not result in any impacts to land use.

Alternative 2: Reduced Median Alternative

Alternative 2 would require acquisition of four parcels for additional right of way. The acquisitions would be limited to one partial parcel and one full parcel.

Full and partial parcel acquisitions are identified by Assessor's Parcel Number in Table 2.1.B below. A full parcel acquisition would be required west of I-5, at the northwest corner of Calgrove Boulevard and The Old Road. Since the land is undeveloped and currently vacant, they would not affect structures of human habitation and there would be no displacement of people. The one partial acquisition parcel is also vacant, containing only vegetation and/or unpaved field roads. Therefore, the partial acquisition would not result in any displacement or relocation of land uses.

Table 2.1.B Right of Way Acquisitions for Alternative 2

Assessor's Parcel Number	Right of Way Acquisition acres (ac)	Full or Partial Acquisitions	Impacts to Existing Land Use
282-6023-011	1.60	Full	None
282-6025-905	0.02	Partial	None

Source: Community Impact Assessment, September 2008.

Alternative 2 would not cause a substantial change on the existing land uses or the General Plan land use designations for these parcels. Therefore, it would not have an adverse effect on existing and designated land use in the area. In addition, Alternative 2 would not negatively impact the planned development described above.

Alternative 3: Full Median Alternative

The Full Median Alternative would have the same permanent impacts to land use, except it would require acquisition of four parcels for additional right of way. The acquisitions would be limited to three partial parcels and one full parcel as shown in Table 2.1.C.

Table 2.1.C Right of Way Acquisitions for Alternative 3

Assessor's Parcel Number	Right of Way Acquisition acres (ac)	Full or Partial Acquisitions	Impacts to Existing Land Use
282-6023-011	1.60	Full	None
282-6025-905	0.05	Partial	None
286-6002-045	0.02	Partial	None
286-6002-057(060)	0.10	Partial	None

Source: Community Impact Assessment, September 2008.

The additional two partial acquisitions for this alternative would also occur on vacant land. Therefore, it would not have an adverse effect on existing and designated land use in the area. In addition, Alternative 3 would not negatively impact the planned development described previously.

Early Implementation Project (EIP)

Similar to the Build Alternatives, there would be no permanent impacts to land use patterns or distribution within the limits of the EIP, as there would be no permanent acquisition of land.

2.1.4.3 Avoidance, Minimization and/or Mitigation Measures

No measures are required since there would be no adverse impacts on land use either from the EIP or the proposed project.

2.1.5 Consistency with State, Regional, and Local Plans

Several land use plans and transportation policies are applicable within the study area for the proposed project. A brief description of the purposes, goals, and policies for each of these planning documents follows.

2.1.5.1 Affected Environment

State Plans

California Transportation Plan 2025

In 2006, the California Department of Transportation (Caltrans) published the California Transportation Plan 2025 (CTP), which was developed in coordination with the California Transportation Commission (CTC) and 45 regional transportation planning agencies, including SCAG, the metropolitan planning organization responsible for regional planning in the greater Los Angeles area. It was updated in October 2007 by the CTP 2030 Addendum to comply with the Safe, Accountable, Flexible, Efficient, Transportation Equity Act–A Legacy for Users (SAFETEA-LU).

The CTP is a policy plan designed to guide transportation investments and decisions at all levels of government and by the private sector to enhance our economy, support our communities, and safeguard our environment for the benefit of all. In consideration of general guidelines for sustainable development (encompassing economy, social equity, and environment), the following state transportation goals were developed in consultation with numerous public and private transportation providers and system users:

- **Goal 1: Improve Mobility and Accessibility.** Expanding the system and enhancing modal choices and connectivity to meet the state's future transportation demands
- **Goal 2: Preserve the Transportation System.** Maintaining and rehabilitating California's extensive transportation system to preserve it for future generations.
- **Goal 3: Support the Economy.** Ensuring the state's continued economic vitality by securing the resources needed to maintain, manage, and enhance the transportation system, while providing a well-organized and managed goods movement system
- **Goal 4: Enhance Public Safety and Security.** Ensuring the safety and security of people, goods, services, and information in all modes of transportation
- **Goal 5: Reflect Community Values.** Finding transportation solutions that balance and integrate community values with transportation safety and performance, and encourage public involvement in transportation decisions
- **Goal 6: Enhance the Environment.** Planning and providing transportation services while protecting our environment, wildlife, and historical and cultural assets.

I-5 Transportation Concept Report

The Transportation Concept Report for I-5, prepared by Caltrans in November 1998, suggests a configuration for I-5 that will meet projected demands within a framework of common sense and regional policy. Specifically, the Transportation Concept Report recommends four mixed-flow lanes, two HOV lanes, and one truck lane in each direction.

2.1.5.2 Regional Plans

North County Combined Highway Corridors Study

The Los Angeles County Metropolitan Transportation Authority (MTA) prepared the North County Combined Highway Corridors Study (June 24, 2004) to develop feasible and cost-effective solutions for alleviating traffic congestion in the North Los Angeles County area. Both short- and long-range improvements for the project corridor were identified in the North County Study. As part of the Short Term Plan, the addition of an HOV lane and a truck lane in each direction from the I-5/SR-14 interchange to Calgrove Boulevard and addition of an HOV lane in each direction from Calgrove Boulevard to I-5/SR-126 was identified. The Long Range Plan identified addition of one truck lane and one HOV lane from SR-14 to Calgrove Boulevard, two truck lanes, and one HOV lance from Calgrove Boulevard to SR-126 and one truck lane and one HOV lane from SR-126 to Lake Hughes. Both studies acknowledge the existing and projected population growth within the Santa Clarita Valley and identified freeway improvements that respond to this growth.

Regional Comprehensive Plan and Guide

The last RCPG was adopted in April 2004 and presents a vision of how southern California can balance resource conservation, economic vitality, and quality of life. It provides guidance to approach growth and infrastructure challenges in a comprehensive way.

The Preliminary Draft Transportation Chapter (updated November 1, 2007) of the Draft 2008 RCP discusses the growth in truck traffic and forecasts up to 216 percent more truck trips by 2035. It predicts that severe congestion due to truck traffic will worsen in the region's major transportation corridors. Truck climbing lanes and dedicated truck lanes are among the goods movement strategies on the Draft 2008 RCP. In addition, the Transportation Action Plan indicates that SCAG shall support and encourage HOV gap closures that significantly increase transit and rideshare usage.

Regional Transportation Plan Update

The Southern California Association of Governments (SCAG) is designated by the federal government as the southern California region's Metropolitan Planning Organization (MPO) and Regional Transportation Planning Agency (RTPA). SCAG functions as the MPO for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. SCAG recognizes that planning issues extend beyond the boundaries of individual cities and has sought to address concerns through various documents, including the Regional Comprehensive Plan and Guide (RCPG) and the Regional Transportation Plan (RTP).

The SCAG RTP serves as the primary transportation planning document for the southern California region. It describes local and regional trends that affect the transportation system and recommends solutions to improve mobility and accessibility. The RTP is updated every three years to ensure consistency with population, housing, employment, and environmental trends; land use forecasts; and technology changes.

Destination 2030, the SCAG 2004 RTP, was completed in March 2004 and adopted in April 2004. It represents an assessment of the overall growth and economic trends in the SCAG region for the years 2004 through 2025 and provides strategic direction for investments during this time period. SCAG is mandated by federal law to adopt a RTP every four years. The 2008 RTP was adopted on May 8, 2008.

The adopted goals of the 2004 RTP are as follows:

1. Maximize mobility and accessibility for all people and goods in the region;
2. Ensure travel safety and reliability for all people and goods in the region;
3. Preserve and ensure a sustainable regional transportation system;
4. Maximize the productivity of the region's transportation system;
5. Protect the environment, improve air quality, and promote energy efficiency; and
6. Encourage land-use and growth patterns that complement the region's transportation investments.

In addition, the 2004 RTP indicates the following that are relevant to the proposed project:

- HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged;
- The concept of dedicated facilities to accommodate truck traffic will be explored; and

- The plan proposes adding a number of truck climbing lane improvements to the region's highway system.

2.1.5.3 Local Plans

County of Los Angeles General Plan

Last adopted in 1980, the Los Angeles County General Plan is currently going through a comprehensive update. The 2008 Draft General Plan represents an analysis of the current condition in the County, and envisions goals and policies with a 20-year horizon. The Draft General Plan identifies the following goals and policies relevant to the proposed project:

- **Goal C-1:** An accessible circulation system that ensures the mobility of people and goods throughout the County.
- **Policy C 1.4:** Maintain transportation right of way corridors for future transportation uses.
- **Goal C-2:** An efficient circulation system that effectively utilizes and expands multimodal transportation options.
- **Policy C 2.3:** Reduce Vehicle Miles Traveled (VMT) and vehicle trips through the use of alternative modes of transportation and various mobility management practices, such as employer/institution based transit passes, regional carpooling programs, teleconferencing, and telecommuting.
- Policy C 3.1: Encourage the use of emerging technologies in the development of transportation facilities and infrastructure, such as hydrogen gas stations, Intelligent Transportation Systems (ITS), and electric car plug-in ports.

County of Los Angeles Santa Clarita Valley Area Plan

The following policies from the Valley Plan are relevant to the proposed project:

Land Use Element

Impact of Transportation on Future Land Use Patterns and Provision of Adequate Transportation Systems

- **Policy 9.2:** Encourage development of access throughout the Santa Clarita Valley.
- **Policy 9.2a:** As development occurs in each community, appropriate links should be provided from residential areas to major destination points.
- **Policy 9.3:** Encourage development of transportation systems consistent with the plan.

Economic Development Element

- **Policy 1.3:** Support infrastructure improvements in appropriate locations which contribute to development or expansion of employment producing uses.

Circulation Element

- **Policy 2.1:** Encourage the State of California to improve the capacity of the Golden State and Antelope Valley Freeways as traffic volumes dictate.
- **Policy 2.3:** Encourage the State of California to expand the access to the freeway system as needed to serve the area and to maximize freeway capacity.

One Valley, One Vision

The One Valley, One Vision project was initiated in the summer of 2000 by the City of Santa Clarita and the County of Los Angeles. It is intended to result in a common General Plan for the entire Valley that will be administered by the City and County for lands within their respective jurisdictions. The primary goal of the new Valley-wide General Plan is to facilitate improved planning and coordination between the City and the County. The General Plan Document/EIR was issued in December 2002 and has not yet been adopted by the City or the County. Therefore, the Santa Clarita General Plan and the Valley Plan are still in effect.

City of Santa Clarita General Plan

Land Use Element

The Land Use Element for the City of Santa Clarita establishes a pattern of land use and identifies standards for development. The land use element also serves as a guide for future development, indicating the location and extent of existing and planned land uses.

The following policies are relevant to the proposed project:

- **Policy 2.11:** Provide for the reservation of adequate land to meet projected institutional and infrastructure needs.
- **Policy 3.5:** Promote Santa Clarita's location along I-5 as an important link between southern and northern California, as the northern gateway to the metropolitan Los Angeles area, and as a self-sufficient community and center serving the broader region.
- **Policy 7.1:** Ensure demand for public facilities and services does not exceed the ability to provide and maintain such facilities and services; necessary facility improvements should precede or be coordinated with future development.

Circulation Element

The Circulation Element of the General Plan (amended in December 1997) is a comprehensive plan for vehicular and nonvehicular circulation and transportation within the city of Santa Clarita.

- **Goal 1:** To provide a circulation system to move people and goods safely and efficiently throughout the city of Santa Clarita and the general Planning Area.
- **Policy 1.11:** Improve circulation facilities to provide improved levels of service and standards of safety over current traffic operations with a priority to improve local transportation patterns.
- **Policy 1.15:** Maximize and improve the operating efficiency and safety of the existing roadway system whenever possible.
- **Policy 1.17:** The City will maintain adequate access to state highways and freeways serving the Santa Clarita planning area, including I-5 on the west, SR-14 on the southeast, and SR-26 on the northwest.
- **Policy 5.4:** Encourage the creation of HOV lanes and other methods to increase the capacity of SR-14 and I-5.
- **Policy 5.5:** Encourage intergovernmental coordination and cooperation among all agencies and levels of government for the planning, management, financing, and implementation of transportation system improvements.

Castaic Area Community Standards District (CSD)

A CSD is a supplemental zoning overlay district in unincorporated areas of the County that implements special development and zoning standards within an adopted neighborhood, community, and/or area. The Castaic CSD defines the Castaic area of influence within Los Angeles County and describes the development standards that manage the growth of the community. The Castaic CSD also provides a set of guidelines for a specific portion of the County that have been voted on and approved by the County and subsequently entered into the book of County ordinances.

The Los Angeles County Board of Supervisors approved the Castaic CSD in November of 2004. Its goal is to help maintain the rural look and feel and natural resources that compose this area. The CSD defines how Castaic should grow and sets up guidelines for developers, County officials, and citizens in managing that growth. It establishes the official boundary for Castaic in its relation to the surrounding communities. It identifies several ridgelines and trails in the area to be preserved and requires minimum lot sizes for new development.

Newhall Ranch Specific Plan

The Newhall Ranch Specific Plan area is located two miles west of Magic Mountain Amusement Park in Potrero Canyon. The Plan was adopted in 1999 and provides for five integrated mixed-use villages on a site of 11,963 ac. Residential development is anticipated to provide 21,308 units at build out. Planned housing types range from Estate Residential and Low-Density to High-Density and Mixed-Use.

2.1.5.4 Environmental Consequences

The discussion below focuses on the impacts of the Build Alternatives (Alternatives 2 and 3) on state, regional and local plans. The EIP would have similar impacts to the Build Alternatives. The No Build Alternative would not result in any impacts on adjacent land uses; however, it would not be consistent with or meet the goals of the plans discussed in the previous section.

Consistency with State Plans

The purpose of the proposed project is to reduce existing and forecast traffic congestion on the project segment in order to accommodate planned growth in the area and to facilitate movement of people, freight, and goods. The project proposes improvements such as HOV and truck lanes to achieve these objectives. The CTP and the I-5 Transportation Concept Report recognize the significant growth in the region and recommend solutions such as HOV and truck lanes to improve mobility and accessibility. As such, the project is consistent with state plans discussed in the previous section.

Consistency with Regional Plans

This project proposes to complete portions of the short- and long-range strategies outlined in the North County Combined Highway Corridors Study. MTA and other local agencies are pursuing the Transportation System Management (TSM) and transit elements of the Study. In addition, the Build Alternatives of the proposed project are consistent with the SCAG Draft 2008 RCP as the Draft RCP considers dedicated truck lanes among the goods movement strategies, and supports HOV gap closures.

The proposed project is consistent with the adopted goals of the RTP, as cited in the previous section. The project is in the 2008 RTP, which was found to be conforming by the Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) on June 5, 2008. The project is also in the 2008 Regional Transportation Improvement Program (RTIP), which was found to be conforming by the FHWA/

FTA on November 17, 2008. The project conforms to the State Implementation Plan (SIP) since it is consistent with the current RTP and RTIP.

Consistency with Local Plans

The proposed project is consistent with each of the County General Plan, Santa Clarita Valley Area Plan, and City of Santa Clarita General Plan goals and policies discussed in the previous section. These plans anticipate significant growth in the Santa Clarita Valley, and have adopted goals and policies to reduce congestion. The Circulation Elements of both the Valley Area Plan and the City General Plan emphasize the need to improve circulation facilities in the area to accommodate the expected growth. The City Plan Circulation Element specifically encourages the creation of HOV lanes on I-5. Therefore, the Build Alternatives are fully supportive of the local plans. The proposed improvements would support continued economic vitality in the surrounding communities by improving conditions for the movement of people and goods. The project would enhance public safety and security through the improvement of driving conditions, and would also enhance environmental conditions through an improvement in traffic flow and a reduction of automobile emissions. Overall, the project is anticipated to improve mobility and accessibility, and serve as a benefit to the surrounding communities and future land use goals.

The proposed project alignment crosses over the Santa Clara River SEA (Figure 2.1.4). The project features include the minimum necessary disruption of the Santa Clara River functions due to the placement of bridge support structures and protection against erosion. Mitigation measures to minimize the project effects on the riverine habitat and its inhabitants have been identified, and final mitigation measures must be approved by the CDFG, ACOE and USFWS. Wildlife movement under the I-5 along the River may be temporarily affected during construction, but, with the identified mitigation measures, will not be substantially compromised in the long term.

The currently mapped Valley Oaks Savannah and Santa Susanna Mountain/Simi Hills SEA boundaries appear to overlap slightly with the existing I-5 right of way, but it is unlikely that the intent of boundary designation was to include the I-5. In any case, the project impacts to these areas are minimal in the context of the SEA designations, and the project includes measures to mitigate for impacts to oak trees and other biological resources. In the event that the Santa Susanna Mountains SEA is ultimately extended to the east of the I-5, the most important issue would be wildlife movement. The potential project impacts to wildlife movement are addressed in Section 2.1.7.

The Lyon Mountain and San Francisquito Canyon SEAs do not intersect the project area, and will not be affected by the proposed project.

Because the proposed project is not subject to discretionary approvals by the County of Los Angeles, the SEA Performance Review Process is not likely to be applicable to the proposed project. However, consultation with the SEATAC related to these biological resources can be conducted as appropriate.

2.1.5.5 Avoidance, Minimization, and/or Mitigation

Since no adverse impacts are anticipated, no avoidance, minimization, or mitigation measures would be required.

2.1.6 Parks and Recreation

2.1.6.1 Affected Environment

The following parks and recreation facilities, as illustrated in Figure 2.1.7, are located within 1 mile radius of the project site:

Parks and Recreational Facilities

Santa Clarita Woodlands Park, Michael D. Antonovich Open Space, Ed Davis Park at Towsley Canyon, Hasley Canyon County Park, and Castaic Regional Sports Complex.

Trails

South Fork, Santa Clara River, Pico Canyon, Hasley Canyon, Gavin Canyon, and Castaic Creek.

Golf Courses

Vista Valencia Golf Course, Valencia Country Club and Golf Course, and Tournament Players Club of Valencia.

2.1.6.2 Environmental Consequences

Temporary Impacts

Alternative 1

The No Build Alternative would not require any construction activities and would not affect recreation resources.

Alternatives 2 and 3

Typcial roadway construction activities would result in some temporary, localized impacts to recreational resources such as additional truck traffic, pollutant emissions

from construction activities, and increased noise and vibration. Potential construction impacts would be temporary and intermittent, and would not be considered adverse.

Permanent Impacts

Alternative 1

The No Build Alternative would not impact parks and recreational facilities.

Alternative 2

A partial acquisition of land would be required from the Santa Clarita Woodlands State Park, which is a Section 4(f) resource. The acquisition is required to allow for widening of the existing overhead structure, and would be limited to approximately 0.02 ac. Public use of the park would not be affected because there are no recreational activities occurring at this location. In addition, access to the park is not at the location of the acquisition, and would not be affected. Therefore, the impact would be minimal.

Alternative 3

Alternative 3 would have the same impact to Santa Clarita Woodlands Park, except the acquisition under this proposal would be approximately 0.05 ac. The impact would be minimal.

Section 4(f) De Minimus Finding

SAFETEA-LU Section 6009(a) amended existing 4(f) legislation to allow the United States Department of Transportation (DOT) to determine that certain uses of 4(f) land will have no adverse affect on the activities, features, and attributes of the 4(f) resource. When this is the case, and the responsible official with jurisdiction over the resource agrees in writing, the proposed project would results in a *de minimis* impact on that property and no further Section 4(f) evaluation would be required. The *de minimus* finding considers avoidance, minimization, and compensation or enhancement measures. Caltrans has assumed the responsibility for making the *de minimis* determination pursuant to 23 U.S.C. 327.

It has been determined that the construction and encroachment of the proposed Build Alternatives would not affect the general public's recreational use of, or access to, Santa Clarita Woodlands State Park. Therefore, it is appropriate that a *de minimis* impact finding be made since the project would not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f). Santa Monica Mountains Conservancy (SMMC), the official with jurisdiction, has

been consulted, and a letter notifying our intention of a *de minimis* finding has been sent (provided in Appendix B).

The *de minimis* finding is warranted due to the following:

1. The Build Alternatives use land that is along the extreme eastern boundary of the Park and there are no recreational activities occurring in this portion of the Park. The integrity of existing recreation resources within the Park would not be jeopardized, and the access to the park would not be impacted.
2. The proposed project includes all appropriate measures to minimize harm and subsequent mitigation necessary to preserve and enhance those features and values of the property that originally qualified the property for Section 4(f) protection. In particular, Section 2.17 (Natural Communities) identifies replacement of native vegetation and participation in subregional efforts to facilitate/maintain wildlife movement.
3. The Park property does not qualify for consideration on the National Register of Historic Places (NRHP) and is not an archaeological resource property. In addition, the amount of disturbance, ranging from approximately 0.02 ac and 0.05 ac, is minimal.

Concurrence on the Section 4(f) *de minimis* finding was received from the SMMC. This concurrence is provided in Appendix B. The signed Section 4(f) *de minimis* impact finding for the project is provided in Appendix B.

2.1.6.3 Avoidance, Minimization, and/or Mitigation Measure

Minimization of temporary impacts to recreational land uses, such as the Castaic County Sports Complex are discussed in Section 2.1.4.1. The following measure would minimize impacts to Santa Clarita Woodlands Park within the study area:

LU-1 The Santa Monica Mountains Conservancy (SMMC) and the California Department of Transportation (Caltrans) have determined that the project's impact to Santa Clarita Woodlands Park is *de minimis*, and the following measures will be implemented as project commitments:

- The standard Caltrans 15-foot setback from the edge of the bridge to the right of way will be evaluated further during final design, and reductions will be considered to reduce impacts to the parcel. Caltrans is willing to reduce the setback, and will need to evaluate the reduction when more detailed information is available during design of the project.

- The amount of $65,000.00 will be paid to the SMMC through an in-lieu fee program prior to start of construction.
- Caltrans will work with the SMMC on possible fencing locations near the Gavin Canyon overcrossing, if necessary.
- Caltrans will pursue possible acquisition of Assessor's Parcel Number (APN) 2826-025-007 with the owner of the parcel if an agreement can be reached on the purchase price. The parcel will be turned over to the SMMC.

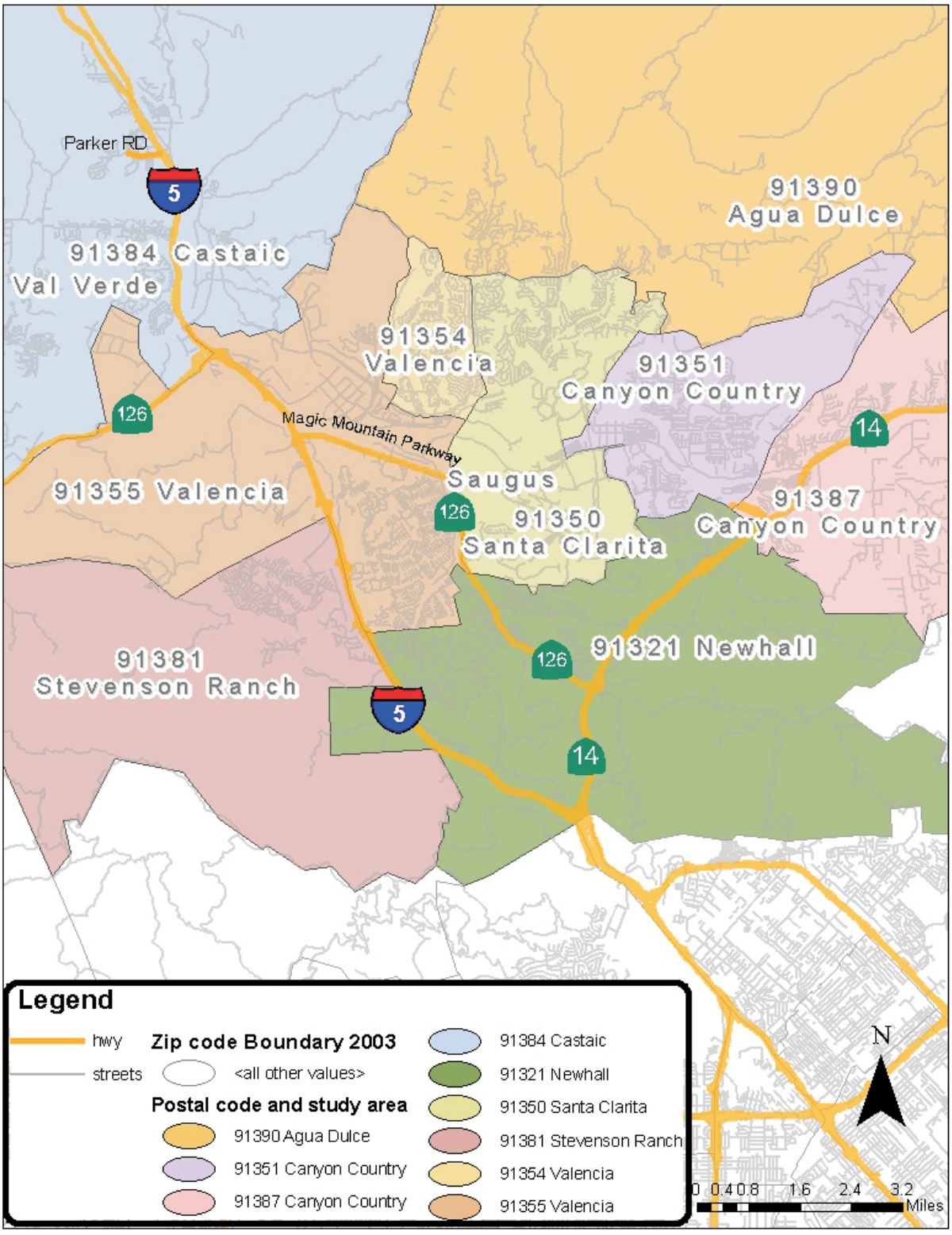

FIGURE 2.1.1

N

0 1.6 3.2 MILES
0 2.57 5.14 KILOMETERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project
Local Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0

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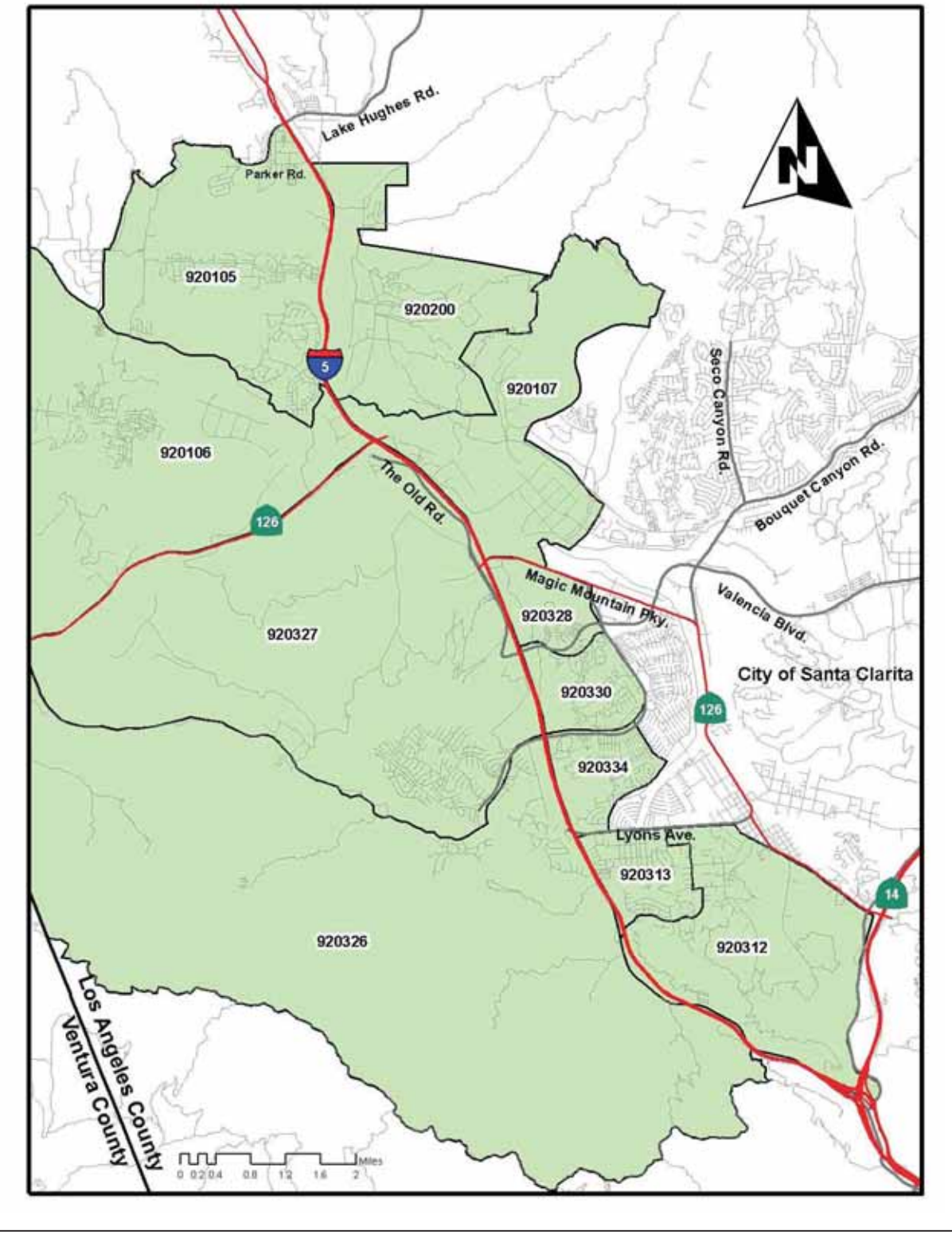

Highway
Major Road
Streets
Study Area

0 1 2 MILES
0 1,609 3,218 METERS

SOURCE: Caltrans

FIGURE 2.1.2

I-5 HOV / Truck Lanes Project
Study Area Census Tracks
07-LA-5 PM R45.4/R59.0
EA 2332E0

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Project Alignment
Highway
Roads

0 1320 2640 FEET
0 402 804 METERS

SOURCE: Caltrans

FIGURE 2.1.3
(Page 1 of 6)

I-5 HOV / Truck Lanes Project

Existing Land Use in the Study Area

07-LA-5 PM R45.4/R59.0
EA 2332E0

Project Alignment
Highway
Roads

N

0 1320 2640 FEET
0 402 804 METERS

SOURCE: Caltrans

FIGURE 2.1.3
(Page 2 of 6)

I-5 HOV / Truck Lanes Project
Existing Land Use in the Study Area
07-LA-5 PM R45.4/R59.0
EA 2332E0

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Project Alignment
Highway
Roads

N

0 1320 2640 FEET
0 402 804 METERS

SOURCE: Caltrans

FIGURE 2.1.3
(Page 3 of 6)

I-5 HOV / Truck Lanes Project

Existing Land Use in the Study Area

07-LA-5 PM R45.4/R59.0
EA 2332E0

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Project Alignment
Highway
Roads

0 1320 2640 FEET
0 402 804 METERS

SOURCE: Caltrans

FIGURE 2.1.3
(Page 4 of 6)

I-5 HOV / Truck Lanes Project

Existing Land Use in the Study Area

07-LA-5 PM R45.4/R59.0
EA 2332E0

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Project Alignment
Highway
Roads

0 1320 2640 FEET
0 402 804 METERS

SOURCE: Caltrans

FIGURE 2.1.3
(Page 5 of 6)

I-5 HOV / Truck Lanes Project

Existing Land Use in the Study Area

07-LA-5 PM R45.4/R59.0
EA 2332E0

Project Alignment
Highway
Roads

0 1320 2640 FEET
0 402 804 METERS

SOURCE: Caltrans

FIGURE 2.1.3
(Page 6 of 6)

I-5 HOV / Truck Lanes Project

Existing Land Use in the Study Area

07-LA-5 PM R45.4/R59.0
EA 2332E0

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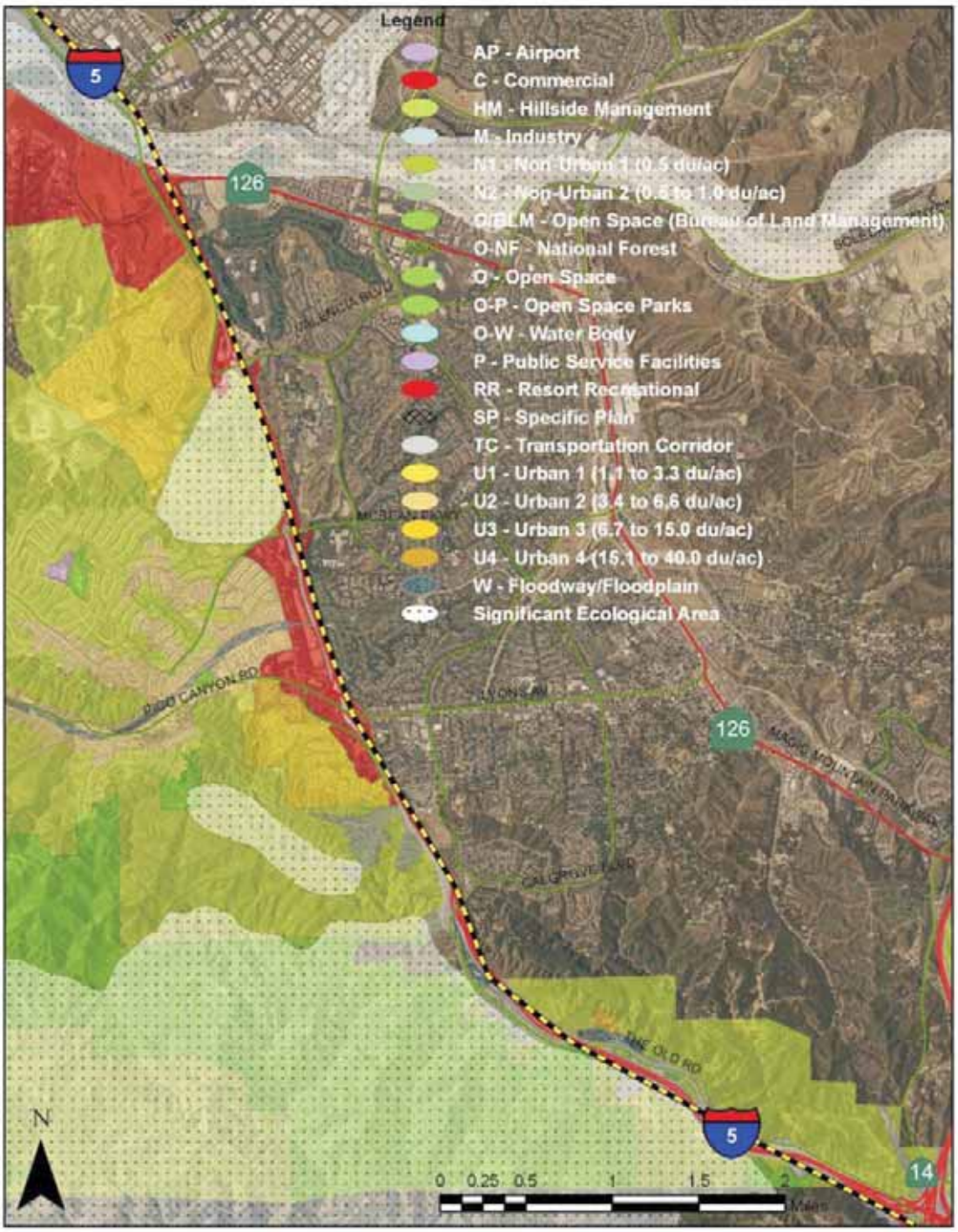


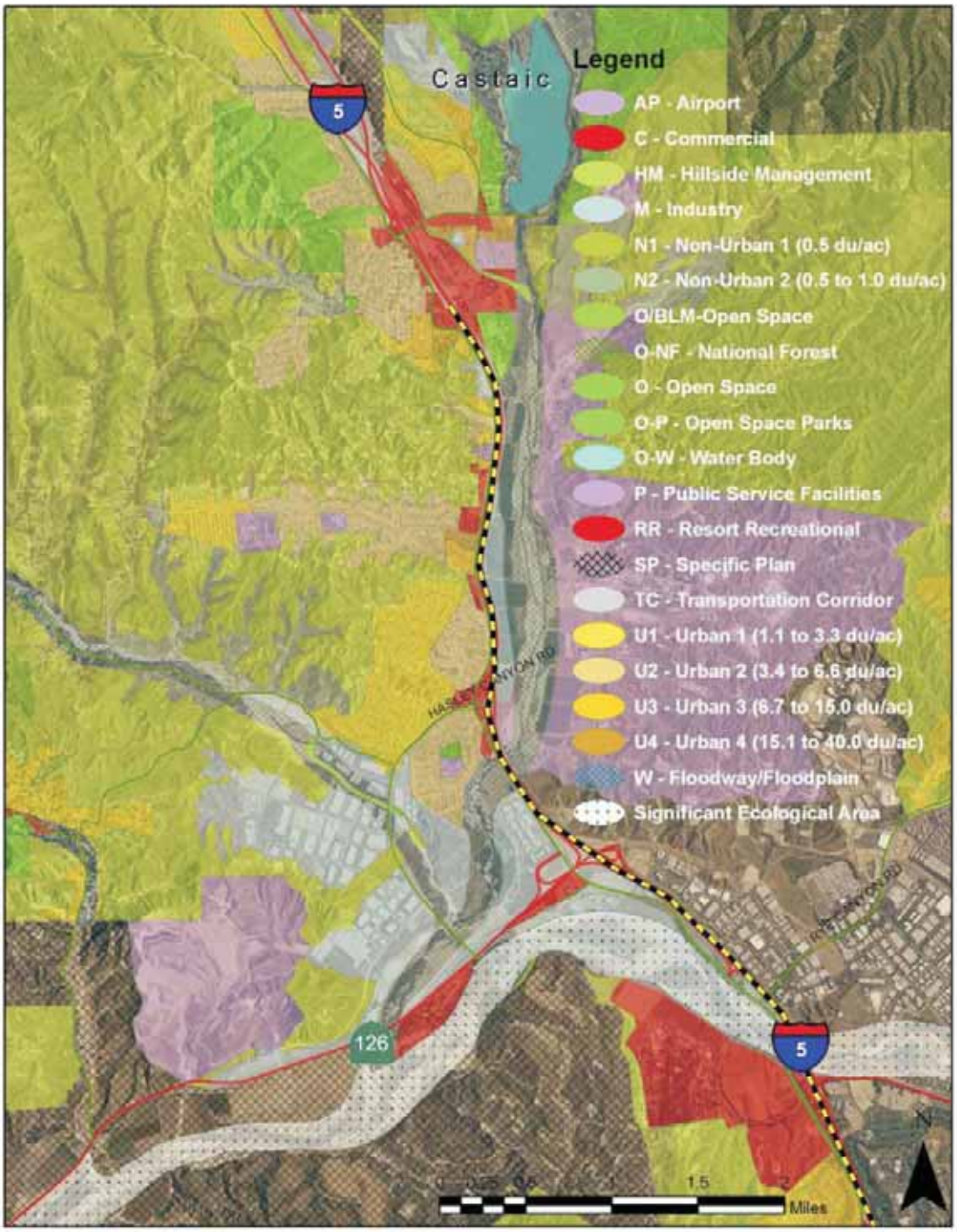
Project Alignment
Highway
Roads

0 3,960 7,920 FEET
0 1,207 2,414 METERS

SOURCE: Caltrans

FIGURE 2.1.4
(Page 1 of 2)

I-5 HOV / Truck Lanes Project
County of Los Angeles General Plan
Land Use Designations
07-LA-5 PM R45.4/R59.0
EA 2332E0



Project Alignment
Highway
Roads

0 3,960 7,920 FEET
0 1,207 2,414 METERS

SOURCE: Caltrans

FIGURE 2.1.4
(Page 2 of 2)

I-5 HOV / Truck Lanes Project
County of Los Angeles General Plan
Land Use Designations
07-LA-5 PM R45.4/R59.0
EA 2332E0

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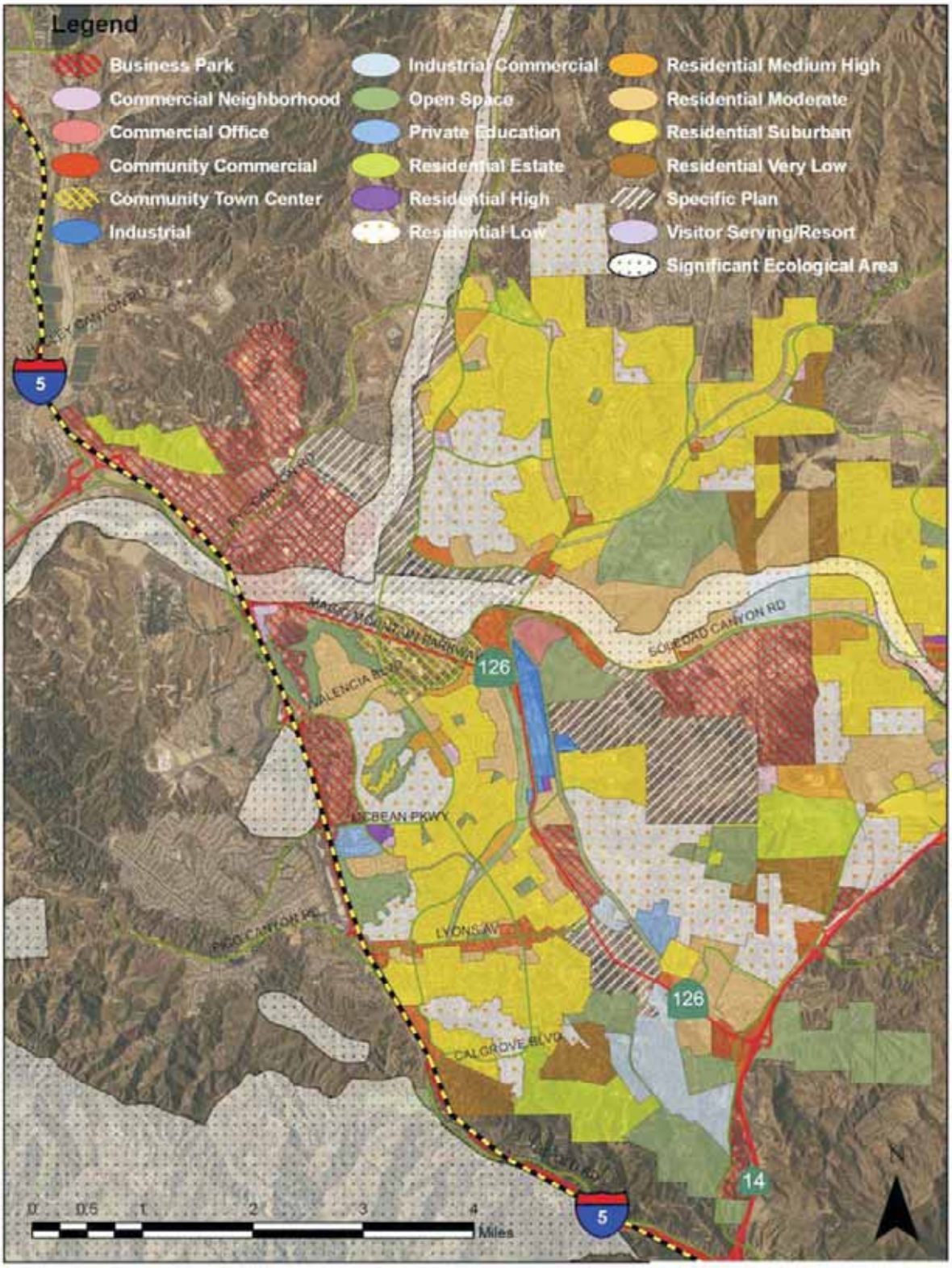

FIGURE 2.1.5

Project Alignment
Highway
Roads

I-5 HOV / Truck Lanes Project
City of Santa Clarita General Plan
Land Use Designation
07-LA-5 PM R45.4/R59.0
EA 2332E0

0 1 2 MILES
0 1,609 3,218 METERS
SOURCE: Caltrans

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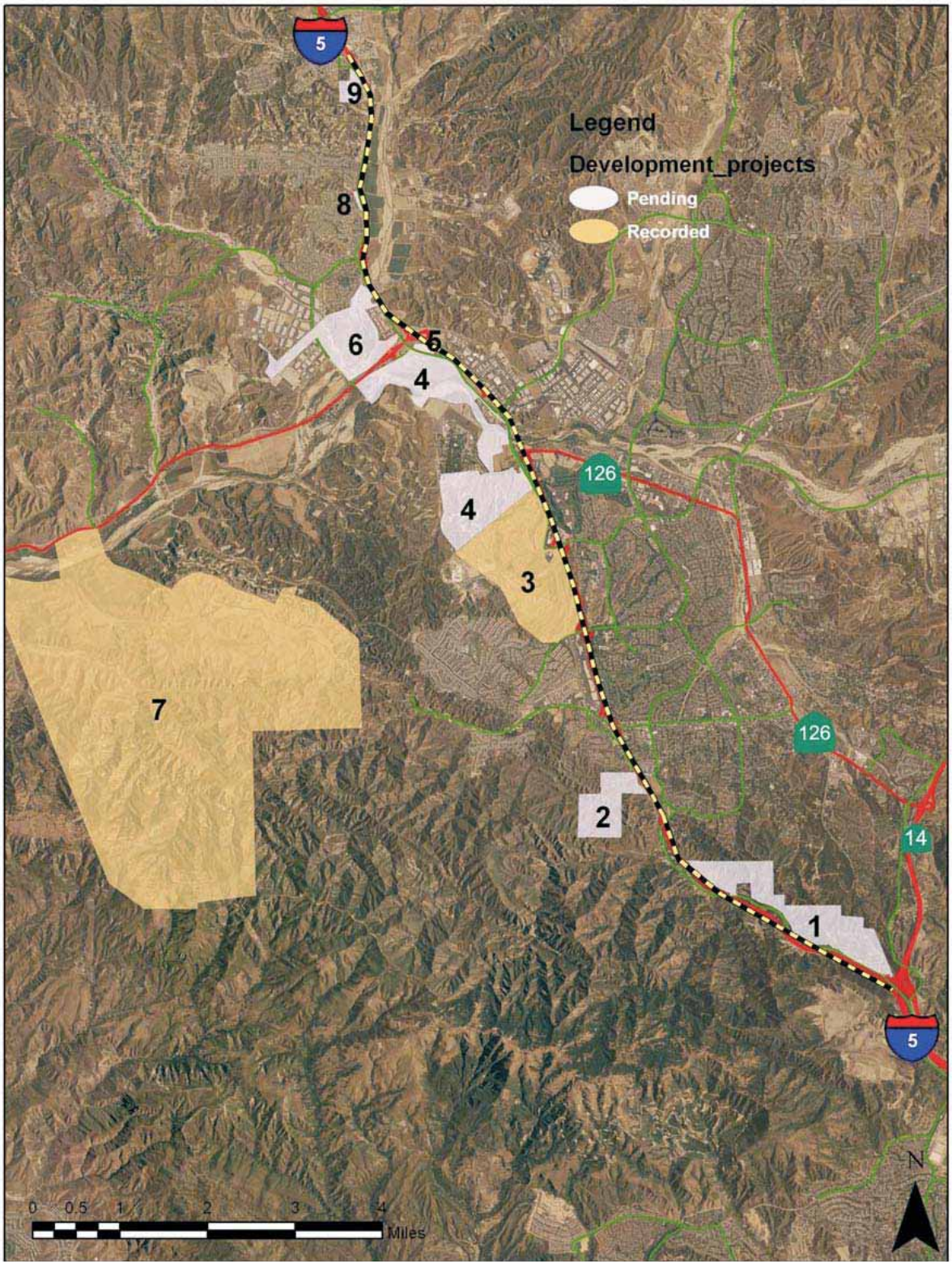

FIGURE 2.1.6

Project Alignment
Highway
Roads

0 1.5 3 MILES
0 2.4 4.8 KILOMETERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project

Location of Development Projects

07-LA-5 PM R45.4/R59.0
EA 2332E0

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FIGURE 2.1.7

Parks, Open Space, and Recreation Areas
Multi-Purpose Trails
Highway

N

0 1 2 MILES
0 1,609 3,218 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project
Recreational Resources
07-LA-5 PM R45.4/R59.0
EA 2332E0

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2.2 Growth

The information in this section is based on the *Community Impact Assessment* (CIA) (Caltrans, September 2008).

2.2.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

2.2.2 Affected Environment

The growth-related impacts of the proposed project were assessed using the *Guidance for Preparers of Growth-Related, Indirect Impacts Analyses by California Department of Transportation*. The guidance specifically deals with the subset of indirect effects that are referred to as "growth-related impacts" associated with highway projects that encourage or facilitate land use or development that changes the location, rate, type, or amount of growth.

The guidance adopts a two-phase approach to the evaluation of growth-related impacts. The first phase, called "*first cut screening*," is designed to determine the likely growth-potential effect and whether further analysis is necessary. If the first phase results in a determination that further analysis is required, then a more detailed growth-related analysis is conducted. The *"first-cut screening"* analysis for the proposed project is provided below.

Regional ContextNorth Los Angeles County, consisting of the Antelope Valley and Santa Clarita Valley, is among the fastest growth areas in the southern California region. According to the Southern California Associated Governments (SCAG),[1] based on the 2000 Census, the North Los Angeles County Subregion (Subregion) had roughly 5.3 percent of the Los Angeles County population. The population in this Subregion is expected to increase from 512,000 in 2000 to 1,179,000 in 2030. This annual growth rate of 4.2 percent is substantially higher than the County annual growth rate of 0.9 percent. Strongly correlated with the population growth, the Subregion is projected to have 362,000 households by 2030, an increase of 125 percent over the 30-year forecast period. The projected annual growth rate of 4.2 percent in the number of households is the highest in the region.

The Subregion had a 4 percent share of the total County employment in 2000. Total employment is expected to increase from 179,000 jobs in 2000 to 286,000 jobs in 2030, growing at an annual rate of 2 percent (highest of all County subregions). This is also higher than the County annual average growth rate of 0.9 percent.

Affected Communities and Study Area in 2006, despite a weakening housing sector, the SCAG region's job market continued to expand over the previous year.[2] Total wage and salary jobs grew by more than 156,000 (2.2 percent) during 2006, the highest increase since 2000.

The Santa Clarita Valley has experienced a significant population influx over the past decade. The population growth has been due to an increase in the number of households mainly because of its desirable location and relatively affordable housing prices compared to other areas of Los Angeles County. Growth within Santa Clarita has also been due to annexations that have occurred since the City incorporated in 1987.

The Technical Background Report (TBR) for the One Valley One Vision Santa Clarita Valley General Plan reports that the Santa Clarita Valley's population was 212,611 in 2000, with 68,760 households and 60,511 jobs. Current projections from

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1 Southern California Association of Governments, 2004 Regional Transportation Plan/Growth Vision: Socio-Economic Forecast Report, June 2004.

2 Southern California Association of Governments, *The State of the Region 2007*, December 2007.

SCAG indicate that the Santa Clarita Valley will continue to grow in population and households through 2030.

Table 2.2.A presents population, households, and employment projections through 2030 for the Santa Clarita Valley. The information has been obtained from the TBR, and is based on projections by SCAG for the City of Santa Clarita and Los Angeles County for the unincorporated areas of the Santa Clarita Valley. The sum of these projections is presented as the total projection for the Santa Clarita Valley.

Table 2.2.A Projections: Population, Households, and Employment, 2000–2030

	2000	2010	2020	2030	Average Annual Growth
City of Santa Clarita					
Population	152,039	187,795	211,367	231,846	1.4%
Households	50,887	62,837	72,883	82,806	1.6%
Employment	49,612	57,248	64,012	70,078	0.9%
SCV Unincorporated Area					
Population	61,523	92,000	153,000	215,422	4.3%
Households	17,973	27,500	46,500	66,000	4.4%
Employment	10,900	18,000	33,500	49,100	5.1%
Santa Clarita Valley					
Population	212,611	273,092	363,220	441,704	2.5%
Households	68,760	92,175	121,578	146,815	2.6%
Employment	60,511	76,345	95,473	114,312	2.1%

Source: Community Impact Assessment (Caltrans, September 2008).

Projections for individual communities and study area census tracts are not available. However, projections from SCAG for north Los Angeles County include all of the communities affected by the proposed project.

Goods Movement

The growth in population and households is expected to increase traffic volumes in the area. Highway congestion causes delays affecting personal mobility and goods movement, and results in increased economic costs. The SCAG region's goods movement system serves as a gateway for both international and domestic commerce. As a result, the southern California region's highways carry some of the highest truck volumes and share some of the worst bottlenecks for trucks in the nation. According to SCAG's Draft 2008 Regional Comprehensive Plan, the region is facing substantial

growth in rail and truck traffic. The regional system is predicted to see upto 216 percent more truck trips by 2035. The daily truck volumes on I-5 are expected to reach 85,900 in 2025 from 40,900 in 2002.[1]

2.2.3 Environmental Consequences

2.2.3.1 Temporary Impacts

Alternative 1: No Build Alternative

Under the The No-Build Alternative, the project would not be constructed. No temporary growth related impacts would occur.

Alternative 2: Reduced Median Alternative and Alternative 3: Full Median Alternative

The first-cut screening for the proposed project concluded that there are no growth-related impact issues with the proposed project.

The Build Alternatives would introduce jobs within the study area on a temporary basis during the construction period. These jobs would be filled by existing workers in the southern California area and would not require additional housing and would therefore not have a temporary impact on growth.

Early Implementation Project (EIP)

As discussed in the *Community Impact Assessment*, the Build Alternatives would not result in growth-induced impacts to populations, housing, or employment. Given that the EIP is a component of the Build Alternatives, it would also not result in temporary growth-induced impacts.

2.2.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not address the existing and projected congestion within the study area. Existing and forecast congestion would continue.

[1] Southern California Association of Governments, *Draft Regional Comprehensive Plan*, 2008.

Alternative 2: Reduced Median Alternative and Alternative 3: Full Median Alternative

The proposed project is located in an area that is experiencing rapid population, housing, and employment growth. The improvements include truck lanes to accommodate existing and projected congestion, and HOV lanes that would improve the efficiency of the freeway operation. It is proposed as a response to existing and projected traffic congestion associated with current land uses and future planned development within the study area and northern Los Angeles County. As such, it is neither intended nor expected to induce any substantial change in the location, distribution, or rate of population and housing growth.

Most of the proposed project improvements would occur within existing right of way with minimal additional right of way, and would not open any new areas to development. No changes to existing or proposed land used and/or density would occur as a result of the proposed project. None of the areas within the study area identified for future development would be made directly more accessible with implementation of the proposed project, and the project would not result in any regional or community-level growth-inducing impacts.

No direct growth inducing impacts are anticipated as the proposed project would not connect previously isolated areas and would not permanently impact any resources of concern.

Early Implementation Project (EIP)

The Build Alternatives would not result in growth-induced impacts to populations, housing, or employment. Given that the EIP is a component of the proposed project, it would also not result in growth-induced impacts.

2.2.4 Avoidance, Minimization and/or Mitigation Measures

Because the proposed Build Alternatives and EIP would not result in any adverse population, housing, or employment impacts, no avoidance, minimization, or mitigation measures would be required.

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2.3 Farmlands/Timberlands

The information in this section is based on the *Community Impact Assessment* (CIA) (Caltrans, September 2008). There are no timberlands within the project study area; therefore, there is no discussion of this resource in this section.

2.3.1 Regulatory Setting

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 USC 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

The California Department of Conservation (CDC) monitors farmland through the Farmland Mapping and Monitoring Program (FMMP). FMMP was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the NRCS. The program prepares and maintains an automated map and database system to record and report changes in the use of agricultural lands.

Farmland Conversion Impact Rating

Projects where farmland may be adversely affected require close coordination with the NRCS and completion of a Farmland Conversion Impact Rating Form. The rating form provides a basis for assessing the extent of farmland impacts relative to federally established criteria. The rating form is based on a Land Evaluation and Site Assessment (LESA) system, which is a numerical system that measures the quality of farmland. LESA systems have two components. The Land Evaluation element rates soil quality. The Site Assessment component measures other factors that affect the viability of a farm, including, but not limited to, proximity to water and sewer lines and the size of the parcel. Sites receiving a combined score of less than 160 points do

not require further evaluation. Alternatives should be proposed for sites with a combined score greater than 160. On the basis of this analysis, a federal agency may, but is not required to, deny assistance to private parties and State and local governments undertaking projects that would convert farmland.

2.3.2 Affected Environment

The farmland areas shown in Figure 2.3.1, Prime Farmland and Farmland of Statewide Importance, are located in the project area as identified in the Farmland Mapping and Monitoring Program (FMMP). *Prime Farmland* is defined as farmland with the best combination of physical and chemical features for sustaining long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. *Farmland of Statewide Importance* is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture.

Cultivated farmland, identified as Prime Farmland, is located west of I-5 at Biscailuz Drive. It is currently being farmed for winter wheat. This property is part of the Valencia Commerce Center development and has been designated for commercial/ industrial use. It is designated for industrial use according to the Los Angeles County Santa Clarita Valley General Plan. The tentative parcel map has been submitted to the County for the development of the parcels, and construction is scheduled to begin in 2010.

Cultivated farmland is located east of Interstate 5 (I-5) in Castaic, and is identified in the FMMP as Farmland of Statewide Importance. The land belongs to Los Angeles County, and is part of the Peter J. Pitchess Detention Center (Wayside Honor Rancho). It is leased by the County to a private operator for sod farming. The parcels are designated for industrial use according to the Los Angeles County Santa Clarita Valley General Plan. There are no pending development plans.

The additional two areas of Prime Farmland adjacent to I-5 within the boundaries of this project will not be impacted by either of the Build Alternatives. Therefore, they are not included in this discussion.

No portion of the project site is under a Williamson Act Contract, as established in the Williamson Land Conservation Act, or any other local agricultural land conservation act. Los Angeles County does not participate in the program. Therefore, no analysis or discussion is required.

2.3.3 Environmental Consequences

2.3.3.1 Temporary Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, no temporary impacts to farmlands would occur.

Alternative 2: Reduced Median Alternative and Alternative 3: Full Median Alternative

There would be no direct temporary impact to farmland associated with Alternative 2 construction.

Temporary air quality and noise impacts may result from project construction activities such as structure demolition, grading, pavement grinding and paving operations, use of heavy-duty construction equipment, and fugitive dust emissions. Since these activities are intermittent and temporary, there would be no substantial, adverse impacts to farmland associated with the project during construction. Construction staging would not occur on agricultural land outside the project footprint. Farm equipment and worker access to the farmland would not be impacted.

Early Implementation Project (EIP)

As discussed above, there are no acquisitions of farmland within the EIP limits. Therefore, the EIP would not impact farmlands.

2.3.3.2 Permanent Impacts

Prime Farmland that is already in the process of conversion to, or committed to, urban development or water storage is by definition farmland not subject to the FPPA. Unique Farmlands and Farmlands of Statewide or Local Importance are subject to the FPPA even if they are already in or committed to urban development. Therefore, the discussion below is limited to Farmland of Statewide Importance located in the project area.

Alternative 1: No Build Alternative

Under the No Build Alternative, no permanent impacts to Farmlands would occur.

Alternative 2: Reduced Median Alternative

Alternative 2 does not require acquisition of agricultural land; therefore no permanent impacts to Farmlands would occur.

Alternative 3: Full Median Alternative

Alternative 3 would require acquisition of 1.02 ac of farmland designated as Farmland of Statewide Importance (Table 2.3.A). According to the completed Farmland Conversion Impact Rating Form (provided in Appendix K), this represents 0.006 percent of Farmland of Statewide Importance within Los Angeles County.

Table 2.3.A Farmland Conversion

Alternative	Agricultural Land Converted (acres)	Agricultural Land of Statewide Importance-in Los Angeles County (acres)	Percent of farmland in Los Angeles County	Farmland Conversion Impact Rating
3	3.02	1.024	0.006	60

Source: Community Impact Assessment (Caltrans, September 2008).

The proposed project rated a combined score of 60 points on the Farmland Conversion Impact Rating Form, which is below the threshold of 160. The impacted farmland is designated for industrial use according to the Los Angeles County Santa Clarita Valley General Plan. Therefore, the acquisition of Farmland of Statewide Importance would not be adverse due to the zoning of the project site and the combined score of 60 on the Farmland Conversion Impact Rating Form.

Early Implementation Project (EIP)

There are no acquisitions of farmland within the EIP limits. Therefore, the EIP would not impact farmlands.

2.3.4 Avoidance, Minimization and/or Mitigation Measures

Implementation of the following measures described in Sections 2.6, Traffic; 2.14, Air Quality; and 2.15, Noise, would avoid or minimize potential short term impacts to agricultural operations during construction.

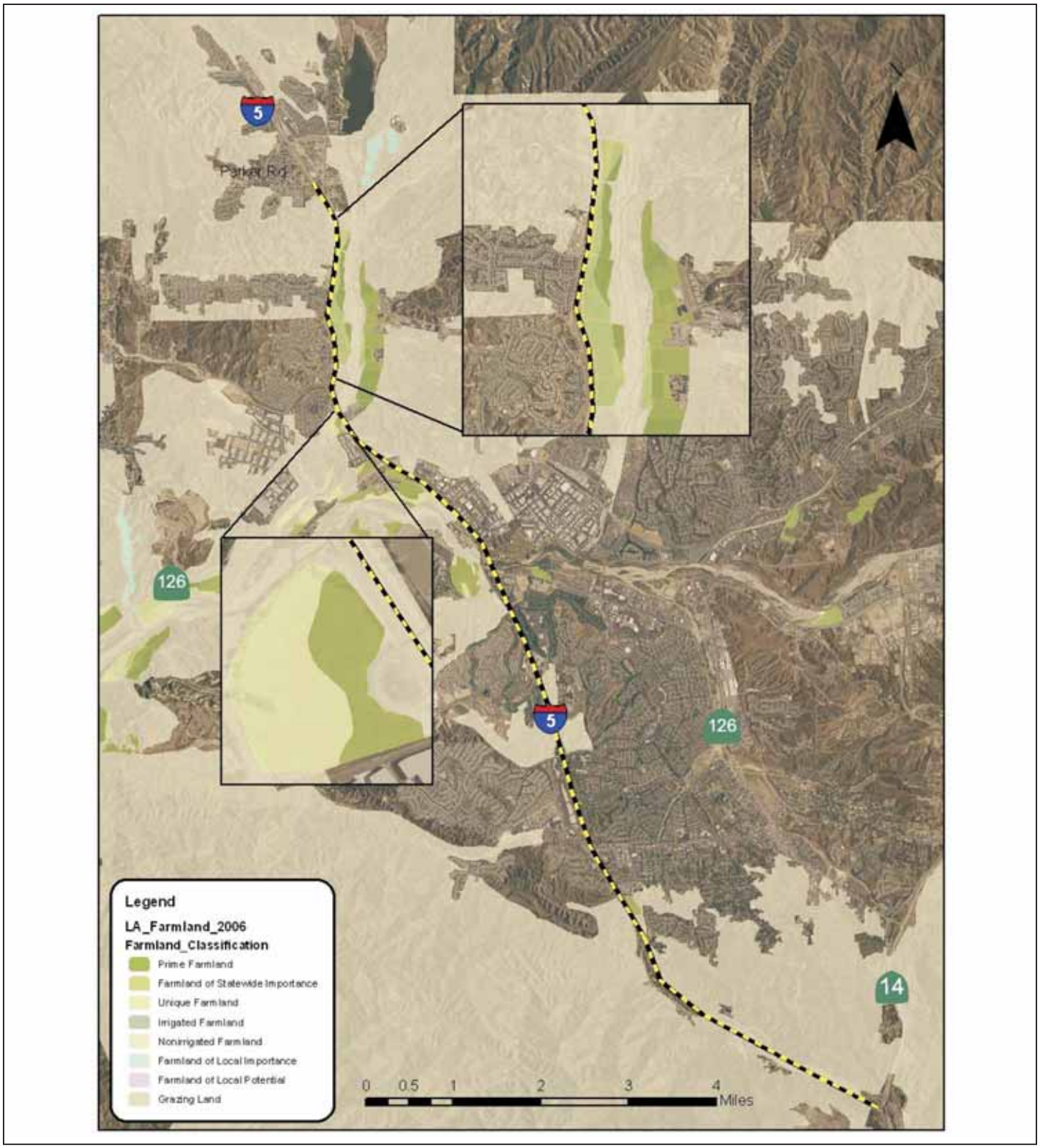

FIGURE 2.3.1

Project Alignment

N

0 1 2 MILES
0 1,609 3,218 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project

Proposed Project Farmland Acquisition

07-LA-5 PM R45.4/R59.0
EA 2332E0

I:\SIB0601\G\Tech Studies\Fig-2.3.1_Farmland Acq.cdr (10/23/08)

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2.4 Community Impacts

The information in this section is based on the *Community Impact Assessment* (CIA) (Caltrans, September 2008).

2.4.1 Community Character and Cohesion

2.4.1.1 Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA), established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b]]2]). The Federal Highway Administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as, destruction or disruption of human-made resources, community cohesion and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.4.1.2 Affected Environment

Socioeconomic and demographic data for the study area used for reference and analysis in this section are based on 2000 Census data (U.S. Department of Commerce, Bureau of Census 2000). The study area for this discussion is illustrated in Figure 2.4.1. As discussed in Section 2.1, the study area comprises 11 census tracts that are adjacent to or encompass Interstate 5 (I-5) within the project area. The study area census tracts are illustrated in Figure 2.1.2 in Section 2.1, Land Use. Census data was not available for Census Tracts 9202.00 and 9201.07 because they do not have any housing units. Census tracts were used because they are the most complete demographic data set available for this analysis. For context and comparison, information is also provided at City and County levels for certain topics.

Communities

The Santa Clarita Valley is primarily a residential community. As discussed before, there are four separate communities in the project area. These communities, located both within city of Santa Clarita limits and in surrounding unincorporated areas, are distinct entities, each with its own special character, development patterns, and lifestyles. Organizations such as neighborhood associations and town councils promote unity within the communities.

A brief description and history of each community is provided below.

Valencia

The community of Valencia is part of the original 37,500-acre (ac) Newhall Ranch, a Mexican land grant acquired by Henry Mayo Newhall and later owned by the Newhall Land and Farming Company. Valencia was initiated as a master-planned community in 1965. Since then, more than 8,000 residential units have been constructed, and over 30,000 residents call Valencia home. Even though both the City of Santa Clarita and the County of Los Angeles have jurisdiction over portions of Valencia, the majority of land is within City limits. Valencia is the largest center for business and technology in the Valley, and has developments such as the Valencia Gateway, comprising the Valencia Industrial Center (City of Santa Clarita) and Valencia Commerce Center (County of Los Angeles). Residential, commercial, and industrial developments form the basic community structure, supported by shopping centers, recreational facilities, schools, colleges, a hospital, golf courses, professional offices, and other services connected by a system of walkways called *paseos.* The community is home to the local Los Angeles County Civic Center, College of the Canyons, California Institute of the Arts, Santa Clarita City Hall, the Valencia Town Center Mall, and Six Flags Magic Mountain Amusement Park. New industrial development continues west of I-5 in North Valencia, including a postal distribution facility.

Newhall

Established in 1876 in conjunction with the construction of Southern Pacific Railroad, Newhall is the oldest and most historic area in Santa Clarita. Old Newhall's development was based on oil, mining, and the railroad. Many residents were first attracted to Newhall because of its rural environment and open space. Today, Newhall maintains its historic character and includes the residence of silent film star William S. Hart, whose 300 ac ranch is now a County park and a museum. The architecture of the Newhall homes reflects a diversity of architectural styles from

early rural/ranch-style homes built on large lots to newer homes on smaller lots reflecting styles from the 1950s to the present. Large stands of oak trees have been preserved within the community. Much of the early commercial development in the downtown Newhall area occupies single-story older buildings. Commercial development along Lyons Avenue includes numerous small and midsize wood and stucco strip centers. There have been attempts made recently to improve the aesthetics of the commercial area by building offices and shopping centers that incorporate historic elements of the area. Also included within the community is the retirement village of Friendly Valley.

Stevenson Ranch

One of the newest communities in the Santa Clarita Valley, Stevenson Ranch, is located in the foothills of the Santa Susana Mountains, west of the I-5 freeway. Stevenson Ranch consists of 4,000 ac of rolling hills, offering a variety of homes from condominiums to large estates. A planned community, it was approved by the County of Los Angeles in 1987. The community is largely developed except for the last phase, which proposes 3,467 residential units. Stevenson Ranch consists primarily of single-family residential units with Valencia Marketplace as its retail center, located along The Old Road. The West Ranch Town Council represents the community of Stevenson Ranch.

Stevenson Ranch is the largest of a group of communities west of I-5, commonly referred to as West Ranch, that have a common setting and shared interests. The other three communities of West Ranch include Westridge, a residential community adjacent to Stevenson Ranch that includes elementary, junior high, and high school sites; Sunset Pointe, another residential community south of Stevenson Ranch; and the rural residential area of Pico Canyon, extending into both city and County areas and including the Santa Clarita Woodlands State Park, Towsley Canyon State Park, Ed Davis Park, and the historic oil town of Mentryville. Significant stands of oak trees and the Lyon Canyon Significant Ecological Area surround the developed areas of West Ranch.

Castaic

The unincorporated community of Castaic started as a highway stopover with small cafes and automobile services along the old Ridge Route after the Route's opening in 1914. Suburban growth was brought to Castaic by Parker Ranch in 1923. Today, I-5 bisects Castaic, with new residential development on both sides of the freeway, and the older portion of the community on the east. Castaic is best known for its

recreational sites in the vicinity of Castaic Lake, part of the California Water project. The Castaic Sports Complex is located just south of Castaic Lake and provides a variety of sports opportunities. Also within Castaic is the Wayside Honor Rancho, a Los Angeles County incarceration facility. The community still provides important services and facilities to the trucking industry due to its close proximity to I-5. Strong community cohesion in Castaic is evidenced by the Castaic Area Town Council, which comprises 10 elected representatives from five regions. Los Angeles County developed a Community Standards District (CSD) for Castaic to address a range of planning issues for this evolving community.

Study Area Demographics

Age

According to the U.S. Census Bureau, between 23 to 31 percent of the population in the affected communities is under age 18, as shown in Table 2.4.A. This signifies the presence of a large number of family households. The percentage of the population between 18 and 64 is similar to Los Angeles County and the City of Santa Clarita. The percentage of the population over age 65 is the smallest age group represented in these communities, with Stevenson Ranch and Castaic being the lowest, with approximately 3 percent, respectively. However, the Southern California Association of Governments (SCAG) projects that as the regional population increases, the percentage of the population over age 65 will increase as well.

Table 2.4.A Age Distribution

Demographic	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
	Number Percentage					
Total Population	9,519,338 100%	151,088 100%	9,919 100%	24,970 100%	22,173 100%	30,727 100%
Median Age	32.0	33.4	32.6	38.0	31.6	31.3
Under 18 Years	2,667,976 28.0%	45,774 30.3%	3,101 31.3%	6,427 25.7%	5,026 22.7%	8,368 27.2%
18 to 64 Years	5,924,689 62.2%	94,589 62.6%	6,487 65.4%	16,018 64.1%	16,509 74.5%	19,085 62.1%
65 Years and Over	926,673 9.7%	10,725 7.1%	331 3.3%	2,525 10.1%	638 2.9%	3,274 10.7%

Source: Community Impact Assessment (Caltrans, September 2008).

Ethnicity

Although the Santa Clarita Valley has become more ethnically diverse, with most racial/ethnic categories increasing in the last decade, it does not reflect the diversity

of Los Angeles County. As shown in Table 2.4.B, Los Angeles County has a greater proportion of Hispanic, Asian, and Black residents than the City of Santa Clarita and the affected communities. The two exceptions to this are the communities of Castaic, with a higher percentage of Black residents (11.5 percent) than the County (9.8 percent), and Stevenson Ranch, with a higher percentage of the Asian population (14.6 percent) than the County average (11.9 percent).

Table 2.4.B Racial/Ethnic Composition

Demographic	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
	Number Percentage					
One Race	9,049,557 95.1%	145,204 96.1%	9,397 94.7%	24,180 96.8%	21,494 96.9%	29,562 96.2%
White	4,637,062 48.7%	120,157 79.5%	7,252 73.1%	21,550 86.6%	15,265 68.8%	22,239 72.4%
Black or African American	930,957 9.8%	3,122 2.1%	272 2.7%	354 1.4%	2,551 11.5%	549 1.8%
American Indian and Alaska Native	76,988 0.8%	886 0.6%	41 0.4%	89 0.4%	112 0.5%	245 0.8%
Asian[2]	1,137,500 11.9%	7,923 5.2%	1,448 14.6%	1,451 5.8%	1,180 5.3%	1,208 3.9%
Native Hawaiian and Other Pacific Islander	27,053 0.3%	220 0.1%	10 0.1%	31 0.1%	23 0.1%	50 0.2%
Some other race	2,239,997 23.5%	12,896 8.5%	374 3.8%	705 2.8%	2,363 10.7%	5,271 17.2%
Two or more races	469,781 4.9%	5,884 3.9%	522 5.3%	790 3.2%	679 3.1%	1,165 3.8%
Hispanic[1] or Latino (of any race)	4,242,213 44.6%	30,968 20.5%	1,232 12.4%	2,448 9.8%	7,277 32.8%	11,036 35.9%

Source: Community Impact Assessment (Caltrans, September 2008).

[1] Percentages do not total 100 percent because the White, Black, American Indian and Alaska Native, Hawaiian and Pacific Islander, and Other categories include persons identified with one race only; the Hispanic category overlaps with other categories. The Census Bureau recognizes Hispanic heritage as an ethnic group rather than as a separate race. If the Hispanic group is added to other racial groups, the total may exceed the total population.

[2] In 2000, the Asian population did not include Hawaiian and Other Pacific Islanders.

According to SCAG's projections, Hispanics will become the majority ethnic group in the region, while the share of other ethnic minorities, primarily more recent immigrants, will grow as well. In addition, the California Department of Finance reports that, by the middle of the century, Hispanics will be 52 percent of the state's population, with Whites composing 26 percent.

Community Cohesion

The Caltrans Environmental Handbook, Volume 4, Community Impact Assessment, defines a community as "a population rooted in one place, where the daily life of each

member involves contact with and dependence on other members," Community cohesion can be described as "the degree to which residents have a "sense of belonging" to their neighborhood, a level of commitment of the residents to the community or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time."

The land use concept for the Valley envisions a "Valley of Villages" in recognition of the various communities and neighborhoods maintaining their distinct character while recognizing their place within the entire Santa Clarita Valley planning area. The "village" concept signifies community cohesion because it describes a community in which people know one another, support local businesses, attend community events, and share common ideals about their future. The residents typically send their children to local schools, use neighborhood parks, and work close to home. The following indicators demonstrate that the community has a high degree of cohesion (as shown in Table 2.4.C):

Table 2.4 C Study Area Community Cohesion

Demographic	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
	Number Percentage					
Total Households	3,133,774 100%	50,787 100%	3,441 100%	9,664 100%	4,634 100%	10,197 100%
Persons per Household	2.98	2.95	2.88	2.53	3.21	2.94
Family Households (Families)	2,136,977 68.2%	38,222 75.3%	2,633 76.5%	6,613 68.4%	3,793 81.9%	6,929 68%
Persons per Family	3.61	3.38	3.31	3.08	3.51	3.48
Same Residence in 1995-2000	4,571,423 52.0%	71,270 51.1%	2,219 24.3%	12,468 52.6%	12,420 59.7%	13,555 48.4%
Home Ownership Rate	47.9%	74.7%	80.4%	72.7%	83.2%	60.4%
Single-Family Homes	56.1%	72.6%	79.6%	72.8%	82.0%	58.0%

Source: Community Impact Assessment (Caltrans, September 2008)

- *Long average residency tenures:* Long-term residents are likely to feel more connected to their community. According to the US Census 2000, approximately 53 percent and 60 percent of the population of Valencia and Castaic, respectively, has lived in the same residence between 1995 and 2000. This is higher that the County and the City of Santa Clarita averages. The relatively new community of Stevenson Ranch only has a 24 percent rate of five-year residency tenure.

- *Households of two or more people:* A high percentage of single-person households tend to correlate with lower cohesion. Average household size is between 2.53 to 3.21 persons per household.
- *Home ownership over rentals:* A significantly higher percentage of the population in the affected communities own their homes, and the rate of homeownership in the affected communities exceeds County average (47.9 percent), with the highest (Castaic) being at 82 percent.
- *Single-family homes over higher density housing:* All of the affected communities have higher percentages of single-family homes than higher density housing. Their averages also exceed the County average of single-family homes (56.1 percent).
- *Family Households:* According to the U.S. Census Bureau, a significant percentage (between 23 to 31 percent) of the population in the affected communities is under age 18. This signifies the presence of a large number of family households. Communities of Stevenson Ranch and Castaic have much higher percentage of families (76.5 and 81.9 respectively) than the County average (68.2 percent).

Housing Demographics

As of 2000, home ownership rates were higher in the study area communities than the county, while the percentages of renter-occupied housing units were lower than the County as shown in Table 2.4 D.

Table 2.4.D Housing Summaries

Demographic	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
Total Housing Units	3,270,909	52,442	3,588	10,133	4,848	10,598
Housing Units Occupied	95.8%	96.8%	95.9%	95.4%	95.6%	96.2%
Owner-Occupied Housing Units	47.9%	74.7%	80.4%	72.7%	83.2%	60.4%
Renter-Occupied Housing Units	52.1%	25.3%	19.6%	27.3%	16.8%	39.6%
Vacancy Rate	4.2%	3.2%	4.1%	4.6%	4.4%	3.8%
Median Home Value	$209,300	$229,200	$327,500	$262,400	$222,300	$215,100

U.S. Community Impact Assessment (Caltrans, September 2008).

Castaic has the highest rate of home ownership (83.2 percent) among the affected communities. In 2000, the total housing vacancies in the affected communities were consistent with the vacancies in the County. Castaic has the highest rate of homeownership (83.2 percent) among the affected communities. In 2000, the total vacancies in the affected communities were consistent with the vacancies in the County. Median home prices were higher than the County, with Stevenson Ranch having the highest median home price ($327,500).

The Valley is perceived as an attractive place to live and the growth in the number of housing units is supported by the goals of the Santa Clarita Area Plan and the City General Plan; both of which advocate a balance of jobs and housing. As of 2008, there were approximately 80,000 dwelling units within the area, of which 57,000 were in the City and 23,000 were in the County. Another 42,000 dwelling units had received land use approval, including 36,000 units in the County areas and 6,000 units within the City; several thousand more dwelling units had land use applications pending. According to the SCV General Plan Technical Report, Santa Clarita Valley experience a 28 percent increase in new housing units between 1990 and 2000, while the County increased its housing units by only 3.4 percent. The vacancy rate in the Valley decreased from 7.5 percent to 4.3 percent between 1990 and 2000, while it decreased from 5.5 percent to 4.2 percent in Los Angeles County.

Home sales in California fell in 2006 after four years of expansion. According to research by California Association of Realtors (C.A.R.), home sales in the Southern California region followed the general direction of the state, declining 23 percent from the record level of 2005. More recently, the first-time home owner affordability has improved. The first-time Buyer Housing Affordability Index (FTB-HAI), defined by the California Association of Realtors as the percentage of households that can afford to purchase an entry-level home in a defined area, rose to 35 percent for Los Angeles County in the first quarter of 2008, compared with 27 percent for the same period a year ago. The increase is 8 percentage points compared to the fourth quarter of 2007. This is below the state FTB-HAI rate of 44 percent.

Table 2.4.E shows the median home prices in June 2008 for the affected communities, City of Santa Clarita and the County compared to the prices of June 2007. Even though there has been a significant increase in the median price of homes since 2000, there has been a decline of approximately 15 to 34 percent in all of the

Table 2.4.E Median Housing Prices, June 2008

	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
Single Family Homes Sold	4,122	60	19	33	22	16
Median Price	$425,000	$485,000	$720,000	$421,000	$480,000	$470,000
Price % Change from June 2007	-26.7%	-5.23%	-15.5%	-34.0%	-19.5%	-25.4%

Source: Community Impact Assessment (Caltrans, September 2008).

affected communities as indicated in Table 2.4.E. While median prices of homes in Valencia, Castaic and Newhall are comparable to the City and County prices, the median price is significantly higher at $720,000 in Stevenson Ranch.

Employment and Income

Although the Santa Clarita Valley is largely recognized as a suburban residential community, the City of Santa Clarita and surrounding development within the jurisdiction of Los Angeles County offer a diversity of employment opportunities. According to the Santa Clarita Valley Chamber of Commerce, the largest employers in the area include Six Flags Magic Mountain (4,500 employees), William S. Hart Union High School District. (2,460 employees), the United States Postal Service (2,000 employees), Saugus Union School District (1,823 employees), and Princess Cruises (1,175 employees).

A major economic force in the Santa Clarita Valley is the entertainment industry. In 2006, the City of Santa Clarita Film Office issued almost 300 permits, and the City hosted 676 days of filming. Location filming contributed over $14 million to the local economy. According to the OVOV, Draft SCV General Plan, approximately 6,600 Santa Clarita residents currently work in the film industry. In addition to film production, the two other important industries in the Valley are biotechnology and tourism.

As shown in Table 2.4.F, all of the affected communities in the study area employ the highest percentage of the employed population in educational, health, and social services. This is consistent with Los Angeles County (18.3 percent). Manufacturing ranks the second highest in Valencia-91354 (12.9 percent), Castaic (13.0 percent), and Santa Clarita (12.3 percent); finance, insurance, and real estate in Stevenson Ranch (11.7 percent); and professional, scientific, and management services in Valencia-91355 (12.3 percent) and Newhall (12.9 percent).

Table 2.4.F Employment within Affected Communities

Economic Sector	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
	Number Percentage					
Construction	202,829 5.1%	4,612 6.1%	198 3.7%	561 4.2%	587 7.9%	1,172 8.1%
Manufacturing	586,627 14.8%	9,653 12.8%	538 10.0%	1,519 11.4%	969 13.0%	1,610 11.1%
Retail Trade	416,390 10.5%	8,232 10.9%	492 9.2%	1,164 8.7%	837 11.3%	1,429 9.9%
Finance, Insurance, Real Estate	272,304 6.9%	5,990 7.9%	629 11.7%	1,333 10.0%	414 5.6%	982 6.8%
Professional, Scientific, Management, Administrative Services	455,069 11.5%	8,573 11.4%	594 11.1%	1,634 12.3%	706 9.5%	1,877 12.9%
Educational, Health, Social Services	722,792 18.3%	13,660 18.1%	963 17.9%	2,768 20.8%	1,177 15.8%	2,508 17.3%
Arts, Entertainment, Lodging, Food Services	332,753 8.4%	6,037 8.0%	370 6.9%	1,010 7.6%	580 7.8%	1,544 10.7%
All Other Sectors	964,651 24%	18,604 24.7%	1,589 30%	3,341 25%	2,162 29%	3,374 23%
Total	3,953,415 100%	75,361 100%	5,373 100%	13,330 100%	7,432 100%	14,496 100%

Source: Community Impact Assessment, September 2008.

Santa Clarita has one of the lowest unemployment rates in Los Angeles County. The City of Santa Clarita's unemployment rate was 4.3 percent in June 2008, compared to 7.1 percent for Los Angeles County and 6.9 percent for the State of California.[1]

According to the 2000 Census, the unemployment figures in the study area were as follows: Stevenson Ranch, 2.7 percent; Valencia, 2.9 percent; Castaic, 1.8 percent; and Newhall, 3.7 percent. The unemployment rate in Los Angeles County in 2000 was 5.0 percent.

Commuting Patterns

Approximately 50 percent of the Valley's employed residents are estimated to commute outside the Valley each workday. Travel patterns for Los Angeles County, the City of Santa Clarita, and the affected communities are shown in Table 2.4.G according to the 2000 Census.

[1] State of California Employment Development Department, <http://www.calmis.ca.gov/file/lfmonth/allsubs.xls>, accessed July 2008.

Table 2.4.G Travel Patterns

	L.A. County	City of Santa Clarita	Stevenson Ranch	Valencia	Castaic	Newhall
Work Outside of Residence	96%	97%	96%	97%	97%	98%
Travel Time						
60–89 minutes	7%	12%	13%	11%	11%	9%
> 90 minutes	3%	4%	5%	4%	5%	3%
Travel Type						
Drive Alone	70%	78%	79%	83%	79%	70%
Carpool	15%	14%	14%	11%	13%	18%
Public Transportation	7%	3%	1%	2%	2%	5%
Walk	3%	1%	1%	1%	2%	3%

Source: Community Impact Assessment (Caltrans, September 2008).

- **Place of Work.** More than 95 percent of employees within the affected communities work outside their place of residence, consistent with the City and County percentages.
- **Travel Time.** Seven percent of employees commuted between 60 and 89 minutes to work (one-way) in Los Angeles County on a daily basis, and 3 percent drove for more than 90 minutes. Commuting times for the City of Santa Clarita and within the affected communities were consistent and generally higher than the County averages.
- **Means of Travel.** Between 70 and 83 percent of employees in the affected communities and the City drove to work alone; between 11 and 18 percent carpooled; 5 percent or less used public transportation; and 3 percent or less walked. These averages are consistent with the County of Los Angeles, except 7 percent of the employees in the County used public transportation to get to work.

Existing Transit Service

Metrolink provides commuter rail transit services to the Valley residents. The Southern California Regional Rail Authority (SCRRA) operates the Metrolink commuter rail service. The Antelope Valley line connects Lancaster, Palmdale, and Santa Clarita with downtown Los Angeles, Burbank, and Glendale. Four stations are located in the Valley: the Santa Clarita station on Soledad Canyon Road, the Via Princessa station in Canyon Country, the Jan Heidt Newhall station, and the Vincent Grade station in Agua Dulce/Acton.

Many residents take transit buses to the Metrolink stations. In addition, 11 park-and-ride lots are located in the Valley area to encourage the use of transit. Of the 11 lots, nine are located in the city of Santa Clarita and two are located just to the north.

Local service in the city of Santa Clarita is served by a City-contracted and operated bus service, Santa Clarita Transit (SCT). In addition to operating the local routes within the Valley, SCT also provides regional service into and out of Los Angeles, Antelope Valley, Van Nuys, and Warner Center. Stops are provided at several park-n-ride lots. SCT also provides Dial-a-Ride service to the residents of Santa Clarita that is geared toward senior citizens and disabled persons.

The Los Angeles Department of Transportation (LADOT) provides commuter service from the Antelope Valley to Westwood and Century City. This service includes stops in the Santa Clarita Valley.

2.4.1.3 Environmental Consequences

Temporary Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. Therefore, no temporary impacts to community character/cohesion, housing, or economic conditions would occur.

Alternatives 2 and 3

Construction activities would result in temporary, localized site-specific disruptions to the population in the project area. Construction related impacts may include traffic disruptions, congestion and detours due to the movement of construction trucks and equipment; increased noise, vibration, light and glare and increased emissions due to construction equipment.

The Pico Canyon Road/Lyons Avenue southbound loop on-ramp will be closed for three to five months during construction. Traffic will be able to access southbound I-5 by using the southbound diagonal on-ramp. In addition, late night closures in each direction may be necessary for removal of the existing and re-construction of the Weldon Overcrossing. Reconstruction at the ramp exit and entrances may require short-term closures.

For the construction of the Alternative 3 Biscailuz Dr./Honor Ranch Overcrossing, the proposed new overcrossing will be constructed using half width construction. This

type of construction will allow traffic to use a portion of the existing structure while the new portion of the bridge structure is under construction.

As explained above, construction activities would result in temporary, localized site-specific disruptions to the population and land uses in the proposed project area. The traffic, air quality, and noise analyses for the proposed project alternatives provide additional information on these types of temporary construction impacts. Because the construction activities would be temporary in duration, substantial disruptions to the local population, housing, and recreational resources are not anticipated.

Temporary circulation and access impairment that may occur during the construction phase of the proposed project that may have an effect upon businesses located along the I-5 corridor as well as the transit services in the area. Businesses immediately adjacent to the proposed project may also experience temporary construction nuisance effects such as noise, vibration, and dust. The construction-related nuisance effects would be temporary and intermittent. As discussed below in Section 2.4.2, Relocations, Temporary Construction Easements (TCEs) required by the proposed Build Alternatives may result in temporary parking loss at some businesses adjacent to I-5. Temporary impacts to the local economy are not considered adverse.

Early Implementation Project (EIP)

As discussed in the above, temporary impacts to community character and cohesion would include disruptions from possible detours or closures as well as construction-related traffic changes due to trucks and equipment movement within the study area. The EIP would construct a component of the Build Alternatives and would result in similar impacts.

Similar to the Build Alternatives, construction activities of the EIP have the potential to temporarily affect the community with disruptions and closures to local streets or access to I-5. The Transportation Management Plan (TMP) prepared for the proposed project and outlined in Measures T-1 and T-2, in Section 2.6, Traffic and Transportation, would minimize the potential temporary impacts to Community Impacts. These impacts are therefore not considered adverse.

Permanent Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. Therefore, no permanent project related impacts would occur.

Alternative 2 and 3

The proposed project would not negatively affect the regional and local community. The project would not require acquisition and relocation of any residential or business uses. The right of way impacts discussed in Section 2.4.2 would not divide an existing neighborhood or fragment the edge of a cohesive group of people. The transportation improvements provided by completion of the Build Alternatives could have a beneficial impact on the affected communities by reducing congestion, and improving air quality.

The Build Alternatives of the proposed project would not negatively affect local or regional employment, industry, or commerce, or require the displacement of business. There would be no tax revenue loss. They would, however, have a positive effect by improving traffic congestion and operations in the area. The reduced traffic congestion would improve transit services that serve the affected community.

Early Implementation Project (EIP)

No permanent impacts to community character and cohesion would occur for the EIP improvements as all of the improvements would be constructed within the existing Caltrans right of way.

2.4.1.4 Avoidance, Minimization and/or Mitigation Measures

The proposed project would be constructed in stages that would minimize impacts to the communities by avoiding consecutive ramp closures and traffic congestion during construction. The EIP and the proposed project would be closely coordinated with other ongoing projects in the area.

Temporary impacts to residential, commercial, and recreational uses, such as additional truck traffic, pollutant emissions from construction activities, and increased noise and vibration, would be minimized by the implementation of Measure AQ-1, described in detail in Section 2.14.4, and Measures N-2 through N-7 and N-9 in Section 2.15.4 for construction-related noise/vibration impacts.

The effects of temporary construction-related disruptions to the local communities would be addressed through implementation of a TMP and a Ramp Closure Study (for all ramps closed longer than 10 consecutive days), as described in Measures T-1 and T-2 in Section 2.6.2, Traffic and Transportation. A preliminary TMP has been outlined in Section 1.4.13.

Fair compensation to the business owners that may be impacted by temporary parking loss would be assessed as part of the TCE costs. Caltrans would consult with those businesses whose parking would be affected during construction consistent with standard Caltrans right of way acquisition procedures.

2.4.2 Relocations

2.4.2.1 Regulatory Setting

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, et seq.). Please see Appendix C for a copy of Caltrans' Title VI Policy Statement.

2.4.2.2 Affected Environment

Within the study corridor, the land adjacent to the freeway has been developed with a variety of land uses, including residential, commercial, and recreation uses. The central portion of the project area has the greatest concentration of developed uses within the project study area.

2.4.2.3 Environmental Consequences

Temporary Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, there would not be any temporary impacts as no property acquisitions would occur.

Alternative 2: Reduced Median Alternative

Temporary impacts would occur under Alternative 2. These impacts are related to construction activities, specifically TCEs. The TCEs would not result in impacts to existing land uses, except for the temporary loss of parking spaces, storage space, and unpaved field roads. Alternative 2 would require approximately 11.94 ac for TCEs.

Alternative 3: Full Median Alternative

Temporary impacts would occur under Alternative 3. These impacts are related to construction activities, specifically TCEs. The TCEs would not result in impacts to existing land uses, except for the temporary loss of parking spaces, storage space, and unpaved field roads. Alternative 3 would require approximately 13.41 ac for TCEs.

Early Implementation Project (EIP)

One TCE would be necessary during EIP construction activities. This TCE would also be required for the Build Alternatives. A maximum of 4.87 ac for the TCEs within Segment 1 improvements have been proposed for the Build Alternatives. The TCE requirements for the EIP improvements would be less than this maximum acreage.

Permanent Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, no permanent impacts resulting from property acquisitions and relocations would occur.

Alternative 2: Reduced Median Alternative

Alternative 2 requires one partial acquisition and one full acquisition of property only. A partial acquisition is defined as when a small area of a property is acquired but full use of the property would remain. Generally, partial acquisitions consist of portions of a back, side, or front yard; landscaping; or parking. A full acquisition of a property is defined as an area within which the property would be purchased and any occupants of the unit (either residential or nonresidential) would be displaced by the project and expected to relocate. Table 2.1.B in Section 2.1 identifies the affected parcels.

No acquisitions of residential or commercial buildings would occur and no businesses or residents would be relocated. No permanent impacts related to acquisitions or relocations would occur under Alternative 2 since no structures would be acquired.

Alternative 3: Full Median Alternative

Alternative 3 requires three partial acquisitions and one full acquisition of property only. No acquisitions of residential or commercial buildings would occur and no businesses or residents be relocated. No permanent impacts related to acquisitions or relocations would occur under Alternative 3 since no structures would be acquired. Table 2.1.C in Section 2.1 identifies the affected parcels.

Alternative 3 would involve a partial acquisition of farmland (3.02 ac of Farmland of Statewide Importance), as discussed in Section 2.3. Due to the minimal amount of land to be acquired, the proposed acquisition would not result in the displacement of a farm or relocation of property. Therefore there would be no relocation impacts.

Early Implementation Project (EIP)

No permanent acquisitions would be necessary to construct the EIP improvements.

2.4.2.4 Avoidance, Minimization, and/or Mitigation Measures

Even though it is not anticipated, if any relocation become necessary, the provisions of the Uniform Act and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by the United States Department of Transportation (March 2, 1989) would be followed. An independent appraisal of the affected property will be obtained, and an offer for the full appraisal would be made.

2.4.3 Environmental Justice

2.4.3.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* signed by President Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2000, this was $17,050 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix C of this document.

2.4.3.2 Affected Environment

The environmental justice analysis was conducted using census tract level information from the 2000 Census from the reference populations of the state, Los

Angeles County and the City of Santa Clarita. The following analysis provides a comparison of four measures with which to evaluate environmental justice:

- Percentage of non-White residents
- Percentage of Hispanic residents (the Census Bureau considered Hispanic or Latino ethnicity distance from racial background)
- Percentage of the population below the poverty level
- Median household income

The percentages for each census tract are identified in Table 2.4.H.

Table 2.4.H Environmental Justice

Census Tract	Non-White Population	Hispanic Population	Poverty	Median Household Income
9201.05	31.7%	33.4%	3.2%	$86,025
9201.06	44.4%	49.5%	9.9%	$50,500
9201.07	NA	NA	NA	NA
9202.00	NA	NA	NA	NA
9203.12	13.7%	11.8%	9.8%	$54,639
9203.13	17.1%	20.6%	7.9%	$67,321
9203.26	26.7%	14.1%	3.5%	$64,375
9203.27	26.9%	11.9%	3.3%	$99,575
9203.28	15.0%	6.7%	2.2%	$90,644
9203.30	13.1%	8.0%	1.5%	$78,733
9203.34	12.7%	8.9%	4.7%	$69,598

Source: Community Impact Assessment (Caltrans, September 2008).

Non-White Population

All of the census tracts identified in Table 2.4.H have a lower percentage of non-White residents than the Los Angeles County average. Figure 2.4.2 illustrates the percentage of non-White population within each study area census tract. Comparable to the affected communities in the study area, all of the census tracts have less than 50 percent of non-White residents compared to the Los Angeles County average of 51.3 percent. Even though Castaic census tract 9201.06 has a higher non-White population (44.4 percent) than the rest of the study area census tracts, it is still below the County average.

Hispanic Population

All of the affected communities have a lower percentage of Hispanic residents than Los Angeles County (refer to Table 2.4.H). As illustrated in Figure 2.4.3, with the

exception of tract 9201.06, all of the census tracts in the study area have substantially lower percentages of Hispanic residents than the County average of 44.6 percent. There is a disproportionately higher percentage of Hispanic residents in tract 9201.06 in Castaic (49.5 percent) relative to the other census tracts in the study area. However, the community of Castaic has a lower percentage of Hispanic residents than Los Angeles County (32.8 percent).

Poverty Level

The affected communities in the study area all have a lower percentage of persons below the poverty level than the Los Angeles County average. Figure 2.4.4 illustrates the percentage of individuals below the poverty line within each study are census tract. Although lower than the Los Angeles County average of 17.9 percent, tract 9201.06 in Castaic and tract 9203.12 in Newhall have a higher percentage of individuals living in poverty relative to the other census tracts in the study area (9.9 percent and 9.8 percent, respectively). All of the other census tracts have substantially lower averages of poverty than Los Angeles County.

Median Household Income

The median household income in the affected communities in the study area is greater than the Los Angeles County average of $42,189 (refer to Table 2.4.H)

Figure 2.4.5 illustrates the median household income within each study area census tract. All of the tracts in the study area have higher median household income than Los Angeles County average. At a median household income of $50,500, Tract 9201.06 average is lower than the rest of the census tracts. However, it is not in proportion with the community of Castaic where it is located, which has a median household income level of $73,933.

2.4.3.3 Environmental Consequences

Temporary Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, temporary adverse impacts to environmental justice populations would not occur.

Alternatives 2 and 3

Temporary construction impacts would include disruption of local traffic patterns and access to residences and businesses, increased traffic congestion, and increased noise,

vibration, and dust. However, construction activities would provide jobs, which would benefit local economies, including minority and low-income populations.

Early Implementation Project (EIP)

No temporary impacts to environmental justice populations would occur for the EIP improvements as all of the improvements would be constructed within the existing Caltrans right of way.

Permanent Impacts

Alternative 1: No Build Alternative

Under the No Build Alternative, no permanent impacts to environmental justice populations occur since no improvements would be constructed.

Alternatives 2 and 3: Reduced Median and Full Median Alternatives

Although it is not considered a minority and low-income population, tract 9201.06 has a slightly higher Hispanic population than Los Angeles County average. It also has a lower median household income level compared to the other study area census tracts. Because of the findings discussed above, an assessment has been made to determine whether the impacts of the project on the population in tract 9201.06 could be considered disproportionately high and adverse. Potential impacts to those census tracts by the proposed Build Alternatives are discussed below.

Census Tract 9201.06

Census tract 9201.06 encompasses a large area that would not be affected by the proposed Build Alternatives because the potential impacts would be limited to the immediate project vicinity. The eastern boundary of tract 9201.06 that is adjacent to I-5 is zoned for business park uses. The majority of residents of the census tract live more than one mile from the proposed project site.

In addition, the Build Alternatives are part of transportation corridor. As such, the census tracts immediately north and south of Tract 9201.06 would be equally affected by the proposed Build Alternatives. The population in tract 9201.06 would not be affected any more by the Build Alternatives than other non-Hispanic, higher-income populations located in other parts of the study area. The project was not purposefully located near a predominantly minority and relatively poor community.

No minority or low-income populations that would be adversely affected by the proposed project have been identified. Therefore, this project is not subject to the provisions of EO 12898. Based on the above discussion and analysis, the Build

Alternatives would not cause disproportionately high and adverse impacts on any minority or low-income populations per EO 12898 regarding environmental justice.

Early Implementation Project (EIP)

No permanent impacts to environmental justice populations would occur for the EIP improvements as all of the improvements would be constructed within the existing Caltrans right of way.

2.4.3.4 Avoidance, Minimization, and/or Mitigation Measures

Alternatives 2 and 3 and the EIP improvements would not result in temporary or permanent adverse impacts related to environmental justice populations. No avoidance, minimization, or mitigation measures are required.

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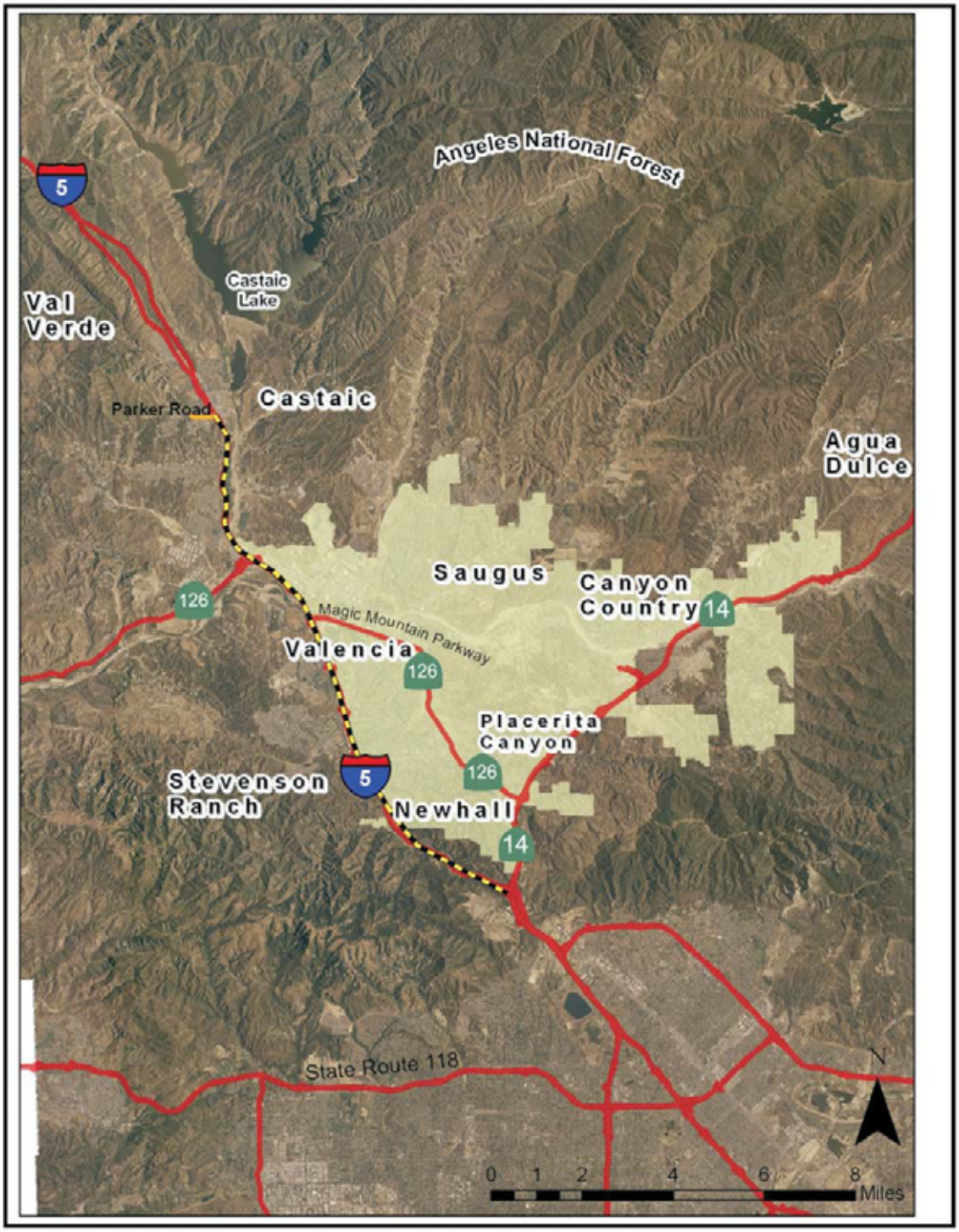

FIGURE 2.4.1

Project Alignment
Highway
City of Santa Clarita

N

0 2 4 MILES
0 3,218 6,436 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project
Study Area
07-LA-5 PM R45.4/R59.0
EA 2332E0

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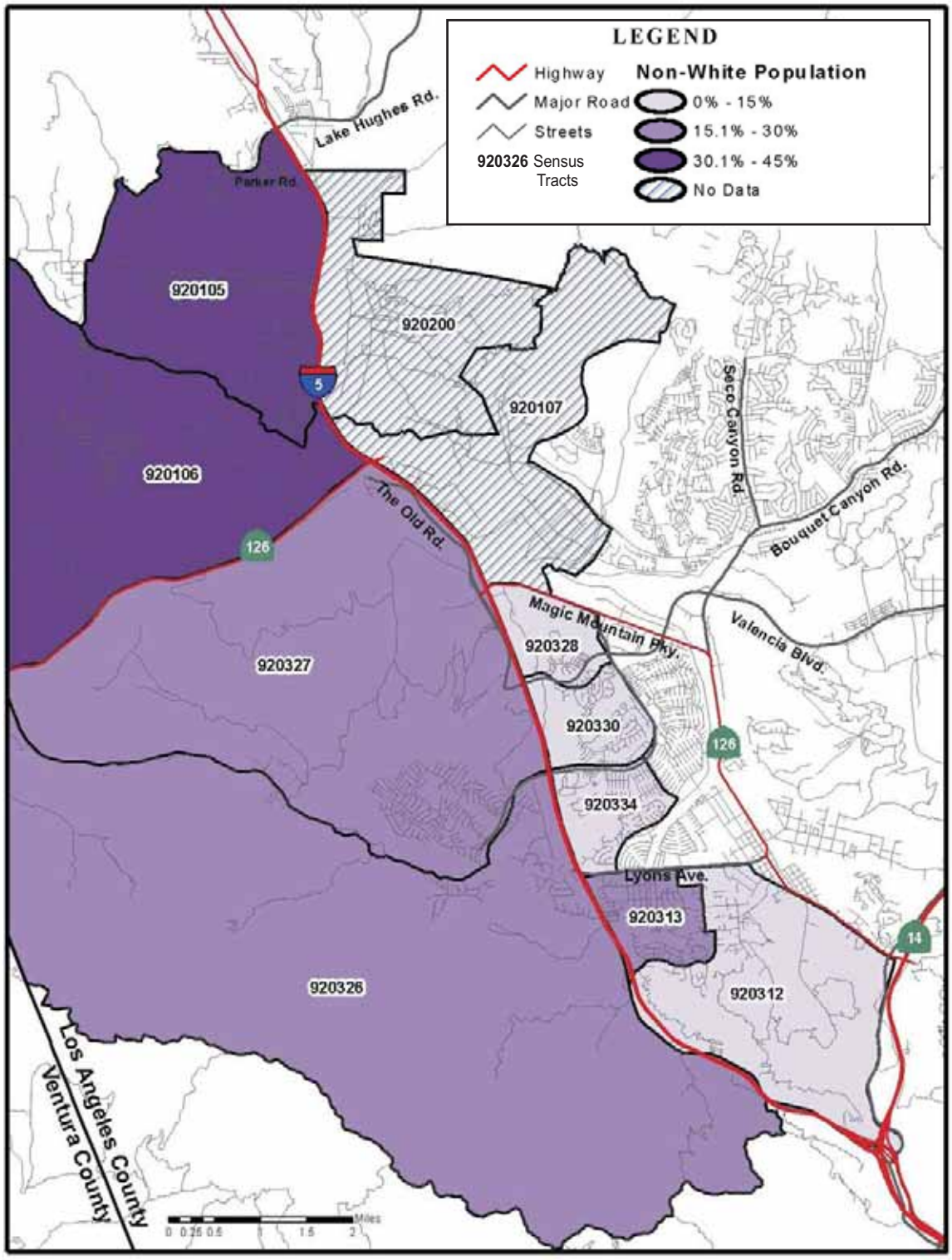

FIGURE 2.4.2

N

0 1 2 MILES
0 1,609 3,218 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project
Non-White Population
07-LA-5 PM R45.4/R59.0
EA 2332E0

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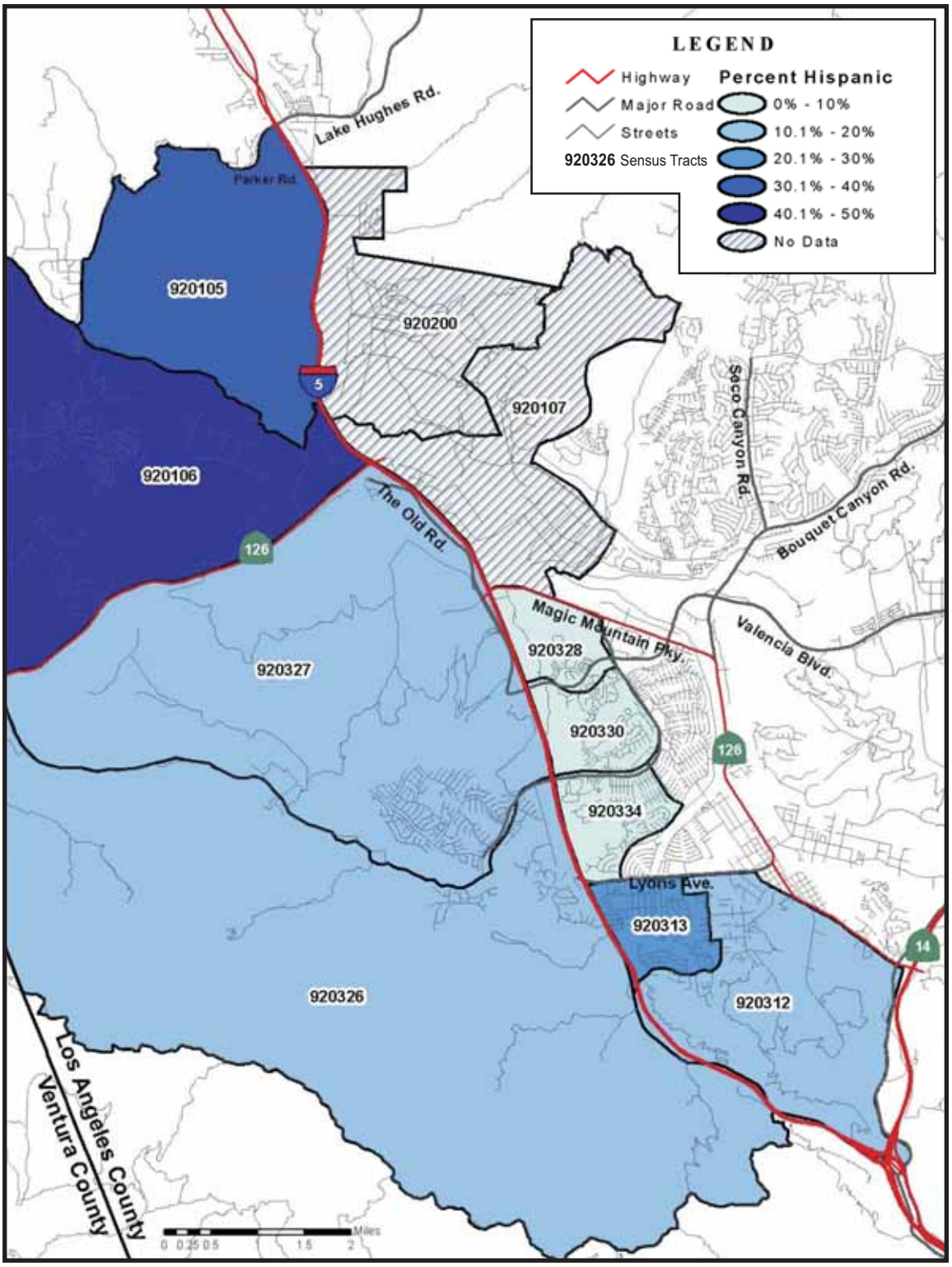

FIGURE 2.4.3

N

0 1 2 MILES

0 1,609 3,218 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project

Percent Hispanic

07-LA-5 PM R45.4/R59.0

EA 2332E0

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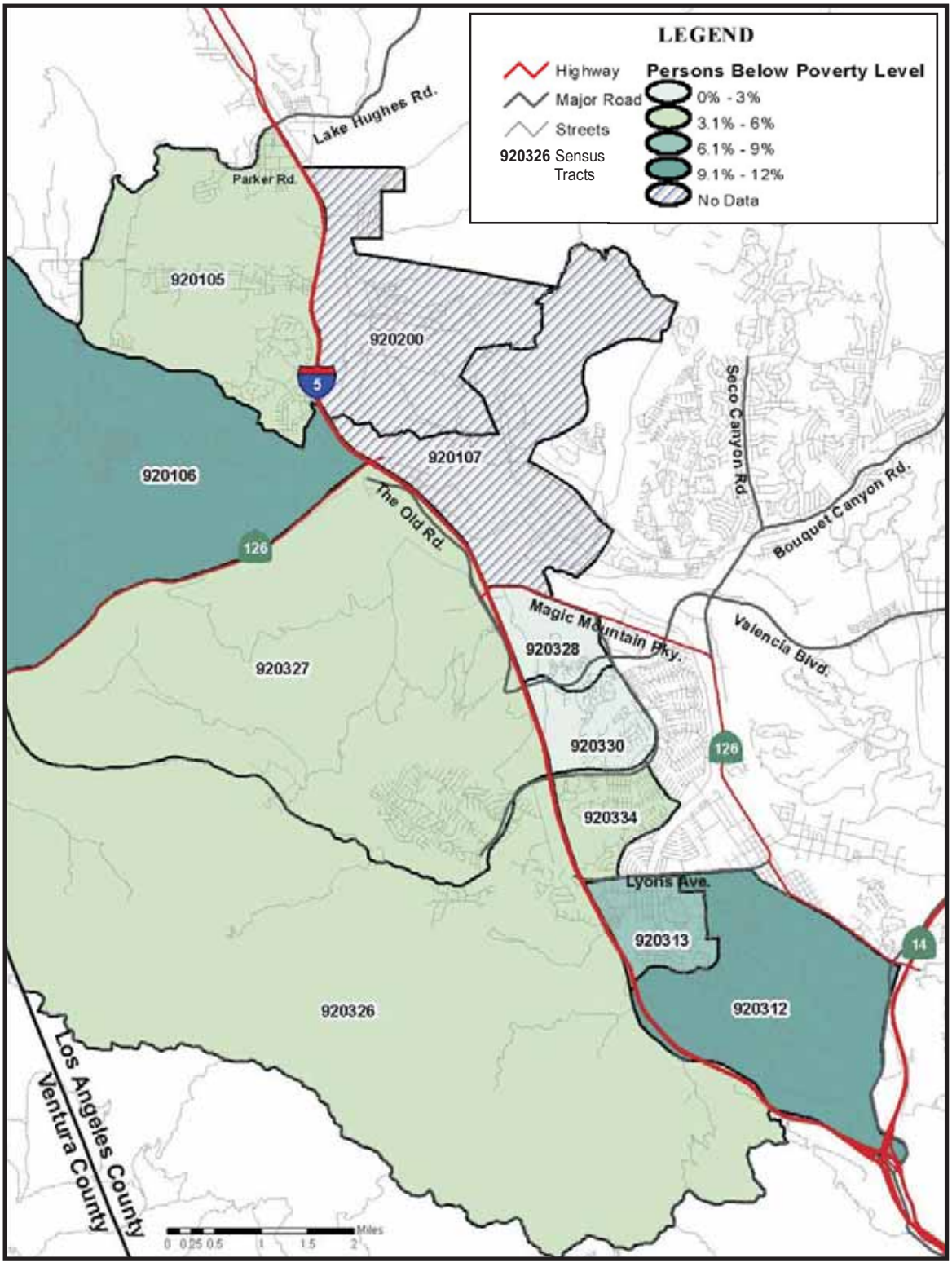

FIGURE 2.4.4

N

0 1 2 MILES

0 1,609 3,218 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project

Persons Below Poverty Level

07-LA-5 PM R45.4/R59.0

EA 2332E0

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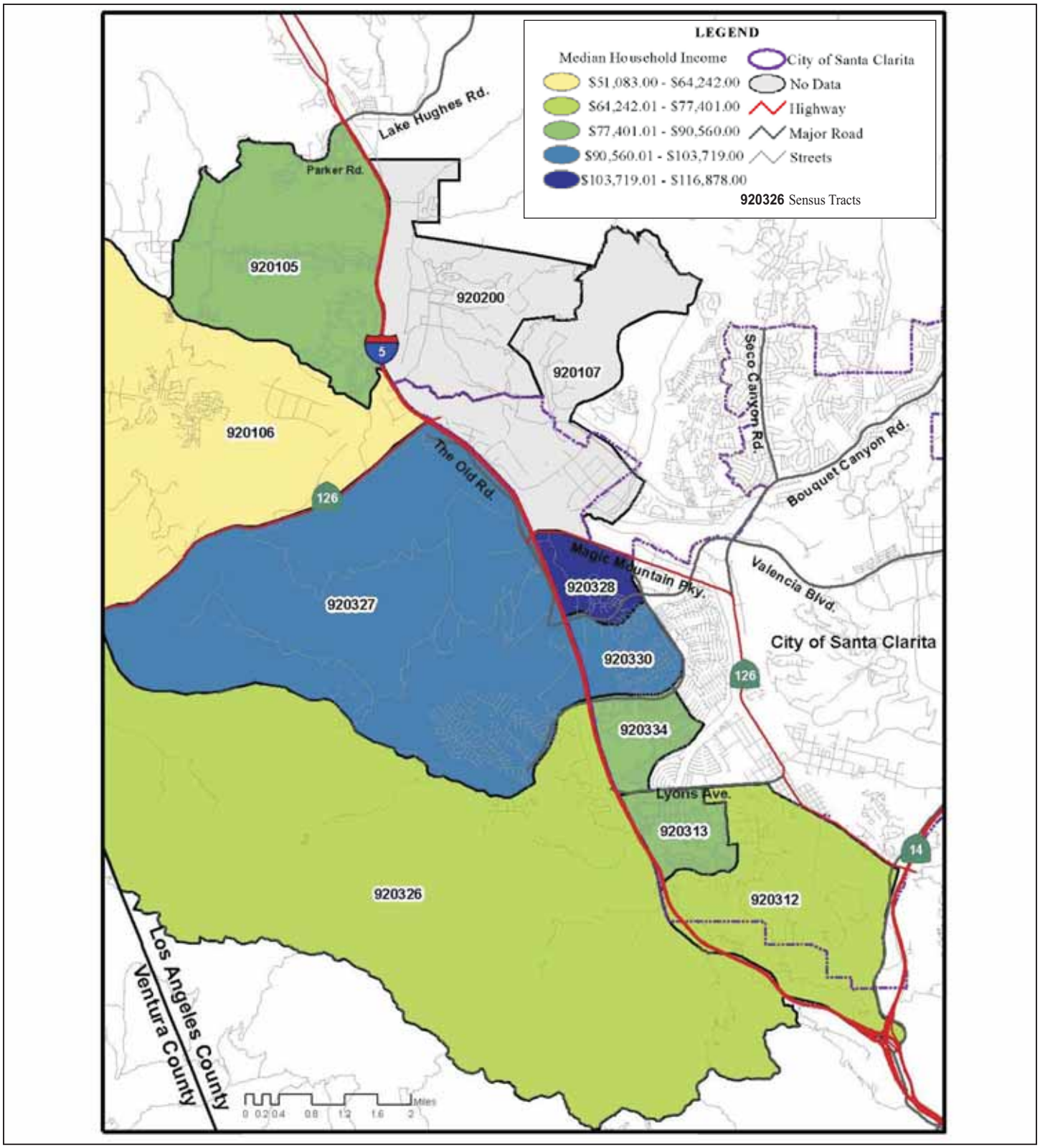

FIGURE 2.4.5

N

0 1 2 MILES
0 1,609 3,218 METERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project

Median Household Income

07-LA-5 PM R45.4/R59.0
EA 2332E0

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2.5 Utilities/Emergency Services

This analysis is of the potential impacts that the proposed project would have on the existing utility facilities and service providers. The information about the location of utility facilities was made available from as-built plans that were obtained from the California Department of Transportation (Caltrans), County of Los Angeles, and local utility companies. The existing utilities in the project area are underground and overhead facilities.

The analysis of the emergency services providers was based on information provided from the service providers. The study area for the emergency service providers is their access and use of the I-5 freeway, its ramps, and its connectors to be able to respond to emergency situations on and near the project site.

2.5.1 Affected Environment

The physical impacts of the Build Alternatives on the utilities and emergency services in the area of the project are mainly limited to the project right of way. This discussion of the affected environment focuses on those services and utilities that are within the right of way or are close enough to the right of way to be affected by the Build Alternatives. Services and utilities are provided generally in large service areas, this discussion will be according to the related service and service providers near the project area.

2.5.1.1 Existing Utility Facilities

There are a number of public utility facilities lines in the project area. Utility lines within the study area include: electric; natural gas; fuel oil transport; water for domestic and irrigation use; wastewater transmission; and telephone, communication, and cable television cables. Table 2.5.A summarizes the utility facilities that either cross the project segments or are located within the facility's right of way.

2.5.1.2 Fire Protection Services

The Los Angeles County Fire Department (LACFD) provides fire protection and emergency medical services to the City of Santa Clarita, the unincorporated areas of Los Angeles County, and the project area. Figure 2.5.1 shows the location of the local stations within the project area.

Table 2.5.A Utility Service Providers with Facilities in or near the Project Right of Way

Utility Category	Utility Provider
Communications	Pacific Bell Telephone
	Pacific Telephone and Telegraph Company (PT&T)
	American Telephone and Telegraph (AT&T)
	Time Warner Cable Television
	Comcast Cable
Electrical	Southern California Edison Electric
	Pacific Lighting Service
Natural Gas/Petroleum	Southern California Gas Company (So Cal Gas)
	Pacific LT Corporation Gas
	Standard Oil
	Mobil Oil (ExxonMobil)
	Getty Oil
	Chevron USA
	Texaco Gas
Crude Oil	Pacific Pipeline System Crude Oil
	Crimson Crude Oil
	British Petroleum (BP)
Sewer Lines	Newhall Land and Farming Company
	Los Angeles County Sanitation District
	County Sanitation District No. 32 of Los Angeles County
Water	Castaic Lake Water Agency
	Los Angeles County Honor Farm
	Newhall County Water District
	Newhall Land and Farming Company
	Valencia Water

The following LACFD stations are located in the project area:[1]

- Station No. 124, located at 25870 Hemingway Avenue, Stevenson Ranch
- Station No. 76, located at 27223 Henry Mayo Drive, Valencia
- Station No. 126 (Division Headquarters), located at 26320 Citrus Street, Santa Clarita
- Station No. 73, located at 24875 North San Fernando Road, Newhall
- Station No. 111, located at 26829 Seco Canyon Road, Saugus
- Station No. 149, located at 31770 Ridge Route Road, Castaic

[1] Los Angeles County Fire Department, Loretta Bagwell, correspondence dated February 12, 2008.

Table 2.5.B lists the emergency incident statistics for area LACFD stations for 2007.

Table 2.5.B Los Angeles County Fire Department Stations Emergency Incident Responses for 2007

Station No.	Emergency Medical Services	Fire	Other	Total Emergency Incidents
Fire Station No. 124	1090	45	343	1478
Fire Station No. 76	721	38	194	953
Fire Station No. 126	1084	28	272	1384
Fire Station No. 73	1291	80	322	1693
Fire Station No. 111	1545	58	255	1858
Fire Station No. 149	495	51	163	709

Source: Los Angeles County Fire Department, Loretta Bagwell, correspondences dated February 12 and December 10, 2008.

LACFD is not currently planning to expand the existing facilities near the project area. However, as planned on the Department's Fire Station 5-Year Plan, two additional stations are to be constructed within the vicinity of the project area. They are: (1) Proposed Fire Station No. 143, to be located in the Hasley Canyon area, and (2) Proposed Fire Station No. 179, to be located in the Lyons Canyon area. Additionally, four proposed fire stations are anticipated to be located in the Newhall Ranch development, west of I-5.

In addition to the LACFD, the U.S. Forest Service has responsibility for nonstructure fires in federal forests and maintains five fire stations in the Valley.

2.5.1.3 Medical Facilities

There are two regional medical facilities within the study area. Each of these facilities is described below.

Henry Mayo Newhall Memorial Hospital

Henry Mayo Newhall Memorial Hospital is located at 23845 McBean Parkway in Valencia. It is the primary acute care hospital serving the Valley, with 230 beds for inpatient care. The hospital has a 21-bed emergency room and is certified for pediatrics, outpatient surgery, intensive care, and obstetrics. Mental health treatment is available at the psychiatric unit, the Child and Family Center, and through family counseling and mental health professionals. The hospital is planning for expansion along with additional office space. Primary access to the hospital is via the McBean Parkway/I-5 Interchange.

Providence Holy Cross Health Center

The Providence Holy Cross Health Center located at 26357 McBean Parkway in Valencia, is approximately 1.3 mile (mi) distance from the project area. It is a nonprofit, 83,000 sq ft health center with emergency and trauma treatment, urgent care, outpatient surgery, outpatient cancer, diagnostic imaging facilities, and laboratories and pharmacy services. The primary access to this facility is the Valencia Boulevard/I-5 interchange.

2.5.1.4 Police Protection Services

Los Angeles County Sherriff's Department

The Los Angeles County Sheriff's Department (Sheriff or LACSD) provides general law enforcement within the unincorporated areas of the Santa Clarita Valley and the City of Santa Clarita. The Santa Clarita Valley station is located at 23740 Magic Mountain Parkway, in the City of Santa Clarita, and is shown in Figure 2.5.1. The LACSD also operates two storefront stations in Newhall and Canyon Country.

Detention Facilities

The Pitchess Detention Center-North Facility, operated by the Sheriff, is located at 29320 The Old Road. The Peter J. Pitchess Detention Canter is the largest jail complex in the County and serves the entire Santa Clarita Valley, as well as other County areas. The jail consists of four facilities, but only three are currently operational: the North Facility, the East Facility, and the North County Correctional Facility. As of 2007, Pitchess had a housing capacity of 7,500 inmates.

In addition, three youth camps serving the region are located in Santa Clarita Valley. The Los Angeles County Probation Department provides secure detention for delinquent minors in juvenile halls, and control and rehabilitation programs in Camp Scott, Camp Scudder, and Camp Francis J. Scobee.

California Highway Patrol

The proposed project is in the jurisdiction of the Southern Division of the California Highway Patrol (CHP) and is served by the Newhall Area Station located at 28648 The Old Road. Law enforcement on I-5 is the responsibility of the CHP and includes traffic enforcement, accident investigation, and response for service.

The Southern Division is a partner with Caltrans in the Los Angeles Regional Transportation Management Center. The center uses advanced transportation management technology which includes computer-aided dispatch, adjustable ramp

meter intervals, changeable warning message signs, and live television updates. It is staffed with CHP and Caltrans personnel.[1]

Truck Facilities

The Castaic Commercial Vehicle Enforcement Facility (CVEF), operated by the CHP, is located at 27858 Golden State Highway, on northbound I-5, between Magic Mountain Parkway and State Route 126 (SR-126) (post-mile 53.7/54.0). This facility provides vehicle inspection, commonly known as a weigh station. Caltrans is currently proposing to upgrade the CVEF, including upgrades to the facility's structure and electrical system, as well as the weight pad.

2.5.2 Environmental Consequences

The Build Alternatives do not include the construction of any residential or commercial land uses; therefore, the project does not increase population or demand for public services or utilities in the study area. This analysis focuses on the direct and indirect impacts as a result of the construction and operation of the Build Alternatives.

2.5.2.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in temporary impacts to utility facilities and emergency service providers. No utility facilities would be relocated or adjusted. No delays to emergency service providers due to detours or closures would occur.

Alternative 2: Reduced Median Alternative

Fire, Law Enforcement, and Emergency Services

Because Alternative 2 would modify all of the on- and off-ramps in the project limits to transition to the mainline widening, there may be the potential for the ramps that are the primary access to medical facilities to be closed during construction activities, which would include the Pico Canyon/Lyons Avenue southbound loop on-ramp, which is expected to be closed for three months. Emergency services could experience temporary, short-term traffic delays and temporary and intermittent road closures or detours around the corridor during construction. This could result in delayed response times for police, fire protection, and emergency services.

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[1] Department of California Highway Patrol Web site, www.chp.ca.gov/depts_div_offs/southern.html, accessed January, 2008.

In addition, construction of Alternative 2 would require the temporary weekend and nighttime closures**.** All ramps within the study area are subject to nighttime closures for a maximum of 5 working days. Ramps located at the SR-126/I-5 interchange and the Valencia Boulevard/I-5 interchange are the primary accesses to medical facilities in the study area and would be affected during construction activities.

However, with the measures outlined below in Section 2.5.4, potential temporary impacts to fire, law enforcement, and emergency services would not be adverse.

Utilities

All utility lines and facilities within and adjacent to the right of way were identified. Typical construction activities requiring relocation include the widening or replacement of existing structures, and outside and/or median retaining walls. Low-height retaining walls constructed beneath overhead utilities and areas of pavement widening were not considered to require utility relocation.

Utilities can be affected in three ways: (1) the location, (2) removal, and (3) protection in place. During relocation and removal, as well as other construction activities, utility services could be temporarily interrupted or damaged.

Alternative 2 would result in temporary impacts to the utility facilities that will need to be relocated due to the project construction. Table 2.5.C summarizes the potential temporary impacts to the utility facilities for Alternative 2. Utilities that are affected only by Alternative 2 are shown in **Bold** in Table 2.5.C.

High risk and/or large facilities listed will have a special footing design to avoid impacts. All other utilities may have parallel facilities built.

Utility relocations would be required in local roadways, primarily at the transverse crossing of the mainline and, in some cases, adjacent to the Caltrans right of way, to allow widening of the mainline. In general, the utility relocations are limited to areas where the local roadways cross I-5 at the interchanges and other structures and adjacent to the I-5 right of way, where the widening encroaches onto the local roadway.

Utilities to be relocated include lighting (photoelectronic controls and switches) at Weldon Canyon Road, communication conduits at Gavin Canyon Road, oil transmission lines at Honor Ranch Road, and water transmission lines at Castaic Creek.

Table 2.5.C Alternative 2 Potential Utility Relocations

Segment	Location	Potential Utility Relocation
1	SR-14 to Weldon Canyon Road	• Telephone-buried cable • Telephone-buried cable (in structure)
1	Weldon Canyon Road to Calgrove Boulevard	• **Potable water** • Communication conduit in barrier rail
1	Calgrove Boulevard to Pico Canyon Road /Lyons Avenue	• Telephone-buried cable • Potable water • Telephone-buried cable • Sewer lines • Gas lines
2	Pico Canyon Road/Lyons Avenue to McBean Parkway	• Telephone • Sewer • Potable water
2	McBean Parkway to Valencia Boulevard	• Potable water line • Electric • Telephone
2	Valencia Boulevard to Magic Mountain Parkway	
2	Magic Mountain Parkway to Rye Canyon Road	• Water (Irrigation) • Telephone-buried cable
2	Rye Canyon Road to SR-126	
2/3	SR-126 to Biscailuz Drive	• Water (Irrigation) • Domestic Water • Oil transmission line • Telephone-buried cable
3	Biscailuz Drive to Hasley Canyon Road	• **Telephone-buried cable** • Sewer • Potable water
3	Hasley Canyon Road to Parker Road	• Telephone-buried cable • Telephone lines

Note: Utilities affected only by Alternative 2 are shown in Bold.

In most cases, parallel facilities will be constructed around the project improvements, requiring short-term interruptions to service when service is switched to the new parallel facilities. In the situations where retaining walls cross larger utilities and/or

high-risk utilities, such as a sanitary sewer, a water pipe, or an oil transmission line, a footing design will require details to transmit the wall loads across the existing utility location to avoid affecting the utilities. This would allow the existing utility to remain in place, with the retaining wall constructed above the existing utility.

If the project improvements can be constructed around the existing utilities with the sufficient separation buffer between the utility and the new construction, the utility is considered not to be affected. Construction of structures directly above or near these utilities will likely affect their location and require relocation.

All proposed utility relocations and adjustments are expected to be contained within the existing right of way. Affected utilities will be contacted during the Plans, Specifications, and Estimates (PS&E) phase to establish the final listing of utilities to be relocated and identify the where/how they will be relocated.

The existing utilities that are within the State and County right of way are assumed to be the responsibility of the affected utility agency. The project will be responsible for any relocation of existing utilities that are within a utility provider's easements or right of way.

With the measures outlined below in Section 2.5.4, potential temporary impacts to utilities would not be adverse.

Alternative 3: Full Median Alternative

Fire, Law Enforcement, and Emergency Services

Alternative 3 would result in similar temporary impacts to those described for Alternative 2, except the following:

Alternative 3 requires the replacement of the existing Biscailuz Drive/Honor Ranch Overcrossing, which provides the primary access to the Pitchess Facility North. The proposed new overcrossing would be constructed using half-width construction. This type of construction would allow traffic to use a portion of the existing structure while the new portion of the bridge structure is under construction. Late-night closures in each direction may be necessary for removal of the existing and construction of the new overcrossing, and reconstruction at the ramp exit and entrance may require short-term closures.

With the minimization measures outlined below in Section 2.5.4, potential temporary impacts to fire, law enforcement, and emergency services would not be adverse.

Utilities

Alternative 3 would result in temporary impacts to the utility facilities similar to Alternative 2. Table 2.5.D summarizes the potential temporary impacts to the utility facilities for Alternative 3. Utilities that are only affected by Alternative 3 are shown in bold in Table 2.5.D.

With the measures outlined below in Section 2.5.4, potential temporary impacts to fire, law enforcement, and emergency services would not be adverse.

Table 2.5.D Alternative 3 Potential Utility Relocations

Segment	Location	Potential Utility Relocation
1	SR-14 to Weldon Canyon Road	• Telephone-buried cable • Telephone-buried cable
1	Weldon Canyon Road to Calgrove Boulevard	• Communications conduit
1	Calgrove Boulevard to Pico Canyon Road/Lyons Avenue	• Telephone-buried cable • Potable water • Telephone-buried cable • Sewer lines • Gas lines
2	Pico Canyon Road/Lyons Avenue to McBean Parkway	• Telephone • Sewer • Potable water
2	McBean Parkway to Valencia Boulevard	• Potable water line • Electric • Telephone
2	Valencia Boulevard to Magic Mountain Parkway	
2	Magic Mountain Parkway to Rye Canyon Road	• Water (Irrigation) • Telephone-buried cable • **Overhead electric lines**
2	Rye Canyon Road to SR-126	
2/3	SR-126 to Biscailuz Drive	• **Water line** • Water (Irrigation) • **Sewer** • **Domestic water** • **Oil transmission line**, • Telephone-buried cable

Table 2.5.D Alternative 3 Potential Utility Relocations

Segment	Location	Potential Utility Relocation
3	Biscailuz Drive to Hasley Canyon Road	• **Water line** • **Oil transmission lines (2)** • **Telephone-conduit buried cable** • Sewer • **Telephone cables** • **Telephone-buried cable** • Potable water • **Potable water**
3	Hasley Canyon Road to Parker Road	• **Telephone** • **Gas line** • **Telephone-buried cable** • **Oil line** • Gas line • **Potable water**

Note: Utilities affected only by Alternative 3 are shown in **Bold.**

Early Implementation Project (EIP)

Similar to the Build Alternatives, the EIP would potentially and temporarily impact the following utilities that may be impacted by widening within the median:

- Telephone-Buried Cable
- Potable Water

Additional coordination with the utility companies and investigation during the PS&E phase would be required to positively identify their locations and determine whether they will require relocation during construction. Similar to the Build Alternatives, all utility relocations required by the EIP would occur in consultation with the owners or operators of the affected utilities.

Similar to the Build Alternatives, construction activities of the EIP have the potential to temporarily impact emergency response within the construction area due to short-term congestion/delays on the mainline freeway and adjacent local roads.

With the minimization measures outlined below in Section 2.5.4, potential temporary impacts of the EIP would not be adverse.

2.5.2.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not provide any road improvements on the project segment of I-5. As a result, traffic congestion would continue to increase along I-5. Levels of Service (LOS) would continue to deteriorate, and vehicle density would increase due to anticipated traffic volume increases between existing and 2030 conditions. These future conditions would potentially result in increased delays for the fire, law enforcement, and emergency service providers and their ability to respond to emergency situations.

Alternative 2: Reduced Median Alternative

The construction of Alternative 2 would have beneficial impacts for the emergency service providers. The beneficial impacts would be the ability of the fire, law enforcement, and emergency service providers to respond to emergency situations and move emergency equipment on the improved transportation network. The emergency service response times would be maintained or potentially improved.

All utility impacts would be temporary; there would be no permanent utility impacts.

Alternative 3: Full Median Alternative

Alternative 3 would have the same permanent impacts to fire, law enforcement, and emergency responders as Alternative 2 since both Build Alternatives result in the same level of improvement to the mainline facility.

Truck Facilities

Alternative 3 requires the acquisition of 0.7 acres of land from the Castaic Commercial Vehicle Enforcement Facility (CVEF). The CVEF has three lanes that are used to inspect trucks. Under Alternative 3, entrance to the CVEF would be reconfigured, and the outside lane may be eliminated.

With implementation of the mitigation measure outlined below, potential impacts to the CVEF are not considered adverse.

The utility facilities would not have permanent impacts due to Alternative 3, since utility services would only be interrupted temporarily.

Alternative 3 would result in the same beneficial impacts to its facilities identified for Alternative 2.

Early Implementation Project (EIP)

Similar to the Build Alternatives, the EIP would not have any permanent impacts to utilities emergency services.

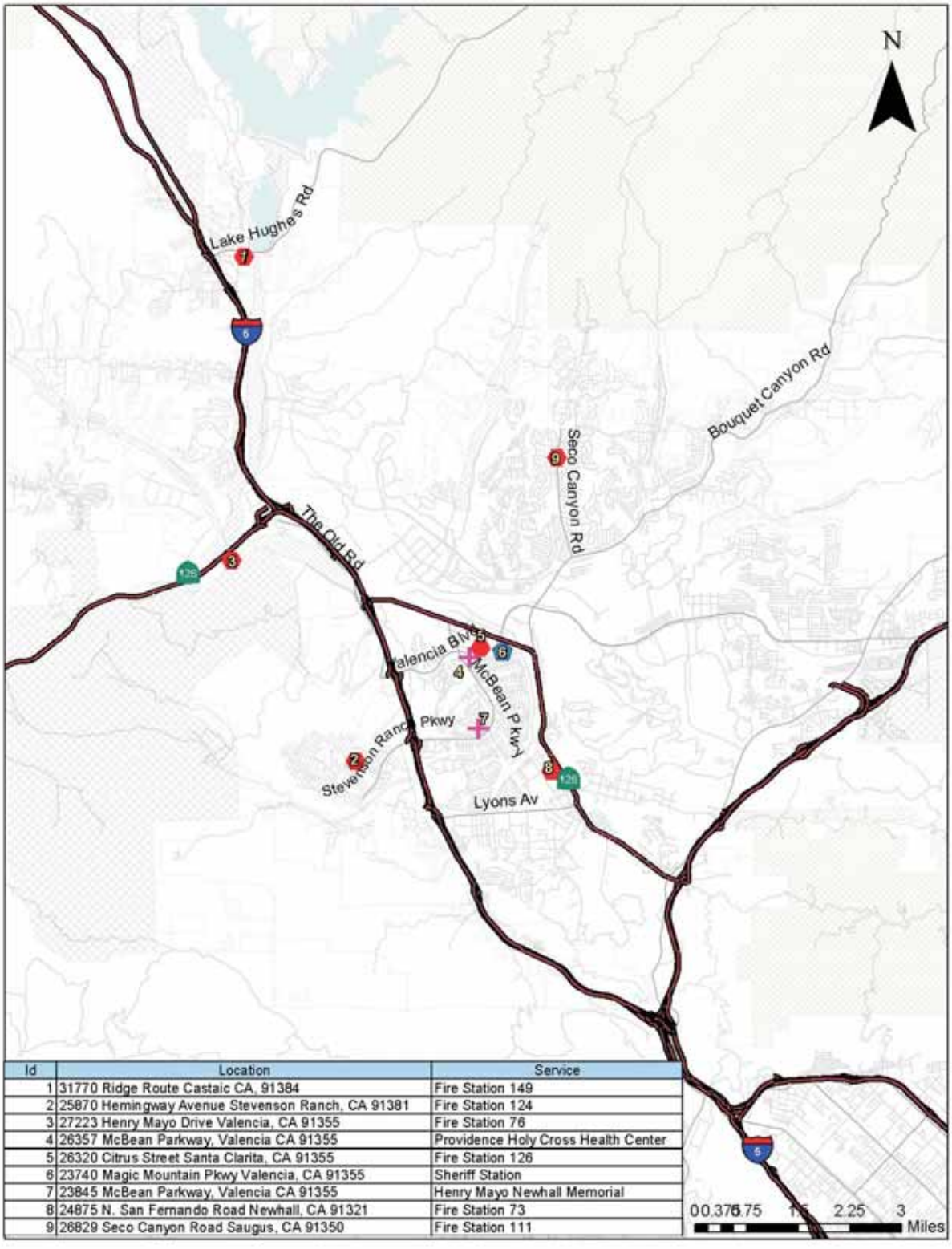
2.5.3 Avoidance, Minimization and/or Mitigation Measures

The impact of temporary construction-related disruptions to freeway access on the emergency service providers associated with the Build Alternatives and the EIP, would be addressed through the Transportation Management Plan (TMP) and the Ramp Closure Study (for all ramps closed longer than ten consecutive days). A preliminary TMP has been outlined in Chapter 1, Section 1.4.1.3 and described in Measures T-1 and T-2 in Section 2.6.4, Traffic and Transportation. All utility relocation would occur in consultation with the owners or operators of the affected utilities. Utility infrastructures that are to be impacted by project construction would be relocated before construction of the project, during construction, protected in place or abandoned. Those utilities that must be relocated as a part of the proposed project construction would be relocated in such a manner as to minimize any disruption of service those utilities provide.

The following mitigation measure is required to reduce potential impacts to the CVEF facility associated with Alternative 3 improvements.

U-1 Modifications to the existing California Highway Patrol (CHP) facilities would be needed to restore the existing available truck inspection capacity improvements and would include expansion to the east to generate a more usable area for the facility. This expansion would require conversion of the existing open channel into a covered pipe system to provide room for the ramp to be widened. Retaining walls would also be necessary.

Coordinate with the CHP to redesign the Castaic Commercial Vehicle Enforcement Facility (CVEF) to replace the lane capacity lost due to construction of the Alternative 3 improvements.



Id	Location	Service
1	31770 Ridge Route Castaic CA, 91384	Fire Station 149
2	25870 Hemingway Avenue Stevenson Ranch, CA 91381	Fire Station 124
3	27223 Henry Mayo Drive Valencia, CA 91355	Fire Station 76
4	26357 McBean Parkway, Valencia CA 91355	Providence Holy Cross Health Center
5	26320 Citrus Street Santa Clarita, CA 91355	Fire Station 126
6	23740 Magic Mountain Pkwy Valencia, CA 91355	Sheriff Station
7	23845 McBean Parkway, Valencia CA 91355	Henry Mayo Newhall Memorial
8	24875 N. San Fernando Road Newhall, CA 91321	Fire Station 73
9	26829 Seco Canyon Road Saugus, CA 91350	Fire Station 111

FIGURE 2.5.1

Highway

N

0 1.5 3 MILES
0 2.4 4.8 KILOMETERS

SOURCE: Caltrans

I-5 HOV / Truck Lanes Project
Community Facilities and Services
07-LA-5 PM R45.4/R59.0
EA 2332E0

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2.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

The information in this section is based on the *I-5 PA&ED HOV & Truck Lane–SR-14 to Parker Road Traffic Study* (Austin-Foust Associates, Inc., October 2007), the *I-5 PA&ED HOV & Truck Lane–SR-14 to Parker Road Supplemental Traffic Data* (Austin-Foust Associates, Inc., August 2008), and the *Draft Project Report* (Psomas, December 2008).

2.6.1 Regulatory Setting

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.6.2 Affected Environment

2.6.2.1 Existing Lane Configuration

For the traffic analysis, the study area is the Interstate 5 (I-5) corridor from San Fernando Road on the south to Lake Hughes Road on the north, which extends one interchange south and north of the limits of the proposed improvement (State Route 14 [SR-14] to south of Parker Road). As discussed in Chapter 1, within the study area, I-5 currently provides generally four mixed-flow lanes in each direction, with the exception of three mixed-flow lanes in each direction at the I-5/SR-14 interchange. In the proposed I-5 High-Occupancy Vehicle (HOV)/Truck Lanes project (project) area, two truck lanes are separated from the mainline freeway south of the Weldon Canyon Overcrossing. This truck bypass route begins/ends just north of the I-5/SR-14 interchange.

2.6.2.2 Baseline Traffic Condition

The existing (2006) a.m. and p.m. peak-hour traffic volumes, average daily traffic (ADT), and percentage of trucks on I-5 within the project limits are shown in Table 2.6.A. The existing (2006) a.m. and p.m. peak-period traffic volumes and ADT are shown in Table 2.6.B. The a.m. peak period is from 6:00 a.m. to 9:00 a.m. and the p.m. peak period is from 3:00 p.m. to 7:00 p.m. The peak hour is the hour during the peak period when traffic congestion is greatest.

Table 2.6.A 2006 Existing Peak-Hour Traffic Volumes

I-5 Segment	% Trucks (Daily)	A.M. Peak Hour		P.M. Peak Hour		ADT
		SB	NB	SB	NB	
North of Parker Road[1]	26.6	1,600	1,190	2,040	2,250	65,000
Between Parker Road and Hasley Canyon Road	20.8	2,210	1,570	2,420	2,790	83,000
Between Hasley Canyon Road and SR-126	17.3	3,110	2,170	3,010	3,620	100,000
Between SR-126 and Rye Canyon Road	15.3	3,420	3,340	4,150	4,080	124,000
Between Rye Canyon Road and Magic Mountain Parkway	14.2	4,200	3,340	5,350	4,080	134,000
Between Magic Mountain Parkway and Valencia Boulevard	12.2	4,490	4,490	5,600	5,270	156,000
Between Valencia Boulevard and McBean Parkway	10.6	5,310	5,430	6,420	6,050	179,000
Between McBean Parkway and Pico Canyon Road/Lyons Avenue	10.1	5,730	5,560	6,450	6,610	189,000
Between Pico Canyon Road/Lyons Avenue and Calgrove Boulevard	9.5	6,320	5,620	6,460	7,020	199,000
Between Calgrove Boulevard and SR-14	9.4	6,610	5,600	6,410	6,970	202,000
South of SR-14[2]	8.6	13,270	7,390	9,180	13,710	325,000

Source: Austin-Foust Associates, Inc., October 2007.
[1] This segment of I-5 is north of the project limits.
[2] This segment of I-5 is south of the project limits.
Peak hour = the hour during the peak period when traffic congestion is greatest.

Table 2.6.B 2006 Existing Peak-Period Traffic Volumes

I-5 Segment	A.M. Peak Period		P.M. Peak Period		ADT
	SB	NB	SB	NB	
North of Parker Road[1]	4,200	3,100	7,000	7,800	65,000
Between Parker Road and Hasley Canyon Road	5,800	4,100	8,300	9,600	83,000
Between Hasley Canyon Road and SR-126	8,200	5,700	10,400	12,500	100,000
Between SR-126 and Rye Canyon Road	9,000	8,800	14,300	14,100	124,000
Between Rye Canyon Road and Magic Mountain Parkway	11,100	8,800	18,400	14,100	134,000
Between Magic Mountain Parkway and Valencia Boulevard	11,800	11,800	19,300	18,200	156,000
Between Valencia Boulevard and McBean Parkway	14,000	14,300	20,700	20,900	179,000
Between McBean Parkway and Pico Canyon Road/Lyons Avenue	15,100	14,400	20,800	22,000	189,000
Between Pico Canyon Road/Lyons Avenue and Calgrove Boulevard	15,400	14,400	20,800	22,600	199,000
Between Calgrove Boulevard and SR-14	15,600	14,200	20,000	21,800	202,000

Source: Austin-Foust Associates, Inc., August 2008.
[1] This segment of I-5 is north of the project limits.
A.M. Peak Period = 6:00 a.m.–9:00 a.m.
P.M. Peak Period = 3:00 p.m.–7:00 p.m.

As shown in Table 2.6.A, the existing southbound a.m. and p.m. peak-hour traffic volumes within the project limits (SR-14 to Parker Road) range from 2,210 to 6,610 vehicles per hour (vph) and 2,420 to 6,460 vph, respectively. The existing northbound a.m. and p.m. peak-period traffic volumes range from 1,570 to 5,620 vph and 2,790 to 7,020 vph, respectively.

As described in Table 2.6.A, the percentage of truck traffic along I-5 within the project limits ranges from 9.4 percent to 20.8 percent of the total traffic volume. Truck percentages along the study area are higher than other freeway facilities, which generally average between 5 and 8 percent.

As shown in Table 2.6.B, the existing southbound a.m. and p.m. peak-period traffic volumes within the project limits range from 5,800 to 15,600 vph and 8,300 to 20,800 vph, respectively. The existing northbound a.m. and p.m. peak-period traffic volumes range from 4,100 to 14,400 vph and 9,600 to 22,600 vph, respectively. ADT ranges from 83,000 to 202,000 vehicles per day in the project segment of I-5.

The quality and density of traffic flow in the I-5 study area can be defined in terms of level of service (LOS) from A to F. LOS describes the efficiency of traffic flow, as well as how such conditions are perceived by those persons traveling in the traffic stream, and accounts for variables such as speed and travel time, freedom to maneuver, traffic interruptions, traveler comfort and convenience, and safety. LOS ranges from LOS A (free traffic flow with low volumes and high speeds, resulting in low densities) to LOS F (traffic volumes exceeding capacity and resulting in forced flow operations at low speeds, resulting in high densities). Table 1.A, provided earlier, is a graphic depiction of relative levels of congestion and speed associated with each LOS.

Table 2.6.C lists the existing (2006) a.m. and p.m. peak-hour traffic LOS for each segment of I-5 in the study area. As shown in this table, northbound I-5 from SR-14 to Magic Mountain Parkway currently operates at LOS C during the a.m. peak hour and at LOS C and D during the p.m. peak hour. Traffic conditions along southbound I-5 during the a.m. and p.m. peak hours operate at LOS E between Calgrove Boulevard and Pico Canyon Road/Lyons Avenue (Pico/Lyons) and at LOS F between the Truck Route Bypass and Calgrove Boulevard. During the p.m. peak hour, Pico/Lyons to Valencia Boulevard in the northbound direction operates at LOS D.

Table 2.6.C LOS Summary: Existing Conditions

I-5 Segment	A.M. Peak Hour	P.M. Peak Hour
	LOS	LOS
Northbound		
Lake Hughes Road to Parker Road	A	A
Parker Road to Hasley Canyon Road	A	B
Hasley Canyon Road to SR-126	B	B
SR-126 to Rye Canyon Road	B	B
Rye Canyon Road to Magic Mountain Parkway	B	B
Magic Mountain Parkway to Valencia Boulevard	C	C
Valencia Boulevard to McBean Parkway	C	C
McBean Parkway to Pico Canyon Road	C	D
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	C	D
Calgrove Boulevard to Truck Route Bypass	C	D
Truck Route Bypass to SR-14 On-Ramp	C	D
SR-14 on-Ramp to SR-14 Off-Ramp	C	D
Southbound		
Lake Hughes Road to Parker Road	A	A
Parker Road to Hasley Canyon Road	A	A
Hasley Canyon Road to SR-126	A	B
SR-126 to Rye Canyon Road	B	B
Rye Canyon Road to Magic Mountain Parkway	B	C
Magic Mountain Parkway to Valencia Boulevard	C	C
Valencia Boulevard to McBean Parkway	C	D
McBean Parkway to Pico Canyon Road/Lyons Avenue	C	D
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	E	E
Calgrove Boulevard to Truck Route Bypass	F	F
Truck Route Bypass to SR-14 On-Ramp	C	C
SR-14 On-Ramp to San Fernando Road	C	C

Source: Austin-Foust Associates, Inc., October 2007.
Peak hour = the hour during the peak period when traffic congestion is greatest.

Observations of vehicle occupancies collected in April 2005 for the segment of I-5 between SR-14 and Calgrove Boulevard are summarized in Table 2.6.D. The data indicate that average vehicle occupancies for this segment of freeway currently range between 1.3 and 1.4 persons per vehicle. These observations equate to approximately 27 percent of vehicles qualifying to use an HOV (2+ persons/vehicle) lane and just 6 percent of vehicles qualifying to use a 3+ persons/vehicle lane.

Table 2.6.D Average Vehicle Occupancy Survey

Location	Time	Direction	People per Vehicle			Average Vehicle Occupancy
			1	2	3+	
I-5 at Weldon Canyon Rd.	9:30–9:45 am	NB	378	139	58	1.44
I-5 at Weldon Canyon Rd.	9:30–9:45 am	SB	279	67	12	1.25
I-5 at Weldon Canyon Rd.	3:15–3:30 pm	SB	271	91	15	1.32
I-5 at Weldon Canyon Rd.	6:30–6:45 pm	NB	511	127	31	1.28
Total Vehicles			1,439	424	116	1.33
National Average – To or From Work						*1.14*
National Average – Social and Recreational						*2.03*
National Average – All Purposes						*1.63*
Percentage of observed vehicles that qualify to use a *2 or more persons per vehicle* carpool lane:						27%
Percentage of observed vehicles that qualify to use a *3 or more persons per vehicle* carpool lane:						6%

Sources: Austin-Foust Associates, Inc., October 2007.
NB = Northbound
SB = Southbound

2.6.2.3 Local Transit System

The City of Santa Clarita has a local transit system composed of nine routes that provide service to the Santa Clarita Valley area. The seven routes that cross or are adjacent to the I-5 project area are shown in Figure 2.6.1. Routes 1 and 2 provide service between Canyon Country (at Whites Canyon) and Castaic/Val Verde to Downtown Newhall. Routes 3 and 7 provide service between Seco Canyon Road and Six Flags Magic Mountain Theme Park. Routes 5 and 6 provide service between Newhall/Stevenson Ranch and Canyon Country (Shadow Pines and north of Sierra Highway), and Route 8 provides service to and from the McBean Transfer Station located at Valencia Boulevard and McBean Parkway, and the Sylmar Metrolink Station at Hubbard Avenue and Frank Modugno Drive. This route connects to eight Santa Clarita routes, six Metro routes, and one Los Angeles Department of Transportation (LADOT) route.[1]

[1] City of Santa Clarita, City of Santa Clarita Transit http://www.santa-clarita.com/cityhall/admin/transit/routes&schedules.asp, site accessed July 24, 2008.

2.6.2.4 Bicycle Facilities

Although there are multipurpose recreational trails (hiking, biking, and equestrian trails) in the project area, there are no existing or proposed dedicated bicycle lanes.[1,2,3] Multiuse recreational trails are discussed in Section 2.1, under Parks and Recreation.

2.6.2.5 Pedestrian Facilities

In the project area, there are existing sidewalks on Magic Mountain Parkway, Valencia Boulevard, McBean Parkway, and Lyons Avenue.

2.6.3 Environmental Consequences

2.6.3.1 Temporary Impacts

Alternative 1: No Build Alternative

Under the No Build Alternatives, the temporary traffic circulation impacts discussed below for the Build Alternatives would not occur. However, temporary traffic circulation impacts would occur during construction of the other transportation improvement projects included in the No Build Alternative.

Alternative 2: Reduced Median Alternative

Staged Construction

A staged construction approach is planned during construction of improvements. The majority of the project involves widening the median area and the outside shoulder area of I-5. Stage 1 activities would include widening the median, placing temporary railing in the median near the existing inside edge of traveled way, constructing the median retaining walls, and constructing the drainage crossings within the median.

Stage 2 activities would include placing temporary railing near the existing outside edge of traveled way, widening the proposed outside shoulder, constructing the outside retaining walls, and constructing the remaining portion of the proposed drainage crossings. Widening of existing structures and bridges would also be

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1 City of Santa Clarita, General Plan Circulation Element, December 1997.

2 County of Los Angeles, Department of Regional Planning, Santa Clarita Valley Area Plan, December 1990.

3 City of Santa Clarita, City of Santa Clarita Trails Map, http://www.santa-clarita.com/cityhall/parks/trails/trailsmap.asp, site accessed February 5, 2008.

constructed in stages, with interior widening being completed first, followed by exterior widening.

Closures/Detours

Late-night closures of I-5 in each direction may be necessary for removal of the existing Weldon Overcrossing. Reconstruction at interchange on- and off-ramps throughout the project area may also require short-term nighttime closures. Potential traffic impacts would be limited given either the low volume of vehicles or the short extent of the closure.

An extended (three-month) temporary ramp closure is expected at the Pico/Lyons Interchange during construction of Alternative 2. To meet the vertical clearance requirements between the I-5 southbound lanes and the Pico/Lyons overcrossing, the southbound Pico/Lyons Interchange loop on-ramp would be shut down while the mainline profile is lowered. During the closure, traffic would be detoured to the southbound diagonal on-ramp. Once the southbound mainline profile can be lowered to provide the minimum vertical clearance, the southbound loop on-ramp would be opened for traffic use. The remaining ramp modifications are expected to require minimal ramp closures. Temporary traffic impacts were studied as part of the *Supplemental Traffic Data*, which concluded that traffic at Pico Canyon Road would operate at an acceptable LOS during construction.

No other closures or detours at bridges are anticipated during construction. In addition, construction is not anticipated to result in any local street closures.

With the avoidance and/or minimization measures outlined below in Section 2.6.4, potential temporary impacts to traffic and circulation under Alternative 2 would not be adverse.

Transit Systems/Bicycle and Pedestrian Facilities

Temporary circulation and access impairment discussed above under closures/detours may impact the transit services in the area during the construction of Alternative 2.

Because there are no bicycle facilities in the project area, Alternative 2 would not result in temporary impacts to bicycle facilities.

Construction activities and ramp modifications at Magic Mountain Parkway, Valencia Boulevard, McBean Parkway, and Lyons Avenue could block pedestrian access and require temporary detours of pedestrian facilities at these locations.

With the avoidance and/or minimization measures outlined below in Section 2.6.4, potential temporary impacts to transit systems and pedestrian facilities under Alternative 2 would not be adverse.

Alternative 3: Full Median Alternative

Closures/Detours

In addition to the extended temporary ramp closure at the Pico/Lyons Interchange, discussed above under Alternative 2, traffic would be affected temporarily during construction of the Biscailuz Drive/Honor Ranch Overcrossing under Alternative 3.

The Biscailuz Drive/Honor Ranch Overcrossing would be constructed using a half-width construction to allow continued access to Biscailuz Drive and maintain traffic flow on the overcrossing during construction. The three phases of half-width construction would be as follows:

1. Half of the new bridge would be constructed just north of the existing structure. Because the existing bridge structure is not affected during this stage, it would remain open to traffic.
2. The existing bridge would be removed and the remaining half of the proposed bridge would be constructed. Traffic would be shifted to the portion of the new bridge that was previously constructed under Phase 1.
3. The two halves of the newly constructed bridge would be joined.

During Phase 2 of the half-width construction, only one lane would remain open, which would require temporary traffic signals or flagpersons to control traffic. The bridge serves as one of two access points for the Peter Pitchess Detention Center. Through traffic does not utilize the bridge. With reduced access during this phase, some limited traffic delays could occur for vehicles entering and exiting the Detention Center.

As with Alternative 2, construction of Alternative 3 would be completed in stages. Late-night closures in each direction may be necessary for removal of the existing Weldon and Biscailuz Drive Overcrossings. Similar to Alternative 2, reconstruction at the ramp exits and entrances may also require short-term nighttime closures.

Modifications at the Pico/Lyons Interchange would also require an extended ramp closure.

With the avoidance and/or minimization measures outlined below in Section 2.6.4, potential temporary impacts to traffic and circulation under Alternative 3 would not be adverse.

Transit Systems/Bicycle and Pedestrian Facilities

Temporary circulation and access impairment discussed above under closures/detours may impact the transit services in the area during construction of Alternative 3.

Because there are no bicycle facilities in the project area, Alternative 3 would not result in temporary impacts to bicycle facilities.

Alternative 3 would result in the same impacts to pedestrian facilities during construction as those discussed above for Alternative 2.

With the avoidance and/or minimization measures outlined below in Section 2.6.4, potential temporary impacts to transit systems and pedestrian facilities under Alternative 3 would not be adverse.

Temporary traffic impacts to transit, bicycle, and pedestrian facilities of the EIP improvements would be similar to those identified for the Build Alternatives; however, they would be limited to the mainline freeway and local interchanges between Pico/Lyons and SR-14. With avoidance and/or minimization measures outlined below in Section 2.6.4, potential temporary impacts to transit systems and pedestrian facilities under Alternative 3 would not be adverse.

2.6.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not provide any road improvements within the study area. As a result, traffic congestion would continue to increase along I-5. LOS would continue to deteriorate due to anticipated traffic volume increases between existing and 2030 conditions.

Future-year traffic forecasts have been obtained from the Santa Clarita Valley Consolidated Traffic Model (SCVCTM), where future traffic conditions were forecast using a constrained flow model. This model reflects the actual flow of traffic volumes south of the I-5/SR-14 interchange, which is constrained by the available capacity of that section of the freeway. The constrained flow model provides a realistic peak-hour volume for the freeway segments north of the I-5/SR-14 interchange by taking into account the constraints that determine the flow rates south of the interchange.

For comparison with the existing (2006) conditions, presented previously in Tables 2.6.A and 2.6.B, the 2015 and 2030 No Build peak-hour traffic volumes, peak-period traffic volumes, and ADT are shown in Tables 2.6.E and 2.6.F. As shown in these tables, the peak-period traffic volumes are expected to continue increasing over the next two decades. This increase in traffic volumes would increase traffic congestion in the project area under the existing lane configuration, which would result in a decrease in LOS.

As shown previously in Table 2.6.C, I-5 currently (as of 2006) operates primarily between LOS B and D in the northbound direction and between LOS B and F in the southbound direction. As shown in Tables 2.6.G and 2.6.H, under the No Build scenario, the LOS is expected to degrade as traffic volumes increase. By 2030, I-5 is forecast to operate primarily at LOS E and F during the p.m. peak hour. During the a.m. peak hour, I-5 is forecast to operate primarily between LOS D and F.

Transit Systems/Bicycle and Pedestrian Facilities

Because there are no existing or proposed bicycle facilities in the project area, the No Build Alternative would not result in permanent impacts to bicycle facilities.

No improvements to the I-5 mainline, bridges, and overcrossings in the project area would occur under the No Build Alternative. Therefore, the No Build Alternative would not result in permanent impacts to pedestrian facilities or transit services.

Alternative 2: Reduced Median Alternative

Build Alternative 2 would provide the following lanes within the project segment of I-5: (1) one HOV lane in each direction from the I-5/SR-14 interchange to south of the Parker Road interchange, (2) one northbound truck lane from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 interchange to the Calgrove Boulevard/I-5 interchange, (3) two southbound truck climbing lanes between Weldon Canyon Road and Calgrove Boulevard, and (4) one southbound truck lane between Calgrove Boulevard and the Pico/Lyons interchange.

Alternative 2 also proposes adding and/or extending auxiliary lanes in the northbound direction from SR-14 to the northbound truck lane merge, from Calgrove Boulevard to Pico/Lyons, and from Valencia Boulevard to Magic Mountain Parkway, and in the

Table 2.6.E 2015 and 2030 No Build Peak-Hour Traffic Volumes

I-5 Segment	2015 A.M. Peak Hour		2015 P.M. Peak Hour		2015 ADT	2015 % Trucks (Daily)	2030 A.M. Peak Hour		2030 P.M. Peak Hour		2030 ADT	2030 % Trucks (Daily)
	SB	NB	SB	NB			SB	NB	SB	NB		
North of Parker Road[1]	3,300	2,700	4,100	4,700	137,000	15.0	5,200	4,100	6,500	6,800	207,000	15
Between Parker Road and Hasley Canyon Road	4,700	3,100	4,700	6,100	163,000	13.0	6,700	4,900	7,600	8,200	240,000	12
Between Hasley Canyon Road and SR-126	5,300	4,800	6,400	6,500	179,000	12.0	7,200	6,500	9,100	8,700	251,000	10.5
Between SR-126 and Rye Canyon Road	4,900	5,600	6,800	5,800	171,000	12.0	7,000	6,900	9,200	7,700	234,000	10.5
Between Rye Canyon Road and Magic Mountain Parkway	5,100	5,600	8,100	5,800	191,000	12.0	7,200	6,900	10,100	7,700	255,000	10.5
Between Magic Mountain Parkway and Valencia Boulevard	5,400	6,200	7,800	6,200	203,000	11.5	7,300	7,100	9,800	7,900	263,000	10.5
Between Valencia Boulevard and McBean Parkway	6,100	7,000	8,200	6,800	216,000	10.5	8,100	7,600	10,000	8,300	268,000	10.5
Between McBean Parkway and Pico Canyon Road/Lyons Avenue	5,900	6,900	8,000	7,000	226,000	10.1	7,800	7,500	9,600	8,400	283,000	9.5
Between Pico Canyon Road/Lyons Avenue and Calgrove Boulevard	6,600	6,500	7,400	7,300	220,000	9.5	7,300	7,000	8,900	8,400	281,000	9.5
Between Calgrove Boulevard and SR-14	6,700	6,100	7,400	7,200	229,000	9.4	7,400	6,400	8,800	8,200	290,000	9.4

Source: Austin-Foust Associates, Inc., August 2008.
[1] This segment of I-5 is north of the project limits.
ADT = average daily traffic
NB = northbound
Peak hour = the hour during the peak period when traffic congestion is greatest.
SB = southbound

Table 2.6.F 2015 and 2030 No Build Peak-Period Traffic Volumes

I-5 Segment	2015 A.M. Peak Period		2015 P.M. Peak Period		2015 ADT	2030 A.M. Peak Period		2030 P.M. Peak Period		2030 ADT
	SB	NB	SB	NB		SB	NB	SB	NB	
North of Parker Road[1]	8,700	7,100	14,100	16,200	137,000	15,300	11,400	24,100	26,200	207,000
Between Parker Road and Hasley Canyon Road	12,400	8,200	16,200	21,000	163,000	19,700	13,600	28,100	31,500	240,000
Between Hasley Canyon Road and SR-126	13,900	12,600	22,100	22,400	179,000	21,200	18,300	32,500	32,800	251,000
Between SR-126 and Rye Canyon Road	12,900	14,700	23,400	20,000	171,000	20,600	19,700	31,700	28,500	234,000
Between Rye Canyon Road and Magic Mountain Parkway	13,400	14,700	27,900	20,000	191,000	21,200	19,700	34,800	28,500	255,000
Between Magic Mountain Parkway and Valencia Boulevard	14,200	16,300	26,900	21,400	203,000	21,500	20,300	33,800	29,300	263,000
Between Valencia Boulevard and McBean Parkway	16,100	18,400	28,300	23,400	216,000	23,800	22,000	35,100	31,300	268,000
Between McBean Parkway and Pico Canyon Road/Lyons Avenue	15,500	18,200	27,600	24,100	226,000	22,900	22,100	34,300	32,300	283,000
Between Pico Canyon Road/Lyons Avenue and Calgrove Boulevard	17,400	17,100	25,500	25,200	220,000	21,500	20,600	31,800	32,300	281,000
Between Calgrove Boulevard and SR-14	17,600	16,100	25,500	24,800	229,000	21,800	18,800	31,400	31,500	290,000

Source: Austin-Foust Associates, Inc., October 2007.
[1] This segment of I-5 is north of the project limits.
A.M. Peak Period = 6:00 a.m.–9:00 a.m.
P.M. Peak Period = 3:00 p.m.–7:00 p.m.
ADT = average daily traffic
NB = northbound
Peak hour = the hour during the peak period when traffic congestion is greatest.
SB = southbound

Table 2.6.G 2015 No Build and Build LOS

I-5 Segment	2015 No Build		2015 Build					
	Mixed Flow Lanes		Mixed Flow Lanes		HOV Lane		Truck Lane(s)	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Northbound								
Lake Hughes Road to Parker Road[1]	B	C	B	C	--	--	--	--
Parker Road to Hasley Canyon Road	B	C	A	C	A	A	--	--
Hasley Canyon Road to SR-126	C	D	B	C	A	A	--	--
SR-126 to Rye Canyon Road	C	C	C	C	A	A	--	--
Rye Canyon Road to Magic Mountain Parkway	C	C	C	C	A	A	--	--
Magic Mountain Parkway to Valencia Boulevard	D	D	C	C	B	B	--	--
Valencia Boulevard to McBean Parkway	D	D	C	C	B	B	--	--
McBean Parkway to Pico Canyon Road/Lyons Avenue	D	D	C	C	B	B	--	--
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	D	D	C	C	A	B	--	--
Calgrove Boulevard to Truck Route Bypass	C	D	B	C	A	B	A	A
Truck Route Bypass to SR-14 Ramp (On)	C	C	B	B	A	B	--	--
SR-14 Ramp (On) to SR-14 Ramp (Off)	C	D	B	C	A	B	--	--
Southbound								
Lake Hughes Road to Parker Road[1]	B	B	B	B	--	--	--	--
Parker Road to Hasley Canyon Road	C	C	B	B	A	A	--	--
Hasley Canyon Road to SR-126	C	D	B	C	A	B	--	--
SR-126 to Rye Canyon Road	C	D	B	C	A	B	--	--
Rye Canyon Road to Magic Mountain Parkway	C	E	B	D	A	B	--	--
Magic Mountain Parkway to Valencia Boulevard	C	E	C	D	A	B	--	--
Valencia Boulevard to McBean Parkway	D	F	B	C	A	B	--	--
McBean Parkway to Pico Canyon Road/Lyons Avenue	C	E	C	D	A	B	--	--
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	E	F	C	C	A	B	A	A
Calgrove Boulevard to Truck Route Bypass	F	F	--	--	--	--	--	--
Calgrove Boulevard to Truck Route Bypass (1 truck lane)	--	--	C	C	A	B	A	A
Calgrove Boulevard to Truck Route Bypass (2 truck lanes)	--	--	C	C	A	B	A	A
Truck Route Bypass to SR-14 Ramp (On)	C	D	B	C	A	B	--	--
SR-14 Ramp (On) to San Fernando Road[2]	C	C	C	B	A	B	--	--

Source: Austin-Foust Associates, Inc., October 2007.
[1] This segment of I-5 is north of the project limits.
[2] This segment of I-5 is south of the project limits.
Peak hour = the hour during the peak period when traffic congestion is greatest.

Table 2.6.H 2030 No Build and Build LOS

I-5 Segment	2030 No Build		2030 Build					
	Mixed Flow Lanes		Mixed Flow Lanes		HOV Lane		Truck Lane(s)	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Northbound								
Lake Hughes Road to Parker Road[1]	B	D	B	D	--	--	--	--
Parker Road to Hasley Canyon Road	C	E	B	D	A	C	--	--
Hasley Canyon Road to SR-126	D	F	C	D	A	C	--	--
SR-126 to Rye Canyon Road	D	E	C	C	A	C	--	--
Rye Canyon Road to Magic Mountain Parkway	D	E	C	C	A	C	--	--
Magic Mountain Parkway to Valencia Boulevard	D	E	C	D	C	C	--	--
Valencia Boulevard to McBean Parkway	E	E	C	D	C	C	--	--
McBean Parkway to Pico Canyon Road/Lyons Avenue	E	F	D	D	C	C	--	--
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	D	E	C	D	B	C	--	--
Calgrove Boulevard to Truck Route Bypass	D	E	C	C	A	C	A	A
Truck Route Bypass to SR-14 Ramp (On)	C	E	B	D	A	C	--	--
SR-14 Ramp (On) to SR-14 Ramp (Off)	C	D	B	C	A	C	--	--
Southbound								
Lake Hughes Road to Parker Road[1]	C	D	C	D	--	--	--	--
Parker Road to Hasley Canyon Road	D	E	C	C	B	C	--	--
Hasley Canyon Road to SR-126	D	F	C	D	B	E	--	--
SR-126 to Rye Canyon Road	D	F	C	D	B	E	--	--
Rye Canyon Road to Magic Mountain Parkway	D	F	C	E	B	E	--	--
Magic Mountain Parkway to Valencia Boulevard	E	F	D	E	B	E	--	--
Valencia Boulevard to McBean Parkway	F	F	C	D	B	E	--	--
McBean Parkway to Pico Canyon Road/Lyons Avenue	E	F	D	E	B	E	--	--
Pico Canyon Road/Lyons Avenue to Calgrove Boulevard	F	F	C	D	B	D	A	A
Calgrove Boulevard to Truck Route Bypass	F	F	--	--	--	--	--	--
Calgrove Boulevard to Truck Route Bypass (1 truck lane)	--	--	C	D	B	C	A	B
Calgrove Boulevard to Truck Route Bypass (2 truck lanes)	--	--	C	C	B	C	A	-A
Truck Route Bypass to SR-14 Ramp (On)	C	D	B	C	B	C	--	--
SR-14 Ramp (On) to San Fernando Road[2]	D	E	C	C	B	C	--	--

Source: Austin-Foust Associates, Inc., October 2007.
[1] This segment of I-5 is north of the project limits.
[2] This segment of I-5 is south of the project limits.
Peak hour = the hour during the peak period when traffic congestion is greatest.

southbound direction from McBean Parkway to Valencia Boulevard, from Magic Mountain Parkway to Rye Canyon Road, and from Rye Canyon Road to State Route 126 (SR-126).

The proposed project would not generate traffic. It is intended to facilitate the redistribution of existing and future traffic demand based on full build-out of land uses allowed by the City of Santa Clarita and County of Los Angeles. A freeway facility is neither an origin nor a destination, as it does not produce or attract trips. The freeway provides a route from one location to another, but it does not change the number of daily trips that need to be made from Point A to Point B. Therefore, the 2015 and 2030 a.m. and p.m. traffic volumes and ADT for Alternatives 2 and 3 are the same as those shown previously for the No Build Alternative in Tables 2.6.D and 2.6.E.

Similarly, the project corridor represents one of a very limited number of potential routes for north/south truck trips. United States Route 101 (US-101) is approximately 40 miles west of the project corridor and Interstate 15 (I-15) is approximately 60 miles to the east. Due to the lack of alternative routes in the vicinity of the project corridor, construction of the proposed truck climbing lanes is expected to have a negligible effect in regard to truck trip route selection. As such, truck volumes for the Build Condition would not vary by an appreciable amount compared to the 2030 No Build truck volumes shown in Table 2.6.I.

Tables 2.6.I and 2.6.J list the future (2015 and 2030) No-Build and Build a.m. and p.m. peak-hour traffic LOS for the project segment of I-5 with the proposed project. Compared to the No Build Alternative LOS, the proposed project would improve the LOS in most segments of I-5 within the project limits. As discussed in Section 1.2.1.2, the mountainous and hilly topography, combined with the large volume of trucks and passenger vehicles, results in conflicts and inefficient operations along the project segment of I-5. Provision of truck lanes would reduce congestion and delay by separating trucks from passenger cars and reduce the interaction associated with these vehicle types. In addition, provision of HOV lanes would further reduce congestion and delay in the general-purpose lanes by taking passenger vehicles out of the general-purpose lanes. As shown in Table 2.6.J, under the No Build condition, the I-5 freeway is forecast to operate primarily at LOS E and F during the p.m. peak hour and LOS D, E, and F during the a.m. peak hour by 2030. With the proposed improvements, I-5 would operate primarily at LOS C or D, with a maximum LOS of E on only three southbound segments during the p.m. peak hour. This analysis is

based on allowing use of the HOV lanes for vehicles with occupancies of two or more persons and construction of truck lanes.

Table 2.6.I Existing and Future (2015 and 2030) Annual Travel Times–Southbound Direction AM

Scenario	Annual Travel Time (vehicle-hours/year)	Travel Time (min)[1]	
		Mix-Flow Lanes	HOV Lanes
Existing Conditions	14,138,730	17	N/A
2015 No Build Alternative	21,501,649	21	N/A
2015 Build Alternatives	15,443,297	13	12
Time Saved (2015)	6,058,351	8	9
2030 No Build Alternatives	44,736,162	39	N/A
2030 Build Alternatives	23,245,054	16	14
Time Saved (2030)	21,491,108	23	25

Source: Austin-Foust Associates, Inc., August 2008.
[1] Parker Road to State Route 14 (SR-14)
HOV = high-occupancy vehicle
Min = minutes

Table 2.6.J Southbound Truck Lane Addition LOS Analysis

Freeway Section		SB Between Pico/Lyons Ave & Calgrove Blvd		SB Between Calgrove Blvd & SR-14	
Peak Hour		**AM**	**PM**	**AM**	**PM**
2006 Existing	LOS	E	E	F	F
	Density (pc/mi/ln)	35.5	38.3	*	*
	Ave pc speed (mph)	61.1	58.6	*	*
2010 No Improvements	LOS	E	E	F	F
	Density (pc/mi/ln)	36.4	43.3	*	*
	Ave pc speed (mph)	60.3	54.6	*	*
2010 With Truck Lane	LOS	C	D	D	D
	Density (pc/mi/ln)	23.8	26.1	27.5	29.3
	Ave pc speed (mph)	69.2	68.1	67.3	66.0

Source: Source: Austin-Foust Associates, Inc., October 2007.
*Density and average passenger car speed are not calculated for LOS F.
LOS = level of service SB = southbound SR-14 = State Route 14
mph = miles per hour pc/mi/ln = passenger car per mile per lane

Existing travel time within the project corridor is approximately 14,100,000 vehicle-hours per year, as shown in Table 2.6.I. Without the proposed project, travel time is expected to increase to approximately 21,500,000 vehicle-hours per year by the year 2015. With the project, in 2015 the annual travel time is shown as approximately 15,400,000 vehicle-hours, representing a reduction of 6,100,000 vehicle-hours.

In 2030, travel time within the project corridor is expected to increase to approximately 44,700,000 vehicle-hours per year without the project. With the proposed project, the 2030 annual travel time is estimated as approximately 23,200,000 vehicle-hours, for a savings of 21,500,000 vehicle-hours.

An example of actual corridor travel time is also provided in Table 2.6.E. Traveling from Parker Road to SR-14 during the a.m. peak hour is currently estimated to take approximately 17 minutes. Without the project, that travel time is expected to increase to approximately 21 minutes by the year 2015. With the project, in 2015 the travel time decreases to 13 minutes for the mixed-flow lanes and 12 minutes for the HOV lane. In 2030, the travel time without the project is expected to increase to approximately 39 minutes. With the project, the 2030 travel time decreases to 16 minutes for the mixed-flow lanes and 14 minutes for the HOV lane. The improvement in travel time would occur as a result of the reduction in congestion and delay provided by the provision of HOV and truck lanes. As discussed above, truck lanes would separate trucks from passenger cars and reduce the interaction between these vehicle types. HOV lanes would reduce the number of passenger vehicles in the general-purpose lanes.

In summary, Alternative 2 would provide a beneficial impact to LOS and travel time in the project corridor by removing vehicles from the general-purpose lanes and reducing the interaction of trucks and passenger vehicles, both of which would result in a reduction in congestion and delay.

Transit Systems/Bicycle and Pedestrian Facilities

Because there are no existing or proposed bicycle facilities in the project area, Alternative 2 would not result in permanent impacts to bicycle facilities.

Alternative 2 would not result in direct permanent impacts to pedestrian facilities or bus routes. All impacts would be temporary during construction, and the existing pedestrian facilities and bus routes would not be altered by the construction of Alternative 2. Therefore, the No Build Alternative would not result in permanent impacts to pedestrian facilities or transit services.

Pedestrian facilities or other types of facilities are not allowed within the project area. Therefore, the Americans with Disabilities Act (ADA) Standards for Accessible Design (28 CFR Part 36) do not apply. Outreach would be conducted as part of the Traffic Management Plan (TMP) described below in Measure T-1.

Alternative 3: Full Median Alternative

Because Alternatives 2 and 3 would provide the same HOV and truck lanes, permanent traffic impacts of Alternative 2 would be the same as those discussed above for Alternative 2. Alternative 3 would provide a beneficial impact to LOS and travel time in the project corridor by removing vehicles from the general-purpose lanes and reducing the interaction of trucks and passenger vehicles, both of which would result in a reduction in congestion and delay.

As discussed above for Alternative 2, Alternative 3 would not result in permanent impacts to bicycle, pedestrian facilities, and transit services.

Early Implementation Project (EIP)

Both the Traffic Study and the Supplemental Traffic Data include evaluation of the EIP. The analysis for the extension of the southbound truck lane was obtained from traffic counts from the sections between Pico/Lyons and Calgrove Boulevard, and between Calgrove Boulevard and SR-14. Based on this analysis, the existing LOS in these segments ranges from LOS E (in the a.m. and p.m. peak hours between Pico/ Lyons and Calgrove Boulevard) and F (between Calgrove Boulevard and SR-14). As shown in Table 2.6.J, the extension of a southbound truck lane is expected to improve the 2010 peak-hour operating conditions from an unacceptable LOS E or F under the No Build condition to an acceptable LOS C or D service level with extension of the truck lane. The highest flow rate is expected to be approximately 410 trucks per hour.

The analysis for the addition of the northbound climbing lane was obtained from traffic counts within the section between SR-14 and Calgrove Boulevard. The addition of the northbound climbing truck lane is forecast to improve the peak-hour operating conditions in 2010 from LOS D (No Build) to LOS C (with truck lane) in the a.m. peak hour and from an unacceptable LOS F (No Build) to LOS D (with truck lane) in the p.m. peak hour (Table 2.6.K). The single truck lane is expected to operate at an acceptable LOS based on an anticipated maximum truck flow rate of approximately 500 trucks per hour.

Construction of the EIP would allow the slower-moving trucks to use the outside lanes in each direction to reduce delays to vehicles caused by slower-moving trucks and to facilitate the movement of freight and goods through the southern portion of this segment of I-5.

Table 2.6.K EIP Northbound Truck Lane Extension LOS Analysis

Freeway Section		NB Between Calgrove Blvd & SR-14	
Peak Hour		**AM**	**PM**
2006 Existing	LOS	C	D
	Density (pc/mi/ln)	22.9	30.3
	Ave pc speed (mph)	69.5	65.3
2010 No Improvements	LOS	D	F
	Density (pc/mi/ln)	30.1	>45.0
	Ave pc speed (mph)	65.4	<53.3
2010 With Truck Lane	LOS	C	D
	Density (pc/mi/ln)	21.1	26.7
	Ave pc speed (mph)	69.9	67.8

Source: Source: Austin-Foust Associates, Inc., August 2008.
LOS = level of service
NB = northbound
SR-14 = State Route 14
mph = miles per hour
pc/mi/ln = passenger car per mile per lane

The EIP improvements would initiate the beneficial impact to LOS in the project corridor and no permanent impacts are anticipated.

The EIP would not result in permanent impacts to bicycle, pedestrian facilities, and transit services.

2.6.4 Avoidance, Minimization, and/or Mitigation Measures

The measures outlined below would avoid or minimize potential impacts on local arterials during construction:

T-1 Prior to construction, the California Department of Transportation (Caltrans) will prepare a final Traffic Management Plan (TMP) that will consist of, but not be limited to, the following standard measures to alleviate traffic inconvenience caused by construction activities.

- **Traffic Control:** This project will require traffic control elements such as lane/shoulder closures and temporary signing/striping on the Interstate 5 (I-5) ramps and the I-5 mainline.
- **Construction Zone Enhanced Enforcement Program (COZEEP):** Through coordination with Caltrans and the California Highway Patrol (CHP), this program was developed to provide a safer work zone for both construction workers and the

motoring public. The program uses CHP officers who enforce lane closures and also provide a visual deterrent to errant/speeding vehicles.

- **Public Awareness Campaign (PAC):** Although the majority of the major closures will occur at night, vehicles traveling through the construction zone will likely experience longer-than-normal delays. To reduce these delays and confusion to the motoring public during construction activities, Caltrans will implement a PAC. The purpose of the PAC is to keep the surrounding community abreast of the project's progress and construction activities that could affect their travel plans. The use of mailers/ flyers, local newspaper advertising, local radio information, public meetings, a project Web site, and e-mail as appropriate should be effective tools for disseminating this information. In addition, all construction activities would be closely coordinated with the City of Santa Clarita; County of Los Angeles fire, law enforcement, and other emergency services; and other construction projects that may occur at the same time.
- Comprehensive Stage Construction and Traffic Handling Plans.
- **Signing:** The project would require use of real-time communications with motorists, such as changeable message signs and highway advisory announcements to alert motorists of upcoming construction activities, detours, and traffic conditions. Signage should be posted at key locations on I-5, SR-14, SR-126, and local arterials, when warranted.
- Identification of park-and-ride facilities, along with encouragement of other public transit and ridesharing usage.
- **Pedestrian Access:** Provide a pedestrian detour plan to accommodate sidewalk closures.

T-2 Prior to construction, the California Department of Transportation (Caltrans) will prepare a Ramp Closure Study for all ramps that will be closed for more than 10 consecutive days.

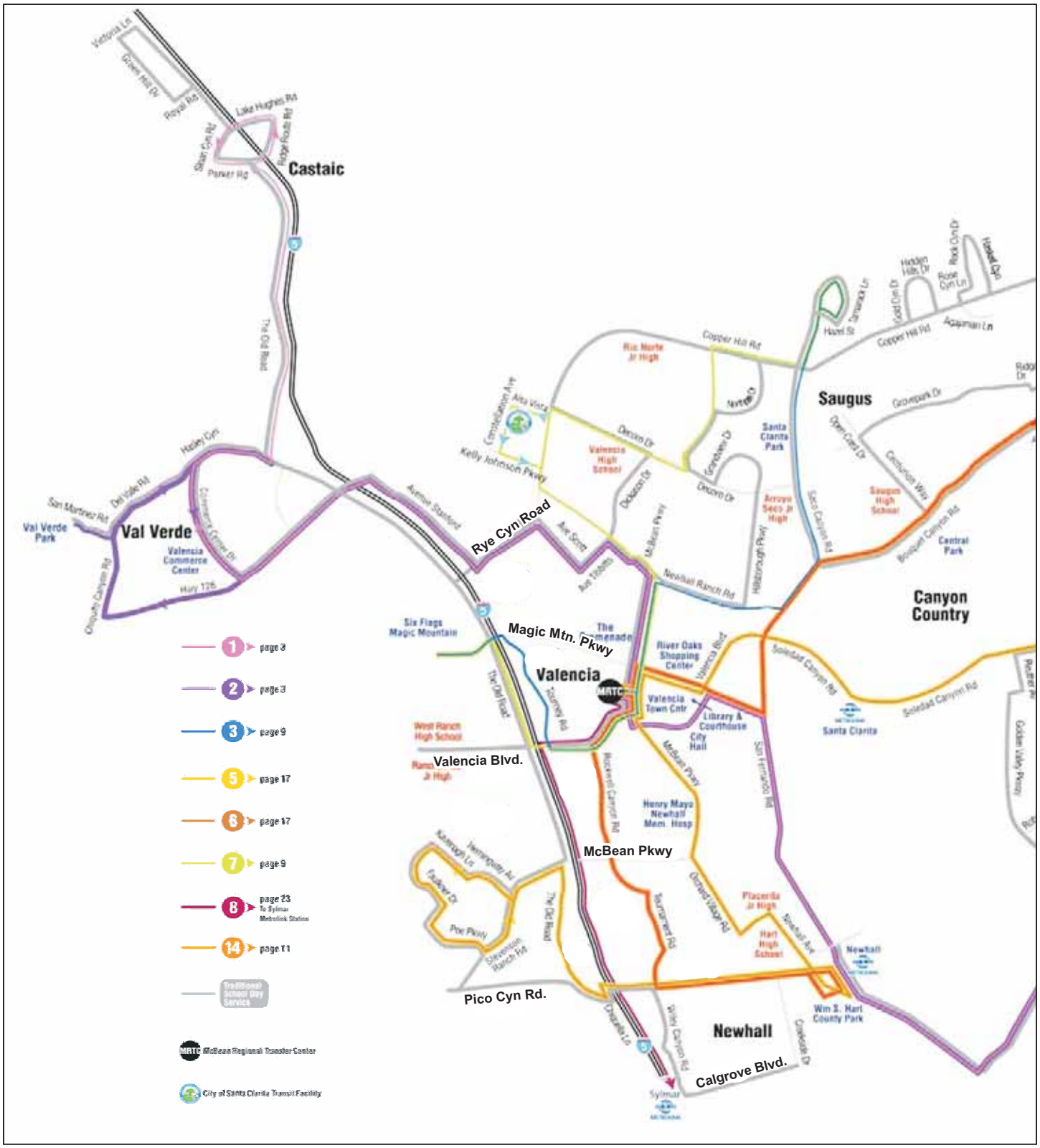

FIGURE 2.6.1

N

NO SCALE
SOURCE: City of Santa Clarita Transit

I-5 HOV / Truck Lanes Project
Local Transit System
07-LA-5 PM R45.4/R59.0
EA 2332E0

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2.7 Visual/Aesthetics

The information in this section is based on the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) *Visual Impact Assessment* (VIA) (LSA Associates, Inc., September 2008)

2.7.1 Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the Federal Highway administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." (CA Public Resources Code Section 21001[b]).

2.7.2 Affected Environment

2.7.2.1 Methodology

This section summarizes the methodology and terminology used to assess the visual impacts of the project Build Alternatives. More details on the methodology are available in the *Visual Impact Assessment* (LSA Associates Inc., September 2008). The visual impact analysis followed the methodology prescribed in the publication *Visual Impact Assessment for Highway Projects* (FHWA, August 1981). The following six principal steps were carried out to assess the visual impacts of the proposed I-5 HOV Build Alternatives:

1. Define the existing visual environment.
2. Identify key views for visual assessment.
3. Analyze existing visual resources (visual quality and visual character) and viewer groups.
4. Depict the visual appearance of project alternatives and viewer response.

5. Assess the visual impacts of project alternatives.
6. Propose methods to avoid, minimize, and/or mitigate adverse visual impacts.

The degree of visual quality in a view was evaluated using the following FHWA descriptive terms:

- **Vividness:** Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns (e.g., Niagara Falls is a highly vivid landscape component).
- **Intactness:** Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. This factor can be present in well-kept urban and rural landscapes and natural settings (e.g., a two-lane road that meanders through the countryside).
- **Unity:** Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape (e.g., an English or Japanese garden).

The visual impacts of the Build Alternatives were determined by assessing the change of visual resources due to the project and predicting viewer response to that change.

Visual resource change is the sum of the change in visual character and change in visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project with the visual character of the existing landscape. The second step is to compare the visual quality of the existing resources with projected visual quality after the project is constructed.

The viewer response to project changes is the sum of viewer exposure and viewer sensitivity to the project, as determined in the preceding section.

The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change. The levels of visual impact are described as follows:

- **Low:** Minor adverse change to the existing visual resource with low viewer response to a change in the visual environment.
- **Moderate:** Moderate adverse change to the visual resource with moderate viewer response.
- **Moderately High:** Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response.

- **High:** Excessive adverse visual change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high.

2.7.2.2 Planning Policies and Land Use Ordinances

Planning policy documents and land use ordinances were reviewed to determine the presence of designated visual resources within the project visual study area. Policy documents contain guidelines and development policies to preserve and enhance the visual character and quality of an area. Visual resources can include landforms, scenic vistas, historic monuments, or vegetative communities. Adopted preservation policies establish the value that visual resources have within a given community or local area.

County of Los Angeles Visual Policies

Los Angeles County is currently undergoing a comprehensive update of its 1980 countywide General Plan. The Draft Preliminary General Plan does not contain any goals or policies relating specifically to the visual study area. However, Policy 33 states, "Protect and enhance the visual uniqueness of natural edges and encourage superior design of major entryways," which may be generally applied to the visual analysis of the project.

City of Santa Clarita General Plan Visual Policies

The City of Santa Clarita General Plan refinement incorporates the following goals and policies related to roadway design within the city:

Goal 2: To encourage design excellence in the development of all public and private projects in the City.

Policy 2.4: Encourage key gateway design themes to the City's major communities consistent with the overall community image. The following gateways are defined in the City of Santa Clarita Community Design element within the project visual study area: of off-ramps from the I-5, including Magic Mountain Parkway, McBean Parkway, SR-126 (or Henry Mayo Drive), Lyons Avenue, Calgrove Boulevard, Valencia Boulevard, Rye Canyon Road, Pico Canyon, and Hasley Canyon.

Goal 7: To develop a safe and efficient circulation system that protects and enhances the overall community character.

Policy 7.1: Encourage and enhance identifiable entryways for the overall community, individual residential neighborhoods, and unique or principal business/commercial districts of the City.

Unincorporated Community of Castaic Area

Castaic is within unincorporated Los Angeles County. In addition to the County of Los Angeles General Plan Policies, Castaic has adopted the Castaic Area Community Standards District (CSD). The Castaic Area CSD was approved by the County of Los Angeles Board of Supervisors in December of 2004 and has the goal of maintaining the rural look and feel and natural resources that characterize the Castaic area. The Castaic Area CSD does contain any applicable visual policies pertaining to the project area.

California Department of Transportation and the California Scenic Highway Program

A State Scenic Highway is any freeway, highway, road, or other public right of way designated by Caltrans that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on three visual concepts: vividness, intactness, and unity.[1] The purpose of the California Scenic Highway Program is "to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263."[2]

An eligible highway only becomes a State Scenic Highway when the local agency applies to Caltrans for State Scenic Highway approval, adopts a Corridor Protection Program, and receives notice that it has been officially designated.

No roads in the project study area are Designated State Scenic Highways. I-5 from State Route 210 (SR-210) to State Route 126 (SR-126), which includes the project limits (from SR-14 to SR-126) is eligible to become a Designated State Scenic Highway, according to the State Scenic Highways Program.

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1 Caltrans Guidelines for Official Designation of Scenic Highways, 1995.

2 http://www.dot.ca.gov/hq/LandArch/scenic/faq.htm, accessed December 20, 2007.

2.7.2.3 Visual Environment

The existing visual setting of the study area is characterized by I-5 and the associated on- and off-ramps; undercrossings and embankments; undeveloped hillsides; open space; recreation, residential, commercial, and light industrial land uses; and City, County, and Caltrans right of way. The areas surrounding the right of way are characterized by low- and moderate-density commercial and industrial uses, low-and medium-density residential uses, infrastructure, and urban landscaping. The overall existing visual character of the visual study area ranges from undeveloped to urban.

The existing land uses in the visual study area consist of the Caltrans right of way in a moderately populated urban setting comprising scattered adjacent commercial development, residential communities, and open-space areas. There are several waterways crossing the project area: Castaic Creek, the Santa Clara River, and Gavin Canyon. Most of the developed area adjacent to I-5 is in the central portion of the project limits between the Santa Clara River and Calgrove Boulevard. These developed areas are primarily in the unincorporated community of Stevenson Ranch and the city of Santa Clarita. The northern portion of the visual study area has slightly rolling topography with scattered residential communities. The study area near Castaic Creek is somewhat flat.

More specific descriptions of the project alignment (along I-5, in segments) are provided below:

- **Between SR-14 Intersection and Calgrove Boulevard.** The southern portion of the project area, north of SR-14, in the vicinity of Michael D. Antonovich Open Space, has a topography consisting of undeveloped hills and canyons with elevations ranging from approximately 500 to 1,500 feet (ft) surrounding the existing I-5 alignment. The alignment of The Old Road, northeast of existing I-5 is located in a canyon approximately 100 ft below the I-5 elevation. Existing cuts into hillsides for the existing I-5 alignment are visible in this area.
- **Between Calgrove Boulevard and Lyons Avenue.** The topography between Calgrove Boulevard and Lyons Avenue begins to transition from a hilly area to a more relatively flat area. Elevations in this area range from approximately 1,300 to 1,400 ft. Hills remain visible from the I-5 alignment; however, cuts into hillsides and drastic canyons are not located within this portion of the project area.
- **Between Lyons Avenue and Magic Mountain Parkway.** The topography between Lyons Avenue and Magic Mountain Parkway is relatively flat, with low-lying hills containing a variety of developed land uses. Elevations in this area

range from approximately 1,200 to 1,300 ft. Hills in this area are located in undeveloped, open-space areas such as the Vista Valencia Golf Course, College of the Canyons, and the Valencia Country Club.

- **Between Magic Mountain Parkway and SR-126.** The topography between Magic Mountain Parkway and SR-126 consists of relatively low-lying hills and the Santa Clara River. Elevations in this area range from approximately 1,175 to 1,200 ft. The majority of the low-lying hills are developed or in developed areas, with the exception of the hills immediately north of the Santa Clara River, east of I-5.
- **Between SR-126 and Parker Road.** The topography between SR-126 and Parker Road is relatively flat with low-lying hills. The existing alignment of I-5 traverses Castaic Creek north of SR-126 and remains semiparallel to Castaic Creek until Parker Road. This area is relatively flat with few low-lying hills to the west of I-5. Elevation in this area ranges from approximately 1,000 to 1,200 ft.

Biological Resources

According to the Natural Environmental Survey (NES) (October 2008) prepared for the project, the project limits include areas of undeveloped land within Caltrans right of way, which is dominated by ruderal vegetation but also supports stands of riparian, Venturan coastal sage scrub (VCSS), and oak woodland communities. From a visual perspective only, mature trees (including oaks) and mostly scrub appear adjacent to and along the length of I-5, and scrub and oak woodland are visible on the hills surrounding I-5.

Parks and Recreation

Identification of parks and recreational facilities is important in a visual study because these areas are typically valued for their visual resources by recreational users. Therefore, the viewer sensitivity from recreational land uses is typically high. Table 2.7.A details the park lands and recreational facilities within the project vicinity:

Table 2.7.A Recreation Resources within the Vicinity of Project

Resource	Description
Castaic Lake State Recreation Area	Managed by the Los Angeles County Department of Parks and Recreation. Encompasses 8,700-acre facility featuring two separate lakes. Facilities include boating, jet skiing, fishing, swim beach, family and group picnicking, hiking, jogging, recreational vehicle camping, group camping, and biking.
Castaic Regional Sports Complex	Los Angeles County Department of Parks and Recreation. Encompasses 51 acres and

Table 2.7.A Recreation Resources within the Vicinity of Project

Resource	Description
	includes baseball diamonds and picnic areas, gymnasium and community rooms, a 12-station par/jogging course, and children's play areas.
Castaic Creek Trail	Managed by Los Angeles County, the hiking, biking, and equestrian trail connects with the Santa Clarita River Trail at the south and runs north for approximately 5 mi to Castaic State Recreation Area.
Del Valle County Park	Los Angeles County manages this 5.84-acre park that includes a multipurpose open playing field, picnic tables, restrooms, and children's play area.
Ed Davis Park at Towsley Canyon	Managed by the Santa Monica Mountains Conservancy and located within the Santa Clarita Woodlands State Park, this approximately 145-acre park offers hiking, biking and equestrian trails; picnic tables; and a nature center.
Gavin Canyon Trail	Managed by Los Angeles County, this 8 mi hiking, biking, and equestrian trail links to the Pico Canyon Trail.
Hasley Canyon County Park	Managed by Los Angeles County, this 5.38-acre park includes multipurpose open playing field, children's play area, BBQs, and picnic tables.
Hasley Canyon Trail	Managed by Los Angeles County, this 3.4 mi trail that follows Hasley Canyon, connecting to the Castaic Creek Trail.
Michael D. Antonovich Open Space	Managed by the Santa Monica Conservancy, 400 acres within the Santa Clarita Woodlands Park; includes hiking, equestrian, and biking trails.
Pico Canyon Trail	Managed by Los Angeles County, this 9 mi hiking, biking, and equestrian trail connects to the Gavin Canyon Trail.
Santa Clara River Trail	Managed by Los Angeles County, this 14.5 mi trail along the Santa Clara River connects to the South Fork Trail and ultimately links to the Pacific Crest Trail outside of the project area.
Santa Clarita Woodlands Park	Managed by the Santa Monica Mountains Conservancy, this 4,000-acre public park contains hiking, biking, and equestrian trials, a nature center, and picnic tables.
South Fork Trail	Managed by the City of Santa Clarita, this 3.4 mi trail runs along the Santa Clara River and connects to the Santa Clarita River Trail.
Vista Valencia Golf Course	A municipal nine-hole, par three golf course with a 28-stall nightlit driving range

2.7.2.4 Key Views

A key view is a photograph representation of a typical existing viewshed within the project visual study area that incorporates the best range of visual resources as seen by viewer groups. A viewshed is the surface area that is visible from a key viewpoint. The viewshed extends to all areas that have a view of and from a project site and identifies potential views that a proposed project could affect.

Selection of the views was based on the following criteria:

1. Areas that would have the most substantial changes from project implementation, such as elevated highway structures or other structures such as sound walls or retaining walls, system or service interchanges, and areas with large cut-and-fill slopes.
2. Areas where there are existing visual aesthetic resources, such as:
   - Existing visual resources according to the General Plans of the County of Los Angeles and the City of Santa Clarita.
   - Scenic vistas.
   - Scenic Roads. There are no state, county or locally designated scenic roads in the study area. However, I-5 from SR-210 to SR-126, which includes the project limits from SR-14 to SR-126, is eligible to become a Designated State Scenic Highway.
3. Populated areas with consideration of residential land uses.
4. Representative views from each proposed Build Alternative.

Any person with a view of the project site may be considered a sensitive viewer. A viewer group is a group of persons that might be affected by the introduction of a project into a viewshed based on location, activity, and length of exposure to a view. For the project, viewers range from those who use the roads and sidewalks in the project limits to those who see the project site from commercial, industrial, residential, and recreational locations outside the proposed construction limits.

Viewers can respond differently to the same visual changes based on their visual preferences. The viewer groups identified for the project visual study area are commuters, pedestrians, residents, and recreational users.

To evaluate the visual impacts of the Build Alternatives, specific views were selected that represent the visual study area. Because it is not feasible to analyze every view of the project visual study area, five key views were selected that most clearly display

the anticipated visual impacts of the project. The key views represent the primary viewer groups that would potentially be affected by the project. The key views are shown in Figures 2.7.1 through 2.7.10.

Key View 1

Key View 1 is a northern view at the northern end of the project limits between Hillcrest Parkway and Parker Road. The primary viewers are future and existing commuters traveling north on I-5. The existing visual quality of this view is rated slightly below moderate. In the foreground, viewers see mostly vehicle traffic on a busy six-lane highway. The vividness, or positive visual features, in the view include the mountains in the background and low-lying hills on east and west of I-5 in the middle ground. The intactness in this view is moderately low due to the traffic and utility poles located west of I-5. Unity is rated moderate because the view of the road in the foreground contrasts with the view of the undeveloped mountains in the background.

The visual character of Key View 1 is dominated by the line patterns associated with the ridgeline horizon and the contrasting, perpendicular lines of the road. The character of Key View 1 is semiurban because of the busy highway and the development and infrastructure immediately surrounding the highway. There is little visible development on the surrounding hillsides, which lessens the urban character of the view as a whole.

Key View 2

Key View 2 is a southern view from the Biscailuz Drive Bridge that crosses over I-5. The primary viewers for Key View 2 are local commuters. The existing visual quality of Key View 2 is rated moderately low because the majority of the view is of existing I-5 and The Old Road located west of I-5. Because of the span of the view, the vividness is rated moderate. Several components, such as the highway, highway traffic, signage, and utility poles, encroach upon the intactness of the view. Because the landscape and urban components are unbalanced, this view has a fairly low unity rating.

The visual character features of line and form associated with I-5 in the foreground and middleground appear to dominate this photograph. The visual character of Key View 2 is urban because of the wide span of highway that dominates the view.

Key View 3

Key View 3 is a southern view form a hillside approximately 300 ft east of I-5, south of Rye Canyon Road. The viewer group includes existing and future recreational users of the area. The existing visual quality of Key View 3 is rated moderately high , as it is high in all visual quality components (vividness, intactness, and unity). The span of the view from the higher elevation, particularly of the mountains in the distance, make this view memorable and picturesque. The background view is more distinct than the fore or middleground views.

The dominant visual characters are the surrounding trees and topography. From this higher elevation, the background view of the mountains in the distance makes this view more distinct than the fore or middleground views.

From the viewpoint of the observer, this view is located in a rural/open-space area. However, the overall view includes urban elements such as the I-5, signage, and other development components.

Key View 4

Key View 4 faces east and is taken from the entrance to the Michael D. Antonovich Open Space Recreational Area located west of the I-5. The view is visible from the parking area, but not from further inside the recreational area. The primary viewer group is recreational users.

The existing visual quality for Key View 4 is moderate, with the same ratings for each of the visual quality components. The simplicity of the mountains and the trees in this view adds to its vividness and unity. There are several urban features present in this view, including the chain-link fencing, the parking area, and signage. I-5 traffic, mainly taller vehicles, is visible beyond the trees in this view.

The existing visual character is semi rural as trees, hills, with a limited amount of development, predominately from the signage and traffic from the I-5.

Key View 5

Key View 5 is a western view from The Old Road located east of I-5 in the southern portion of the visual study area. The Old Road traverses I-5 throughout most of the project length. The primary viewer group includes existing and future I-5 commuters.

The existing visual quality of Key View 5 is rated moderate. The hillside and distant taller peaks make the view memorable. Encroachments on the view include the road

and guardrail in the foreground, and possibly the lightposts. I-5 is at the top of the first hill in this view and is not visible. The unity is good because of the simplicity of the view's main components of road, ridgeline, and skyline.

The existing visual character comes from the surround hills, but is also semiurban in appearance because of the limited amount of development that appears, combined with the natural hills and trees.

2.7.3 Environmental Consequences

2.7.3.1 Temporary Impacts

No Build Alternative

No changes would occur to the I-5 under the No Build Alternative. The No Build Alternative would not alter the site's visual quality or character, or have any visual impact on any visual resource or viewer group.

Build Alternatives

Temporary visual impacts during construction, such as construction activity, staging sites, truck hauling, excavation activity, and construction area signage, are anticipated under Build Alternatives 2 and 3. The project would require temporary construction easements (TCEs). However, use of TCEs is for a short duration and will not result in permanent visual impacts. The adverse visual impacts related to construction activity would cease after completion of construction and any adverse impacts due to vegetation clearing would gradually cease over time as replaced vegetation matures. With avoidance and/or minimization measures outlined below in Section 2.7.4, potential temporary visual impacts would not be adverse.

Early Implementation Project (EIP)

Construction of the EIP would result in similar temporary visual impacts to those identified for the Build Alternatives as it requires construction equipment and ground disturbing activities within the Caltrans right of way.

With avoidance and/or minimization measures outlined below in Section 2.7.4, potential temporary visual impacts of the EIP would not be adverse.

2.7.3.2 Permanent Impacts

To assist in evaluation of potential visual impacts, computer simulations of the future improvements visible from each of the key viewpoints was conducted. Visual simulations of Alternatives 2 and 3 are shown in Figures 2.7.1 through 2.7.10 along

with their corresponding existing view photograph. Under the No Build Alternative, no changes would occur to I-5. Therefore, visual simulations are not warranted, and the existing setting photographs are representative of the No Build Alternative. The project renderings are based on the maximum ultimate right of way for the alternatives as shown on the conceptual plans (Appendix A). The visual simulations were created by applying the conceptual engineering designs for the project alternative and the Caltrans Highway Design Manual to the existing setting photographs to show the anticipated postproject conditions. The visual simulations are strictly for conceptual analysis and are not intended to provide a precise, scaled depiction of the alternatives; rather, they illustrate the potential future postproject visual character and quality of the project area.

No Build Alternative

No permanent impacts would occur to visual quality or character, visual resource or viewer group under the no Build Alternative.

Build Alternatives

Alternative 2 would result in visual impacts as a result of vegetation and tree removal, increased width in the road to accommodate HOV and truck lanes, and construction of retaining walls intermittently along the length of I-5. Under this Alternative, the visual quality of Key Views 1, 2, and 3 would be similar to existing conditions. At Key Views 4 and 5, the addition of retaining walls would reduce the existing visual quality substantially.

The visual impacts associated with Alternative 3 are similar to the impacts of Alternative 2 at Key Views 1, 2 and 3; the visual quality at these Key Views would be similar to the existing views. At Key Views 4 and 5, this Alternative would reduce the existing visual quality substantially due to the addition of retaining walls.

Key View 1

Figures 2.7.1 and 2.7.2 illustrate Key View 1 for Alternative 2 and Alternative 3, respectively.

Viewer Exposure and Awareness. Viewer exposure is high at this view because of the large volume of vehicles on I-5. Because roadway construction/improvements along interstate highways is a typical scene in southern California, viewer sensitivity to this project, from the point of view of the commuter, would be considerably low. Also, the length of time for the viewers to see the project components would be short

(approximately 10 minutes), if they are driving at the speed limit. Therefore, viewer awareness would be low.

Visual Quality and Visual Character of Proposed View of Alternative 2. The visual simulation shows the proposed Alternative 2 with the replacement of the metal barrier with a concrete median wall and addition of an HOV lane. Implementation of Alternative 2 would not block the distant view of the mountains in the background or the view of the low-lying hills on the east and west of I-5 in the middleground. The proposed concrete median wall would block a portion of the view of the southbound road and traffic. The proposed visual quality remains the same as the existing visual quality because implementation of Alternative 2 would not alter the surrounding landscape within this view, as seen on the visual simulation. Because the changes to this view are minimal, viewer response to change in the visual environment would be low.

Visual Quality and Visual Character of Proposed View of Alternative 3. The visual simulation depicting Alternative 3 is similar to the visual simulation depicting Alternative 2. The view of Alternative 3 would show the reconstructed concrete median wall, continuous CHP enforcement area, and addition of an HOV lane, similar to Alternative 2. Implementation of Alternative 3 would not block the distant view of the mountains in the background or the view of the low-lying hills on the east and west of I-5 in the middleground. The proposed concrete median wall would block a portion of the view of the southbound road and traffic. The proposed visual quality remains the same as the existing visual quality because implementation of Alternative 3 would not affect any visual resources, including distance views, within this view.

Key View 2

Figures 2.7.3 and 2.7.4 illustrate Key View 2 for Alternative 2 and Alternative 3, respectively.

Viewer Exposure and Awareness. Viewer exposure is low to moderate at Key View 2 because Biscailuz Drive is not a highly traveled road. The viewers would be primarily local commuters. Viewer awareness would also be relatively low because, similar to Key View 1, construction/improvements to existing roads in southern California is a typical scene for southern California drivers.

Visual Quality and Visual Character of Proposed View of Alternative 2. The visual simulation shows the addition of an HOV lane in each direction. Alternative 2

includes replacement of the metal guardrail with a new concrete wall in the median. The visual quality in this simulated view is slightly below moderate and the same as the existing view's visual quality because the features that provide quality to the view (i.e., the distant mountains) do not change. Given that the visual character is urban, the visual quality at this view remains similar to the existing condition. The overall experience for the viewer on the Biscailuz Drive overcrossing remains the same as with the existing setting. Viewer response is predicted to be very low.

Visual Quality and Visual Character of Proposed View of Alternative 3. The visual simulation shows the view of I-5 from the Biscailuz Drive overcrossing with Alternative 3 implemented. Alternative 3 includes the addition of an HOV lane in each direction and a continuous CHP enforcement center. The visual quality under Alternative 3 is rated moderately low, which is the same as the existing setting visual quality. The simulated view has more pavement associated with the widened road; however, the widening does not encroach upon any visual resource or change the visual character. The commuter response to these visual changes is anticipated to be low.

Key View 3

Figures 2.7.5 and 2.7.6 illustrate Key View 3 for Alternative 2 and Alternative 3, respectively.

Viewer Exposure and Awareness. Viewer exposure is moderate at Key View 3. While the number of viewers (recreational group) will be relatively low, their time seeing the view and their sensitivity to changes in the visual setting are high. Overall, viewer awareness of this view would be high.

Visual Quality and Visual Character of Proposed View of Alternative 2. The visual simulation shows the addition of an HOV lane in each direction. Alternative 2 includes replacement of the metal barrier with a new concrete wall in the median. The visual quality in this simulated view is moderately high and the same as the existing view's visual quality because from this viewpoint, the changes are not visible due to the distance, nor do they affect any visual resource, including distant views. The visual character is rural/open space, remaining similar to the existing visual character. The overall experience for the viewer from this open-space area remains the same as with the existing setting because the project components are not visible from this distance. Viewer response is predicted to be low. Therefore, Alternative 2 would not result in adverse visual impacts at this view, and mitigation is not required.

Visual Quality and Visual Character of Proposed View of Alternative 3. The visual simulation shows the addition of an HOV lane in each direction. Alternative 3 includes replacement of the metal barrier with a new concrete wall in the median. The visual quality in this simulated view is moderately high and the same as the existing view's visual quality because from this viewpoint, the changes are not visible nor do they affect any visual resource, including distant views. The visual character is rural/open space, remaining similar to the existing visual character. The overall experience for the viewer from this open space area remains the same as for the existing setting. Viewer response is predicted to be low.

Key View 4

Figures 2.7.7 and 2.7.8 illustrate Key View 4 for Alternative 2 and Alternative 3, respectively.

Viewer Exposure and Awareness. Viewer exposure is moderate at Key View 4. While the number of viewers (recreational group) will be relatively low, their time seeing the view and their sensitivity to changes in the visual setting is high. Overall, viewer awareness of this view would be high.

Visual Quality and Visual Character of Proposed View of Alternative 2. The visual simulation shows the proposed Alternative 2, which includes replacement of the metal barrier with a new concrete retaining wall. Implementation of Alternative 2 would not block the views of the trees west of I-5. The concrete retaining wall would block a portion of the view of the mountains east of I-5, impacting the overall intactness of the view. However, views of the trees and mountains will continue to be visible, and existing trees would block portions of the retaining wall. The proposed visual quality for Key View 4 would be less than the existing visual quality as a result of the addition of the retaining wall, an urban feature, and a reduction in the bottom of the hill. The recreational viewer group at the entrance of the park facility would notice the new project component.

Visual Quality and Visual Character of Proposed View of Alternative 3. The visual simulation depicting Alternative 3 is similar to the visual simulation depicting Alternative 2. The view of Alternative 3 would show the concrete retaining wall. Implementation of Alternative 3 would not block the views of the trees west of I-5. The concrete retaining wall would block a portion of the view of the mountains east of I-5, impacting the overall intactness of the view. However, views of the trees and mountains will continue to be visible, and existing trees would block portions of the

retaining wall. The proposed visual quality for Key View 4 would be reduced slightly from the existing visual quality because of the addition of a project component and a reduction in the hillside's natural element. The recreational viewer group at the entrance of the park facility would notice the new project component.

Key View 5

Figures 2.7.9 and 2.7.10 illustrate Key View 5 for Alternative 2 and Alternative 3, respectively.

Viewer Exposure and Awareness. Viewer exposure to Key View 5 is moderate because the number of viewers using The Old Road will be moderate to high, depending on the day and time of day, but the time seeing the view is very short, just a few seconds while driving by. Viewer awareness and sensitivity to Key View 5 would be relatively low.

*Visual Quality and Visual Character of Proposed View of Alternative 2***.** The visual simulation shows Alternative 2 with a concrete retaining wall on the northbound side of I-5 to support widening of the freeway to accommodate the HOV and truck climbing lanes. The addition of a retaining wall decreases the visual quality of the view because it introduces an urban element, the retaining wall, into the viewshed and removes some of the hillside and its natural elements. The proposed visual quality decreases the existing visual quality at this Key View. The visual character of Key View 5 becomes less rural with the added urban element of the retaining wall. While the commuter or pedestrian viewer group from Key View 5 is not prominent or highly sensitive to this change, implementation of this alternative would degrade the view.

Visual Quality and Visual Character of Proposed View of Alternative 3. The visual simulation shows Alternative 3 with a concrete retaining wall on the northbound side of I-5 to support widening of the freeway to accommodate the truck climbing lanes. The addition of a retaining wall decreases the visual quality of the view because it introduces an urban element, the retaining wall, into the viewshed and removes some of the hillside and its natural elements. The proposed visual quality decreases the existing visual quality at this Key View. The visual character of Key View 5 becomes less rural with the added urban element of the retaining wall. While the commuter or pedestrian viewer group from Key View 5 is not prominent and highly sensitive to this change, implementation of this alternative will slightly degrade the view.

Early Implementation Project (EIP)

Potential permanent impacts to visual and aesthetics setting of the EIP include construction of the retaining wall within the median and the retaining wall to be constructed along the southbound outside edge of I-5 located north of the Weldon Canyon/I-5 overcrossing. These improvements would also be required for the Build Alternatives and are assessed as part of the Visual Impact Assessment.

With avoidance and/or minimization measures outlined below in Section 2.7.4, potential permanent visual impacts of the EIP would not be adverse.

2.7.4 Avoidance, Minimization and/or Mitigation Measures

The measures listed below avoid or minimize the potential temporary or permanent visual impacts that may result from the EIP and project construction and operation of the project. Measures V-1, V-2, V-3, and V-6 would visually enhance the project area by avoiding unnecessary removal of trees and incorporating wall treatments and landscaping where feasible. Measures V-4 through V-5 minimize visual impacts during construction.

V-1 **Trees.** Existing mature trees will be avoided where practical. If removal of mature trees cannot be avoided, additional landscape improvements will be incorporated into the final design. Where feasible, trees removed will be replaced at a minimum 1:1 ratio using nursery-grown trees for the same species that are a minimum of one gallon in size. Replacement planting shall be as appropriate and approved by the California Department of Transportation (Caltrans) District Landscape Architect.

V-2 **Landscape Plan.** A landscape plan will be prepared that will be incorporated into the final design of the proposed project. The landscape plan will include the following components, as feasible:

- Identification of areas within the project limits for revegetation, including landscaping for graded areas with plant species consistent with adjacent vegetation
- Planting of trees and shrubs along Interstate 5 (I-5) to enhance the existing visual planting character of the area
- Revegetation of areas used as temporary construction easements (TCEs)

- Erosion control measures will be implemented on slopes to aid in storm water prevention
- Vine planting on sound walls and barriers (where feasible) to prevent vandalism and/or graffiti

V-3 **Wall Treatments.** Aesthetic treatments will be applied to walls associated with Key View 4. Other walls will be evaluated for aesthetic treatments during final design. Specific treatments will be coordinated with local agencies during final design.

V-4 **Construction and Staging Areas.** Construction staging areas or storage yards shall be located within State right of way to the extent feasible, and construction access and staging shall be within the maximum project footprint or areas outside the project footprint that have been environmentally cleared for staging use.

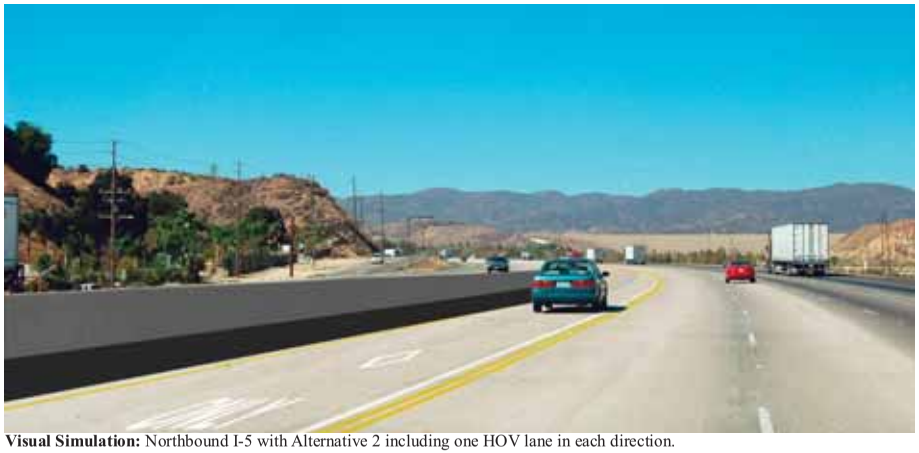
V-5 **Construction Plan.** The project shall be constructed in accordance with California Department of Transportation (Caltrans) Standard Construction Specifications, which include measures to reduce visual impacts.

V-6 **Noise Barriers.** Where noise barriers are located adjacent to residential areas with existing views onto protected open space areas or of the adjacent Santa Monica or Santa Susana Mountains, use of transparent materials, such as Plexiglas, shall be considered in the design of these noise barriers.

Project Area

Key View Location

Existing Conditions: Northbound I-5, north of Hillcrest Parkway, south of Parker Road.



Visual Simulation: Northbound I-5 with Alternative 2 including one HOV lane in each direction.

Figure 2.7.1

LEGEND

View Location

Project Alignment

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

I:\SIB0601/G/View Sims/VP1_Alt2.ai (12/18/07)

I-5 HOV / Truck Lanes Project

Key View 1 Alternative 2

07-LA-5 PM R45.4/R59.0

EA 2332E0

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Project Area

Key View Location

Existing Conditions: Northbound I-5, north of Hillcrest Parkway, south of Parker Road.

Visual Simulation: Northbound I-5 with Alternative 3 including one HOV lane in each direction.

Figure 2.7.2

LEGEND

2 View Location

Project Alignment

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

I:\SIB0601\G\View Sims\VP1_Alt3.ai (12/18/07)

I-5 HOV / Truck Lanes Project

Key View 1 Alternative 3

07-LA-5 PM R45.4/R59.0

EA 2332E0

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Project Area

Key View Location

Existing Conditions: View from the Biscailuz Drive overcrossing of southbound I-5.

Visual Simulation: View of southbound I-5 from the Biscailuz Drive overcrossing with Alternative 2 including one HOV lane in each direction.

LEGEND

View Location

Project Alignment

Figure 2.7.3

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

I-5 HOV / Truck Lanes Project

Key View 2 Alternative 2

07-LA-5 PM R45.4/R59.0

EA 2332E0

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Project Area

Key View Location

Existing Conditions: View from the Biscailuz Drive overcrossing of southbound I-5.

Visual Simulation: View of southbound I-5 from the Biscailuz Drive overcrossing with Alternative 3 including one HOV lane in each direction.

LEGEND

View Location

Project Alignment

Figure 2.7.4

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

I-5 HOV / Truck Lanes Project

Key View 2 Alternative 3

07-LA-5 PM R45.4/R59.0

EA 2332E0

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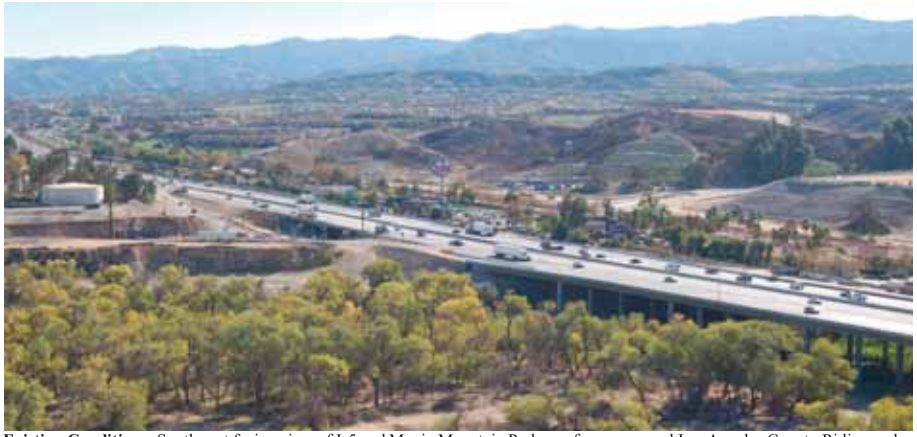
Project Area

Key View Location



Existing Conditions: Southwest facing view of I-5 and Magic Mountain Parkway from proposed Los Angeles County Riding and Hiking Trail.

Visual Simulation: I-5 and Magic Mountain Parkway with Alternative 2 including one HOV lane in each direction.

LEGEND

View Location

Project Alignment

Figure 2.7.5

I-5 HOV / Truck Lanes Project

Key View 3 Alternative 2

07-LA-5 PM R45.4/R59.0

EA 2332E0

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

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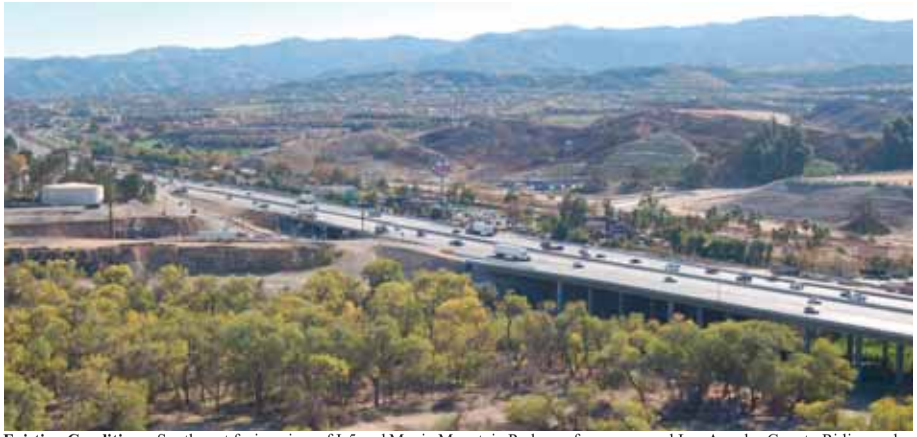
Project Area

Key View Location



Existing Conditions: Southwest facing view of I-5 and Magic Mountain Parkway from proposed Los Angeles County Riding and Hiking Trail.

Visual Simulation: I-5 and Magic Mountain Parkway with Alternative 3 including one HOV lane in each direction.

LEGEND

View Location

Project Alignment

Figure 2.7.6

I-5 HOV / Truck Lanes Project

Key View 3 Alternative 3

07-LA-5 PM R45.4/R59.0

EA 2332E0

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

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Project Area

Key View Location

Existing Conditions: Northwestern facing view of equestrian facility, I-5, and hillside from the entrance of the Michael D. Antonovich Open Space Recreational Area located west of I-5.

Visual Simulation: Equestrian facility, proposed retaining wall, I-5, and adjacent hillside with Alternative 2.

LEGEND

View Location

Project Alignment

Figure 2.7.7

I-5 HOV / Truck Lanes Project

Key View 4 Alternative 2

07-LA-5 PM R45.4/R59.0

EA 2332E0

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

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Project Area

Key View Location

Existing Conditions: Northwestern facing view of equestrian facility, I-5, and hillside from the entrance of the Michael D. Antonovich Open Space Recreational Area located west of I-5.

Visual Simulation: Equestrian facility, proposed retaining wall, I-5, and adjacent hillside with Alternative 3.

LEGEND

View Location

Project Alignment

Figure 2.7.8

I-5 HOV / Truck Lanes Project

Key View 4 Alternative 3

07-LA-5 PM R45.4/R59.0

EA 2332E0

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

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Project Area

Key View Location

Existing Conditions: Northwestern facing view of I-5 embankment and The Old Road, from The Old Road located northeast of I-5.

Visual Simulation: I-5 embankment, proposed retaining wall with Alternative 2.

LEGEND

View Location

Project Alignment

Figure 2.7.9

I-5 HOV / Truck Lanes Project

Key View 5 Alternative 2

07-LA-5 PM R45.4/R59.0

EA 2332E0

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

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Project Area

Key View Location

Existing Conditions: Northwestern facing view of I-5 embankment and The Old Road, from The Old Road located northeast of I-5.

Visual Simulation: I-5 embankment, proposed retaining wall with Alternative 3.

LEGEND

View Location

Project Alignment

Figure 2.7.10

I-5 HOV / Truck Lanes Project

Key View 5 Alternative 3

07-LA-5 PM R45.4/R59.0

EA 2332E0

(NO SCALE FOR PHOTOS)

SOURCE: Psomas (2007)

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2.8 Cultural Resources

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to cultural resources is based on the *Historic Property Survey Report* (California Department of Transportation [Caltrans], January 2008).

2.8.1 Regulatory Setting

"Cultural resources" as used in this document refers to all historical and archaeological resources, regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended (NHPA), sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA's responsibilities under the PA have been assigned to the Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix B for specific information regarding Section 4(f).

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet

National Register of Historic Places listing criteria. It also specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

2.8.2 Affected Environment

An Area of Potential Effects (APE) was developed for the project, which includes the Interstate 5 (I-5) corridor, as well as a 9 to 230-foot (ft) buffer on each side of the structure for construction purposes. The APE encompasses all areas associated with the proposed construction, which is mostly in a previously disturbed built environment. The APE includes existing Caltrans right-of-way (ROW) and all proposed acquisitions on either side of the ROW.

The earliest prehistoric sites in Los Angeles County are identified as the Horizon I (or Early Man Horizon). The Early Man Horizon people continued to inhabit the area until sometime after 8000 before present (BP). The next culturally recognized group in the area is the Intermediate Horizon or Campbell Tradition, who began inhabiting the area near the beginning of 6650 BP. The Shoshonean, or Takic, Tradition (e.g., the Gabrielino/Tongva) inhabited the area then sometime after AD 500 until the arrival of the Spanish in the 18th Century.

The project is located in the traditional native lands of the Tataviam of the Shoshonean (i.e., Takic) language stock. Generally, the territory of the Tataviam covered the upper reaches of the Santa Clara River drainage and extended to the Sawmill Mountains and the western edge of the Antelope Valley. The Tataviam territory contained many villages with a total population estimated at over 1,000 at the time of the Spanish arrival in 1769. Villages included *Etseng* on Piru Creek, *Tochonanga* near Newhall, and *Kwarun* near Elizabeth Lake.

The history of Los Angeles County includes the following four periods: Early Explorer Period (1542 to 1769), Spanish Mission Period (1769 to 1822), Mexican Ranch Period (1822 to 1846), and Anglo-American Period (1846 to present).

A records search covering 0.5 mile on either side of the project area was conducted on October 15, 2007, at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) at California State University, Fullerton. The records search included review of the National Register of Historic Places (NRHP), the California Register of Historic Places (CRHP), California Historical Landmarks, and California Points of Historical Interest. The records search indicated that the study area had been partially surveyed and that no

cultural resources had been previously identified within the APE. In addition, the records search revealed that there were two recorded prehistoric sites within 0.5 mile of the APE.

On October 22, 2007, the Native American Heritage Commission (NAHC) was requested to review the Sacred Land Inventory for the project APE. On October 25, 2007, the NAHC indicated that there were no sacred sites within the project APE.

The most likely descendants of the Tataviam were contacted to elicit general concerns regarding the project and to identify specific sites that may hold special concerns for them. Letter contacts were made and follow-up telephone calls were placed, with messages left where possible. The individuals contacted indicated that no sites or areas of concern exist in the project area, including Traditional Cultural Properties.

In October 2007, Caltrans archaeologists conducted an intensive pedestrian survey within the project APE. Where possible, parallel transects spaces 32.8 ft apart were employed consistently across open (or accessible) portions of the APE. Ground visibility was fair to excellent throughout the area surveyed. No cultural resources were found during the survey.

No historic Section 4(f) resources were identified in the study area.

2.8.3 Environmental Consequences

2.8.3.1 Temporary Impacts

Impacts to cultural resources would result from construction of any of the Build Alternatives, not from operation of the facility itself. Impacts to cultural resources would be considered permanent, not temporary, as discussed below.

2.8.3.2 Permanent Impacts

Alternative 1: No Build Alternative

Because the No Build Alternative would not involve any construction activities or improvements, there would be no permanent impacts to any historical or archaeological resources.

Alternative 2: Reduced Median Alternative

Based on the results of the Historic Property Survey Report and the Archaeological Survey Report (as an attachment to the HPSR), it was determined that no known cultural resources are present within the project APE; therefore, the project achieves a

finding of No Historic Properties Affected. However, there is a potential for previously unknown cultural materials and human remains to be discovered during construction of Alternative 2. With the avoidance and/or minimization measures discussed below in Section 2.8.4, potential permanent impacts to cultural resources would not be adverse.

Alternative 3: Full Median Alternative

Based on the results of the Historic Property Survey Report and the Archaeological Survey Report (as an attachment), it was determined that no known cultural resources are present within the project APE; therefore, the project achieves a finding of No Historic Properties Affected. However, there is a potential for previously unknown cultural materials and human remains to be discovered during construction of Alternative 3. With the avoidance and/or minimization measures discussed below in Section 2.8.4, potential permanent impacts to cultural resources would not be adverse.

Early Implementation Project (EIP)

There are no known cultural resources within the project APE for the proposed project; therefore, the construction of the EIP is not anticipated to result in permanent impacts to known cultural resources. Previously unknown resources could be encountered. With the avoidance and/or minimization measures discussed below in Section 2.8.4, potential permanent impacts to cultural resources would not be adverse.

2.8.4 Avoidance, Minimization, and/or Mitigation Measures

The measures below would avoid and/or minimize the potential impacts related to the discovery of previously unknown cultural materials and human remains during construction of the project and the EIP.

CR-1 If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CR-2 If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage

Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will also contact the District 7 Environmental Branch Chief so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

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Physical Environment

2.9 Hydrology and Floodplain

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to hydrology and floodplains is based on the *Location Hydraulic Study Report* (Psomas, December 2008) and the *Summary Floodplain Encroachment Report* (Psomas, December 2008).

2.9.1 Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as "the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year." An encroachment is defined as "an action within the limits of the base floodplain."

2.9.2 Affected Environment

The project area is located within the Santa Clara River Watershed, a subwatershed of the Los Angeles-San Gabriel Hydrologic Unit. The following rivers and streams cross the project and are shown as Federal Emergency Management Agency (FEMA) designated 100-year floodplains (Federal Insurance Rate Map [FIRM] Panel Nos. 06037C805F, 06037C0815F, and 06037C1031F, September 2008):

- Castaic Creek and Tributaries
- Santa Clara River and Tributaries

- Pico Canyon Creek and Tributaries
- Gavin Canyon Creek and Tributaries
- Lyon Canyon Creek and Tributaries

The FEMA FIRM mapping is provided in Figure 2.9.1. The locations of surface waters in the project area are shown in Figure 2.10.1 and presented later in Section 2.10, Water Quality and Storm Water Runoff.

Floodplains and wetlands in their natural or relatively undisturbed state serve water resource values (e.g., natural moderation of floods, water quality maintenance, groundwater recharge), living resource values (e.g., fish, wildlife, plant species), and cultural resource values (e.g., open space, archaeological, historical natural beauty, scientific study, outdoor education, recreation). Beneficial uses for surface waters are defined in the Los Angeles Regional Water Quality Control Plan as various ways that water can be used for the benefit of people and/or wildlife. Beneficial uses of surface waters in the project area include agricultural water supply; freshwater replenishment; warm freshwater habitat; wildlife habitat; spawning, reproduction, and/or early development; migration of aquatic organisms; body contract recreation; and nonbody contact recreation.

2.9.3 Environmental Consequences

"Significant encroachment" as defined at 23 CFR 650.105 is a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction or flood-related impacts:

- a significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route;
- a significant risk (to life or property); or
- a significant adverse impact on natural and beneficial floodplain values

Coordination with local, State, and federal water resources and floodplain management agencies (such as FEMA) is not required for the proposed project because the project would not encroach on a regulatory floodway, substantially increase the base flood elevation, or require a floodplain map revision.

2.9.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any transportation improvements on this segment of I-5 beyond those already approved. Therefore, the No Build Alternative would not result in temporary adverse impacts related to hydrology and floodplains.

Alternative 2: Reduced Median Alternative

Construction equipment would be operated within the floodplain during construction of culverts and falsework, and widening of the Castaic Creek Bridge. Alternative 2 would result in temporary impacts to 4.2 acres (ac) within the 100-year floodplain. Potential temporary impacts could occur during construction such as erosion, degradation of the water quality, and flooding. The erection of falsework in the floodplain during construction could create blockages in the streams and rivers, causing impacts upstream of the crossing. Potential impacts to natural and beneficial floodplain values during construction include damage to the streams and rivers through grading, plant removal, and structure construction, and an increase in pollutants discharged to the water bodies. The locations of construction activities that would occur within the 100-year floodplain are shown in Table 2.9.A.

Table 2.9.A Proposed Drainage Improvements

Crossing No.	Crossing Name	Existing Drainage Facility	Proposed Drainage Facility	Alternative
1	Wiley Canyon Channel	18' W by 10' H Concrete Channel	Extend Channel	2 and 3
2	Gavin Canyon Culvert	Triple 12' by 12' Box Culvert	Add One Additional 12' by 12' Box or Three 36" Reinforced Concrete Pipe Culvers	2 and 3
3	Lyon Canyon Culvert	Double 8' by 8' Box Culvert	Lengthen Culvert	2 and 3
4	Pico Canyon Bridge	Bridge	Widen Bridge	2 and 3
5	Castaic Creek Bridge	Bridge	Widen Bridge	2 and 3
6	Santa Clara River Bridge	Bridge	Widen Bridge	3 Only

Source: Location Hydraulic Study Report (Psomas, December 2008).

At the completion of construction activities within the floodplain, the disturbed area would be returned to the existing condition. Therefore, Alternative 2 is not anticipated to result in adverse temporary impacts related to hydrology and floodplains. With the measures outlined in Section 2.9.4 temporary floodplain impacts associated with Alternative 2 would not be adverse.

Alternative 3: Full Median Alternative

Alternative 3 would result in similar temporary impacts to floodplains as discussed above for Alternative 2. However, the area of temporary impacts to 100-year floodplains due to construction activities would be greater for Alternative 3 compared to Alternative 2, because construction activities would also occur at the Santa Clara River, where the existing bridge would be widened. Additionally, more columns would be added in Castaic Creek when compared to Alternative 2. Alternative 3 would result in temporary impacts to 5.5 ac within the 100-year floodplain. However, although the temporary impacts of Alternative 3 on floodplains are greater than those of Alternative 2, Alternative 3 is not anticipated to result in adverse temporary impacts related to hydrology and floodplains. With measures outlined in Section 2.9.4 temporary floodplain impacts associated with Alternative 3 would not be adverse.

Early Implementation Project (EIP)

Potential impacts to floodplain areas associated with the EIP would be limited to Lyon Canyon Creek and the Gavin Canyon Creek. The EIP would construct the same drainage improvements as the Build Alternatives and would therefore result in the same temporary impacts to the existing floodplains of Lyon Canyon Creek and Gavin Canyon Creek. In particular, improvements would be made to Drainages 39 and 53, as identified in the *Location Hydraulic Study* (December 2008). With measures outlined in Section 2.9.4 temporary floodplain impacts associated with the EIP would not be adverse.

2.9.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any transportation improvements on this segment of I-5 beyond those already approved. Therefore, the No Build Alternative would not result in additional permanent adverse impacts related to hydrology and floodplains.

Alternative 2: Reduced Median Alternative

Based on the hydraulic analysis from the *Location Hydraulic Study Report* (Psomas, December 2008), all drainage facilities in the project area, with the exception of Gavin Canyon Creek, have sufficient capacity to support the additional runoff from the freeway widening. The Gavin Canyon culvert would need to be improved to provide additional capacity because modeling indicates that its existing size cannot accommodate a 100-year storm event without flows backing up onto The Old Road. Therefore, the project would result in a benefit to the Gavin Canyon floodplain by

providing capacity for the existing and proposed flows and eliminate flooding of The Old Road at this location.

Alternative 2 would require improvements at five floodplain crossings. These improvements include channel extension, culvert lengthening and/or improvement and bridge widening, which would encroach on the 100-year floodplain. The locations of floodplain encroachment and the proposed improvements at these locations are shown previously in Table 2.9.A. All of the encroachments would be transverse (i.e., encroachments resulting from construction, or placement of fill, in the base floodplain perpendicular to the direction of flow). Alternative 2 would result in permanent impacts to 1.1 ac within the 100-year floodplain.

The 100-year base flood elevation would be slightly increased at some of the locations due to this widening; however, as determined by the *Location Hydraulic Study Report* (Psomas, December 2008), these increases are well within the National Flood Insurance Program's requirement of not more than a 1-foot (ft) increase. This minimal increase would not result in any substantial change in flood risks or damage to life or property.

The project would not support incompatible floodplain development. The project would have no substantial impacts on development in the base floodplain since only a slight change in the upstream water surface elevations would occur, and the floodplain limits would not change.

Impacts to natural and beneficial floodplain values include direct impacts caused by grading, construction, and operation of the project. Permanent project impacts to wetlands and other waters of the United States are discussed in Section 2.18, Wetlands and Other Waters. Project impacts to water quality and beneficial uses are discussed in Section 2.10, Water Quality and Storm Water Runoff. Inclusion of Treatment Best Management Practices (BMPs) into project design and compensatory measures to address wetland impacts pursuant to federal and State regulations would further minimize permanent impacts to hydrology and floodplains. The proposed treatment BMPs would actually improve the water quality of the project area creeks and streams over existing conditions, given the limited treatment facilities currently operational on this portion of I-5.

For the reasons listed above, Alternative 2 is not anticipated to result in adverse permanent impacts related to hydrology and floodplains.

Alternative 3: Full Median Alternative

Alternative 3 would result in the same impacts to floodplains as those discussed above for Alternative 2. However, Alternative 3 would also require improvement at the Santa Clara River. In addition, the area of encroachment in Castaic Creek would be greater because more columns would be added in the 100-year floodplain at this location. At this location, the existing bridge at the Santa Clara River would be widened, which would result in a transverse encroachment. Alternative 3 would result in permanent impacts to 2.0 ac within the 100-year floodplain. However, although the impacts of Alternative 3 on floodplains are greater than those of Alternative 2, Alternative 3 is not anticipated to result in adverse permanent impacts related to hydrology and floodplains because Alternative 3 would not result in a longitudinal encroachment, substantially increase the 100-year base flood elevation, result in a substantial change in flood risks or damage to life or property, support incompatible floodplain development, or result in adverse impacts to natural and beneficial floodplain values.

For the reasons listed above, Alternative 3 is not anticipated to result in adverse permanent impacts related to hydrology and floodplains.

Early Implementation Project (EIP)

Potential impacts to floodplain areas associated with the EIP would be limited to Lyon Canyon Creek and the Gavin Canyon Creek. The EIP would construct the same drainage improvements as the Build Alternatives and would therefore result in the same permanent impacts to the existing floodplains of Lyon Canyon Creek and Gavin Canyon Creek. In particular, improvements would be made to Drainages 39 and 53, as identified in the *Location Hydraulic Study* (December 2008). For the reasons listed above, the EIP is not anticipated to result in adverse permanent impacts related to hydrology and floodplains.

2.9.4 Avoidance, Minimization and/or Mitigation Measures

There would be no adverse permanent impacts on hydrology and floodplains values; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

As described in Section 2.18, Wetlands and Other Waters, compensatory mitigation for impacts to wetlands and other floodplain values would help reduce impacts to water resource beneficial floodplain values.

As specified in Measures WQ-1 and WQ-2, presented later in Section 2.10, Water Quality and Storm Water Runoff, construction and treatment BMPs would be implemented to reduce impacts to water quality for the proposed project and the EIP. As discussed in further detail in Section 2.10, Water Quality and Storm Water Runoff, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared and implemented. The SWPPP would contain a detailed mitigation plan for erosion and sediment control, including plans for implementing BMPs for the control of storm water runoff, erosion, and sedimentation. The SWPPP would include an Erosion Control Plan for project construction developed by a registered engineer to minimize potential impacts to surface water quality during construction activities. Best available erosion and sediment control measures would be implemented during grading and construction.

Implementation of the following measures would minimize potential temporary construction impacts within the existing 100-year floodplains within the study area. With implementation of the measures described below, construction activities associated with Alternatives 2 and 3 and the EIP would not constitute an adverse impact on hydrology and floodplains.

HY-1 Construction within 100-year floodplains will be limited and will be based on coordination with the Los Angeles Regional Water Quality Board, Region 4.

HY-2 Construction of falsework within the 100-year floodplain will be confined to the area immediately adjacent to the existing piers (within 20 feet).

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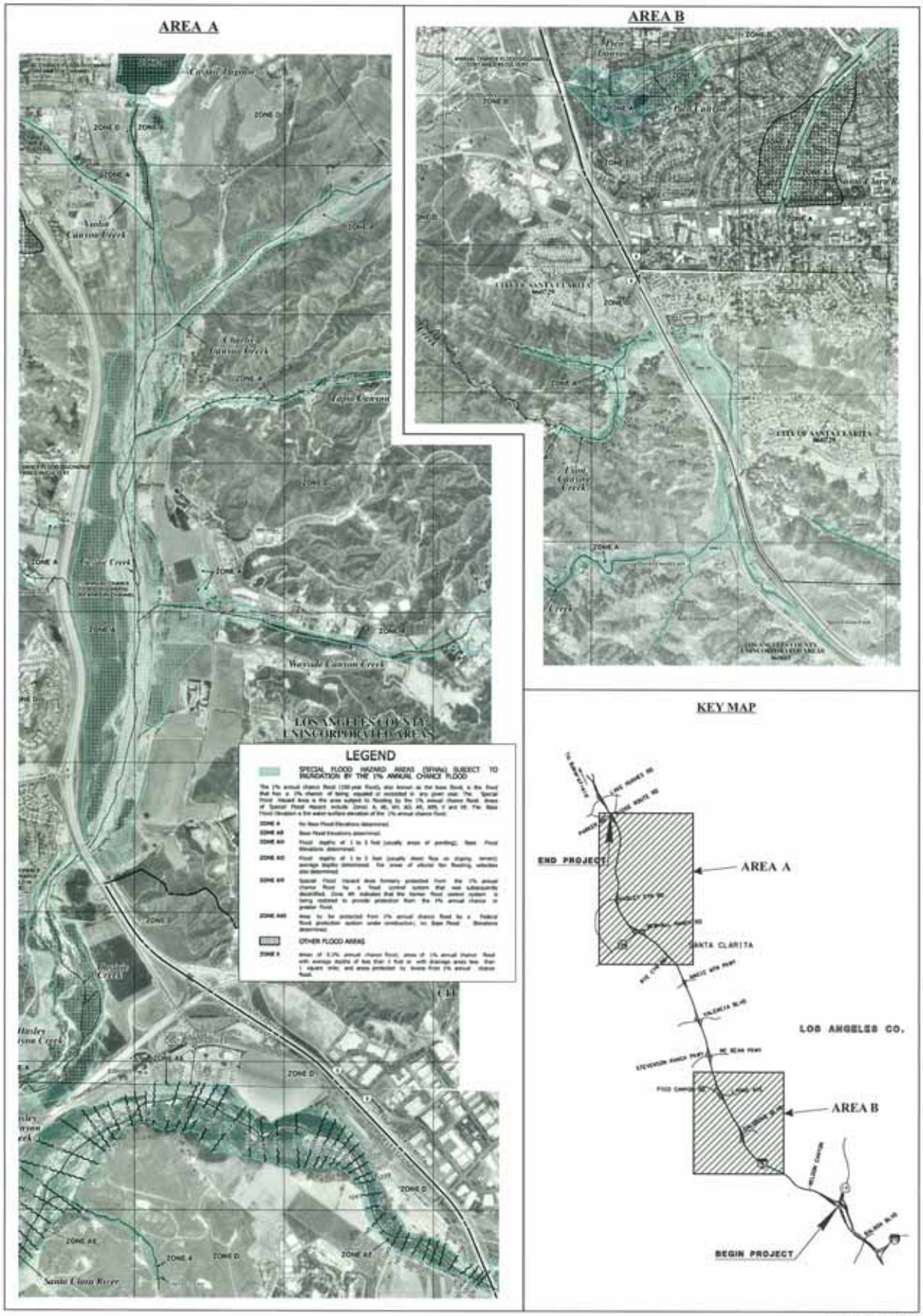

FIGURE 2.9.1

I-5 HOV/Truck Lanes Project
Floodplain Maps
07-LA-5 PM R45.4/R59.0
EA 2332E0

SOURCE: FEMA, '09

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2.10 Water Quality and Storm Water Runoff

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to water quality and storm water runoff is based on the *Draft Water Quality Report* (Psomas, December 2008) and the *Storm Water Data Report* (Psomas, May 2009).

2.10.1 Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill materials into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the Statewide permit, and projects performed by other entities on Caltrans right of way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 ac require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Caltrans activities less than 1 ac require a Water Pollution Control Program.

2.10.2 Affected Environment

2.10.2.1 Surface Water

The proposed project area is located within the 1,608-square-mile Los Angeles-San Gabriel Hydrologic Unit. Within this hydrologic unit, the majority (approximately 91

percent) of the proposed project area is located within the Santa Clara River Watershed. Within the Santa Clara River Watershed, Castaic Creek, Pico Canyon Creek, Lyon Canyon Creek, and Gavin Canyon Creek all receive runoff from the project area of I-5 and are tributary to Reaches 5 and 6 of the Santa Clara River. A small portion (approximately 9 percent) of the project area on the south drains to Bull Creek (and eventually to the Los Angeles River) within the Los Angeles River Watershed. As shown in Figure 2.10.1, the Santa Clara River crosses I-5 near Magic Mountain Parkway. Figure 2.10.1 shows all of the major surface waters in the area.

Under Section 303(d) of the 1972 CWA, states are required to develop a list of water quality limited segments. The waters on the 303(d) list do not meet water quality standards even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water on the lists and develop action plans, called Total Maximum Daily Loads (TMDLs), to improve water quality.

The Santa Clara River, Reaches 5 and 6 were designated as Reaches 7 and 8 on the 2002 CWA 303(d) list of water quality limited segment. The 2006 CWA 303(d) list corrected these reach designations to Reach 5 and Reach 6 to match the Los Angeles RWQCB's Water Quality Control Plan (Basin Plan). The 2006 CWA 303(d) lists the river as a water quality limited segment, with coliform bacteria, chlorpyrifos, toxicity, diazinon, chloride, nitrite, nitrate, and ammonia as pollutants of concerns with proposed TMDL completion dates of 2019. Bull Creek is not listed on either 303(d) list. Castaic Creek is not a 303(d) receiving water body.There are six established TMDLs within the project limits. The TMDLs are the Upper Santa Clara River Chloride TMDL; the Santa Clara River Nitrogen Compounds TMDL; the TMDL for Santa Clara River Estuary/Surfers' Knoll, McGrath State Beach, and Mandalay Beach Coliform and Beach Closures; the Los Angeles River Trash TMDL; the Los Angeles River Nitrogen Compounds and Related Effects TMDL; and the Los Angeles River and Tributaries Metals TMDL. The California Department of Transportation (Caltrans) is not a responsible party in the Santa Clara River TMDLs.

The Basin Plan designates existing, potential, and intermittent beneficial uses for all water bodies within the region, including inland surface waters. These uses are the foundation of the water quality protection measures under the Basin Plan. Potential beneficial uses of the Santa Clara River identified in the Basin Plan include:

- Agricultural Supply (water used for irrigation, leaching of salts, stock watering, etc.);
- Freshwater Replenishment (maintenance of surface water quality or quantity);
- Warm Freshwater Habitat: maintenance of warm-water ecosystems;
- Wildlife Habitat (water used to support terrestrial or aquatic ecosystems);
- Spawning, Reproduction, and/or Early Development (water used to support aquatic habitats suitable for reproduction and early development of fish);
- Migration of Aquatic Organisms (water used to support migration or other temporary aquatic organism uses);
- Body Contact Recreation (recreational activities involving body contact with water); and
- Nonbody Contact Recreation (recreational activities involving proximity to water, but generally no body contact or ingestion of water).

Potential beneficial uses for Bull Creek are not listed in the Basin Plan.

There are existing and/or planned treatment Best Management Practices (BMPs) within the project limits. A detention basin[1] and biofiltration swales[2] are planned as part of the I-5/Hasley Canyon Road interchange project. In addition, a detention basin currently exists at the I-5/State Route 126 (SR-126) interchange. These facilities are within the Caltrans right of way and are maintained by Caltrans.

2.10.2.2 Groundwater

The project area is within the Santa Clara River Groundwater Basin. The alluvial aquifer is recharged chiefly by infiltration of runoff waters in the Santa Clara River and its tributaries, with additional natural recharge from percolation of rainfall to the valley floor and subsurface inflow. Additional recharge results from percolation of excess irrigation water applied to urban landscaping and of reclaimed water discharged into the Santa Clara River channel. Groundwater is extracted from the groundwater basin through pumping for municipal and irrigation uses, consumption

[1] Detention basins are basins whose outlets have been designed to detain the storm water runoff from a water quality design storm for some minimum amount of time (e.g., 48 hours) to allow particles and associated pollutants to settle.

[2] Biofiltration swales (or vegetated swales) are open, shallow channels with vegetation covering the side slopes and bottom that collect and slowly convey runoff flow to downstream discharge points.

by vegetation, and outflow to the Santa Clara River in the western part of the subbasin.

Groundwater levels in the alluvium were relatively stable from about 1970 through 2000. During this period, depth to groundwater varied from about 13 to 37 feet (ft) in the western part of the subbasin, 10 to 50 ft in the central part of the subbasin, and 15 to 100 ft in the eastern part of the subbasin. Water levels tend to follow long-term precipitation patterns by dropping during periods of low rainfall and recovering during periods of high rainfall. Groundwater flow in the subbasin is southward and westward and follows the course of the Santa Clara River.

According to the Basin Plan, the beneficial use for the groundwater in and downstream of the project area is municipal, which reflects the importance of groundwater as a source of drinking water in the region. Groundwater in and downstream of the project area is being used by municipalities for potable water.

2.10.3 Environmental Consequences

2.10.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any transportation improvements on this segment of I-5. Therefore, the No Build Alternative would not result in temporary adverse impacts related to storm water runoff and water quality.

Alternative 2: Reduced Median Alternative

Surface waters potentially affected by construction activities include the Santa Clara River and its tributaries, the Los Angeles River and its tributaries, and Castaic Creek. As mentioned previously, approximately 9 percent of the project area drains to Bull Creek (and eventually the Los Angeles River), while the remaining area drains (ultimately) to the Santa Clara River.

Exposure of surface soils during construction activities such as grading could lead to increased surface runoff and erosion. In areas adjacent to streams, increased erosion could lead to increased stream sedimentation. In general, the disturbance associated with construction would be temporary, and much of the disturbed ground surface would be paved or landscaped. Under Alternative 2, the proposed project would disturb a total of 176 acres (ac).

Temporary control practices (BMPs that would be considered during construction of the project) include:

- Soil stabilization;
- Sediment control;
- Erosion control;
- Tracking control;
- Nonstorm water control;
- Waste management; and
- Materials pollution control

These control practices are required under the Caltrans Statewide NPDES Permit *(Order No. 99-06-DWQ NPDES No. CAS000003)* and the Caltrans *Statewide Storm Water Management Program* (SWMP*).*

The potential for accidental releases of hazardous materials such as small fuel or oil spills is considered possible, and such spills could affect water quality should pollutants enter bodies of water. Other potential sources of pollution include concrete and trash and litter generated during construction.

Construction equipment and vehicles operating in close proximity to surface water bodies could result in accidental discharges of oil or other construction-related contaminants into streams.

During construction, excavations may encounter shallow or perched groundwater, which may require dewatering. Dewatering could result in temporary water quality impacts by introducing sediment-laden discharge to surface waters.

With the avoidance and/or minimization measure outlined below in Section 2.10.4, potential temporary water quality impacts under Alternative 2 would not be adverse.

Alternative 3: Full Median Alternative

Construction-related impacts under Alternative 3 are the same as those discussed above for Alternative 2. However, under Alternative 3, the project would disturb a total of 217 ac, which is greater than the area disturbed under Alternative 2 (176 ac).

With the avoidance and/or minimization measure outlined below in Section 2.10.4, potential temporary water quality impacts under Alternative 3 would not be adverse.

Early Implementation Project (EIP)

Construction activities associated with the Build Alternatives could contribute to temporary water quality effects due to increased soil erosion and equipment use. Similarly, the EIP could contribute to similar water quality impacts; however, the construction work area would be more limited than identified for the entire Build Alternatives.

With the avoidance and/or minimization measure outlined below in Section 2.10.4, potential temporary water quality impacts under the EIP would not be adverse.

2.10.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in any transportation improvements on this segment of I-5. Therefore, the No Build Alternative would not result in permanent adverse impacts related to storm water runoff and water quality.

Alternative 2: Reduced Median Alternative

Surface waters potentially affected by runoff from the completed facility include the Santa Clara River and its tributaries, the Los Angeles River and its tributaries, and Castaic Creek. After the project is complete, potential long-term impacts during operation include increased sediments, turbidity, floating material, oils, greases, and chemical contamination. The increased area of impervious surfaces could result in increased pollutants that could be released into storm water systems. The proposed increase in impervious area would be 70.6 ac.

All nine Caltrans-approved treatment BMPs were evaluated as part of the Project Approval & Environmental Documentation (PA&ED) phase, consistent with the Caltrans SWMP. Based on preliminary engineering, biofiltration swales, detention basins, media filters, and gross solids removal devices were identified as the only feasible treatment BMP options.

Nitrogen is the only targeted design constituent (TDC) for this project. All of the nine Caltrans-approved treatment BMPs were considered for treating nitrogen, and because nitrogen is a nutrient, only detention devices, media filters, and infiltration basins would treat this constituent effectively. Infiltration basins will probably be infeasible due to the high groundwater tables in the project area. The locations chosen for the permanent BMPs require little or no additional right of way.

The most southern portion of the project drains southerly to an existing Los Angeles County debris basin just to the west of the I-5 and Interstate 405 (I-405) interchange. This section of the project, with steep, rocky canyons, multiple highways, development, and interchanges filling up the corridor, presents substantial difficulty in finding any land area to place treatment BMPs. The longitudinal slope of the existing highway is too steep for biofiltration swales, and no substantial area is available, inside or outside of the existing right of way, to place media filters, infiltration basins, or detention basins.

The remainder of the project area, which all drains to the Santa Clara River, has limited area within the existing right of way available for BMPs. The proposed BMPs treat an area equal to all of the new impervious area and as much of the existing impervious as practical to balance the amount of treatment over the whole project by compensating in one area for another. Practical, as used in this analysis, means trying to treat as much overall impervious surface regardless of what drainage area it is in. This "overall" method results in the most treatment without necessarily treating each impervious area. For example, with so little opportunity for locations for permanent controls in the southern portion of the Santa Clara River watershed, little of the runoff will be treated. However, in Segment 3 of the Santa Clara River watershed, which has a substantial amount of land within the 100-year floodplain and is adjacent to the roadway widening, the amount treated will be maximized to compensate for other areas.

With the implementation of detention basins, media filters, gross solids removal devices (GSRD) and biofiltration swales, it is believed that substantial reductions in pollutants from the existing freeway and from the proposed widening will be achieved.

Twenty-six biofiltration swales are proposed to be installed within the project limits. No infiltration devices are planned for this project since they are not feasible due to high groundwater tables and lack of available space in the project area. The swales are sized to convey peak discharges from larger design storms (e.g., 10-year storms).

Three detention basins are proposed to be installed in the project area. The first basin would be located just south of Valencia Boulevard (between the northbound diagonal off-ramp and the northbound loop on-ramp). The second basin would be located just north of Valencia Boulevard (between the southbound diagonal off-ramp and the

southbound loop on-ramp), and the third basin would be located north of the SR-126 interchange (within the southbound loop on-ramp).

One GSRD is proposed to be installed near the SR-14 interchange (at the intersection of The Old Road/San Fernando Road/Sierra Highway) for this project.

Due to the larger-sized drainage areas, Austin sand media filters are proposed to be installed at two locations for the project. One filter would be located south of the Gavin Canyon undercrossing (along the southbound lanes, 900 ft south of the Gavin Canyon bridge), and the second filter would be located north of the Calgrove Boulevard undercrossing (along the southbound lanes, parallel to the Calgrove Boulevard southbound diagonal off-ramp).

For maintenance BMPs, all new drainage inlets would include drain inlet stenciling for drainages located within Caltrans right of way.

With project implementation, much of the surface runoff from the roadway improvements will be intercepted by the proposed BMPs and treated prior to release. These proposed facilities would actually improve the water quality of the project area creeks and streams over existing conditions, given the limited treatment facilities currently operational on this portion of I-5. Table 2.10.A summarizes the amount of treatment proposed for Alternative 2.

Table 2.10.A Summary of Permanent Treatment Area for Alternative 2

Segment	Area of New Impervious (ac)	Total Runoff Area Proposed to be Treated (ac)	Area of Total Impervious (Existing plus New) (ac)	Percent of Total Impervious Treated	Total Area Drained (ac)	Percent of Total Runoff Area Treated
Segment 1: Bull Creek	7.1	28.6	26.9	100%	76.0	38%
Segment 1: Santa Clara River	24.1	32.9	89.2	37%	100.0	33%
Total Segment 1	**31.2**	**61.5**	**116.1**	**53%**	**176.0**	**35%**
Total Segment 2	**28.7**	**25.7**	**109.4**	**24%**	**238.0**	**11%**
Total Segment 3	**10.7**	**57.4**	**54.9**	**100%**	**67.9**	**85%**
Total Project	**70.6**	**144.6**	**280.4**	**52%**	**481.9**	**30%**

Source: *Draft Water Quality Report* (Psomas, May 2009).
ac = acres; N/A = not applicable

The estimated increase in permanent impervious area, as discussed above, would not substantially affect groundwater recharge. The increase in impervious surface would create some additional volume of runoff that would be conveyed to streams and rivers

in the project area, thereby decreasing the amount of groundwater recharge. However, with the proposed permanent BMPs (biofiltration swales, detention basins, media filters, and gross solids removal devices,), the additional volume of runoff would be captured and allowed to infiltrate. As a result, no substantial decrease in groundwater recharge would occur. Therefore, the project would not substantially deplete groundwater supplies or interfere with groundwater recharge. The project would not have long-term or permanent impacts on the groundwater system.

The project could result in the removal or reduction of riparian vegetation or other vegetation from the buffer zone of streams, creeks, or wetlands. This could affect water quality by increasing the potential for erosion; additionally, riparian vegetation could serve as a filter for pollutants.

With the avoidance and/or minimization measure outlined below in Section 2.10.4, potential permanent water quality impacts under Alternative 2 would not be adverse.

Alternative 3: Full Median Alternative

Permanent surface water and groundwater impacts for Alternative 3 would be similar to those discussed above for Alternative 2. However, the proposed increase in impervious area for Alternative 3 is 87.3 ac, which is an increase of 40.2 percent compared to existing conditions, and is greater than that proposed for Alternative 2. Table 2.10.B summarizes the amount of treatment proposed for Alternative 3, which is less than that proposed for Alternative 2. As with Alternative 2, much of the surface runoff would be intercepted with biofiltration swales or detention basins and treated prior to release. With the avoidance and/or minimization measure outlined below in Section 2.10.4, potential permanent water quality impacts under Alternative 3 would not be adverse.

Early Implementation Project (EIP)

The EIP's impacts to permanent water quality impacts would not exceed the total effects identified for the Build Alternatives, since the improvements are only a portion of the total proposed improvements. The amount of impervious surface associated with the EIP would be within the total increase calculated for the Build Alternatives. With the avoidance and/or minimization measure outlined below in Section 2.10.4, potential permanent water quality impacts under the EIP would not be adverse.

Table 2.10.B Summary of Permanent Treatment Area for Alternative 3

Segment	Area of New Impervious (ac)	Total Runoff Area Proposed to be Treated (ac)	Area of Total Impervious (Existing plus New) (ac)	Percent of Total Impervious Treated	Total Area Drained (ac)	Percent of Total Runoff Area Treated
Segment 1: Bull Creek	8.8	28.6	28.6	100%	81.1	35%
Segment 1: Santa Clara River	29.8	32.9	94.9	35%	106.5	31%
Total Segment 1	**38.6**	**61.5**	**123.5**	**50%**	**187.6**	**33%**
Total Segment 2	**35.5**	**25.7**	**116.1**	**22%**	**253.6**	**10%**
Total Segment 3	**13.3**	**57.4**	**57.4**	**100%**	**72.2**	**80%**
Total Project	**87.3**	**144.6**	**297.0**	**49%**	**513.4**	**28%**

Source: *Draft Water Quality Report* (Psomas, May 2009).
ac = acres

2.10.4 Avoidance, Minimization and/or Mitigation Measures

The Caltrans SWMP is the guidance for compliance with the NPDES permit requirements for discharge. As part of Caltrans Project Delivery Storm Water Management Program described in the SWMP, selected construction site, design pollution prevention, and treatment BMPs would be incorporated into the final design of the proposed project. Compliance with the standard requirements of the SWMP for potential short- and long-term impacts (listed below in Avoidance Measures WQ-1 and WQ-2) is required.

As specified in Mitigation Measure WQ-1, the project would comply with the NPDES permit process, which requires Caltrans to file a Notice of Construction (NOC) and prepare and submit a SWPPP to the Los Angeles RWQCB. The SWPPP would contain a detailed mitigation plan for erosion and sediment control, including plans for implementing BMPs for the control of storm water runoff, erosion, and sedimentation. The SWPPP would include an Erosion Control Plan for project construction developed by a registered engineer to minimize potential impacts to surface water quality during construction activities. Best available erosion and sediment control measures would be implemented during grading and construction, and could include but, are not limited to:

- Use of sediment basins
- Gravel bags
- Silt fences
- Geo-bags or gravel and geotextile fabric berms
- Erosion control blankets

- Jute net

Additional measures could include:

- Minimizing the size of the disturbed area associated with grading/construction
- Stockpiling all excavated soils and protecting them from wind and water erosion
- Revegetating disturbed areas
- Limiting grading during construction to the dry season to the extent practicable

Construction scheduling would consider the amount and duration of soil exposed to erosion by wind, rainfall, runoff, and vehicle tracking and seek to minimize disturbed soil area during the rainy season. A schedule would be prepared that shows the sequencing of construction activities with the installation of erosion and sediment control BMPs.

The diversion of storm water runoff and conveyance of concentrated flows would be considered in determining the appropriateness of the BMPs chosen. BMPs to divert or manage concentrated flows in a nonerodible fashion may be required to divert off-site drainage through or around the construction site or to properly manage construction site storm water runoff.

Proper design, inspection, and maintenance of construction and treatment BMPs and adherence to the Caltrans NPDES permit and the SWMP as presented below in Measures WQ-1 and WQ-2 would avoid or minimize adverse water quality impacts during construction and operation of Alternative 2, 3, or the EIP.

WQ-1 The provisions of the California Department of Transportation (Caltrans) Statewide National Pollution Discharge Elimination System (NPDES) Permit *(Order No. 99-06-DWQ NPDES No. CAS000003)* and any subsequent permit as they relate to construction activities for the project, will be complied with during construction. This will include submission of a Notice of Construction (NOC) to the Los Angeles Regional Water Quality Control Board (RWQCB) at least 30 days prior to the start of construction, preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), and submission of a *Notice of Construction Completion* (NCC) to the Los Angeles RWQCB upon completion of construction and stabilization of the site.

WQ-2 The procedures outlined in the *Storm Water Quality Handbooks, Project Planning and Design Guide* will be followed during implementation of Treatment Control Best Management Practices (BMPs) for the project. This will include coordination with the Los Angeles Regional Water Quality Control Board (RWQCB) with respect to feasibility, maintenance, and monitoring of Treatment Control BMPs as set forth in the California Department of Transportation (Caltrans) *Statewide Storm Water Management Program*.

FIGURE 2.10.1

LEGEND

Project Location

Surface Waters

0 2,500 5,000 Feet

I-5 HOV/Truck Lanes Project

Surface Waters

07-LA-5 PM R45.4/R59.0

EA 233210

SOURCE: Air Photo USA (04/2007); National Hydrography Dataset (2006); Psomas (2007).

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2.11 Geology, Soils, Seismic, and Topography

The information in this section is based on the *Preliminary Geotechnical Design Report* (CH2M Hill, December 2007) and Addendum dated September 2008, and the *Draft Water Quality Report* (Psomas, August 2008).

2.11.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

2.11.2 Affected Environment

2.11.2.1 Local Geology/Topography

The project study area is defined generally by two distinct topographic characteristics: (1) steep hills between the I-5/State Route 14 (SR-14) interchange north to the Stevenson Ranch area, and (2) relatively flatter, gently sloping alluvial deposits, and terrace deposits that are bisected by canyons and washes between Stevenson Ranch and the I-5/Parker Road interchange.

Elevations range from approximately 1,025 feet (ft) above mean sea level (amsl) near the Hasley Canyon interchange to a maximum elevation of approximately 1,780 ft amsl near the crest of Stevenson Ranch.

I-5 crosses numerous ephemeral washes and streams that flow through canyons that dissect the surrounding hillsides, including the Santa Clara River and Castaic Creek. Local surface drainage is controlled by a network of storm drains, irrigation channels, and pipes, and is conveyed in pipes and ditches to the nearest cross channels.

California comprises 11 geomorphic provinces as defined by the California Department of Mining. The project site is located within the Transverse Ranges geomorphic province of southern California, a series of east-west-trending mountain ranges including the San Gabriel Mountains, Santa Monica Mountains, and San Bernardino Mountains. The regional geology of the Transverse Ranges consists of terrestrial and marine sedimentary rocks underlain by older igneous and metamorphic rocks. There is no potential for volcanic activity within the project vicinity.

2.11.2.2 Faulting and Seismicity

The entire southern California region is seismically active due to the influence of several earthquake fault systems resulting from interaction between the Pacific and North American crustal plates. An active fault is defined by the State of California as a "sufficiently active and well defined fault that has exhibited surface displacement within the last 11,000 years." A potentially active fault is defined by the State as a "fault with a history of movement between 11,000 and 1.6 mya" (million years ago). These active and potentially active faults are capable of producing seismic shaking within the study area that could be damaging to bridges and other structures.

The major active faults capable of generating shaking during a seismic event that could impact the project study area include: (1) San Andreas, (2) San Gabriel, (3) San Canyetano-Holser-Del Valle, (4) Santa Susana, and (5) Simi-Santa Rosa-Northridge. The Holser Fault, located approximately 0.1 to 5 miles away from the project alignment, has a maximum credible earthquake (MCE) moment magnitude M_w of 6.5 per California Geological Survey (CGS). However, the California Department of Transportation (Caltrans) considers the Holser Fault part of the San Cayetano-Holser-Del Valle Fault, with a MCE M_w of 7.5 , Table 2.11.A summarizes the three active faults nearest the project study area.

Table 2.11.A Active Faults in the Study Area

Fault/Fault Zone	Mean Distance to Fault (mi)	Maximum Credible Earthquake (MCE) Moment Magnitude M_m
San Gabriel	0.1 to 0.7	7.5
Santa Susana	0.7 to 7.0	7.0
San Canyetano-Holser-Del Valle	0.1 to 5.0	7.5

Source: Preliminary Geotechnical Design Report, CH2M Hill, December 2007.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was signed into law December 22, 1972, and went into effect March 7, 1973. It is codified in the Public Resources Code as Division 2, Chapter 7.5. The purpose of this Act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture.

The California Geologic Survey defines a fault as a fracture or zone of closely related fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a region of related faults that are typically interconnected and subparallel to the main fault, but may also branch and diverge. A fault zone can range in width from a few feet to several miles.

Of the three major active faults within the project area vicinity that could potentially affect the I-5, the San Gabriel Fault is the principal fault zoned under the Alquist-Priolo Earthquake Fault Zoning Act[1]. The San Andreas Fault, which runs parallel to the San Gabriel Fault, is also zoned under the Act, but is outside the immediate project vicinity.

2.11.2.3 Landslides and Slope Stability

Landslides constituted a major geologic hazard because they are widespread and cause substantial damage to life and property. Expansion of urban and recreation developments into hillside areas leads to more people being threatened by landslides each year. Landslides commonly occur in connection with other major natural disasters such as earthquakes, volcanoes, wildfires, and floods. Steep, bare slopes; clay-rich rock; deposits of stream or river sediment; and heavy rains can also cause landslides. The only existing steep slopes in the immediate vicinity of the project sit are the side cut and fill slopes observed on the west and east side of the project alignment. The slopes on the west side of the alignment are located discontinuously, with an inclination of 1.5:1 to 2:1 (horizontal: vertical [H:V]) in steepness, with a maximum height of about 80 ft. Slopes on the east side of I-5 have an average slope ratio of 1.2:1 (H:V) and, locally, as steep as 1:1 (H:V). The heights vary from approximately 45 ft to 120 ft.

There is no evidence of excessive erosion or slope instability in the existing cut slopes. Furthermore, as shown on the State of California Seismic Hazard Zones

[1] California Geologic Survey, Special Publication 42, Interim Revision 2007.

Newhall and Oat Mountain Quadrangle maps, there are no mapped areas of earthquake-induced landslides within the study area.[1]

2.11.2.4 Liquefaction

Liquefaction is a seismic phenomenon that occurs when saturated, loose soils lose their strength due to excess water within the soils. The space between the soil particles is completely filled with water, which exerts pressure on the soil particles, influencing how tightly the soil particles are pressed together. Prior to an earthquake, the water pressure is relatively low. However, the shaking caused by an earthquake can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other. When liquefaction occurs, the strength of the soil decreases and the ability of the soil to support building and bridge foundations is reduced. Liquefied soils also exert pressure on retaining walls, which can cause them to tilt or slide.

The primary factors affecting the possibility of liquefaction in a soil deposit are: (1) intensity and duration of earthquake shaking, (2) soil type and relative density, (3) overburden pressures, and (4) depth to groundwater. Soils most susceptible to liquefaction are clean, loose, uniformly graded, fine-grained sands, and nonplastic silts that are saturated. Silty sands have also been proven susceptible to liquefaction.

The presence and depth of groundwater in an area will determine if the land is more or less subject to liquefaction (the state of becoming liquid) and instability.

Within the study area, the historically highest groundwater was mapped at 0 to 30 ft below ground surface (bgs) in relatively low-elevation areas. The majority of the subsurface soils within the upper 50 ft are considered to have a loose to very dense relative density. Due to the presence of locally shallow groundwater levels and the presence of isolated loose to medium-dense sand below the groundwater table, portions of the site are expected to have a low to moderate potential for liquefaction.

The State of California Seismic Hazard Zones Newhall and Oat Mountain Quadrangle maps indicate areas within the study area with historical occurrences of

[1] State of California Seismic Hazard Zone Map Oat Mountain Quadrangle, February 1, 1998.

liquefaction. Local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements.[1]

2.11.2.5 Subsurface Conditions/Soils

The entire study area is underlain by the Saugus and Pico Formations, which comprise conglomerate, sandstone, siltstone, and claystone. Based on a review of the United States Natural Resource Conservation Service's (NRCS) Web Soil Survey, the soils in the project area are primarily Milshom Rocky loams and Castaic-Balcom silty clay loams (southern, mountainous portion of study area), Ojai-Zamora loams (transition area from mountainous to valley), and Yolo loams and Handford sandy loams (flat portions of the study area). A small portion of the project area in the valley near the Santa Clara River is made up of alluvial sand with the water table within 1 ft of the surface. Nearly all of these soils are classified as "well-drained," "somewhat excessively-drained," or "excessively-drained."

The NRCS also classifies soils based on its permeability. These classes are called Hydrologic Soil Groups (HSG). The soils within the study area are primarily HSG B and HSG C. Soils in Group B have moderately low runoff potential within thoroughly wet areas, and water transmitted through the soil is unimpeded. These soils are between 10 and 20 percent clay and 50 to 90 percent sand, with loamy sand or sandy loam textures. Water movement within the soil from the surface to 20 inches (in) deep ranges from 1.42 in per hours to 5.67 in per hour.

Soils in Group C have moderately high runoff potential when thoroughly wet, and water movement through the soil is somewhat restricted. These soil types have between 20 and 40 percent clay, with less than 50 percent sand, and have loam, silty loam, sandy clay loam, clay loam, and silty clay loam textures. Water movement within the soil from the surface to 20 in deep ranges from 0.14 in per hour to 1.42 in per hour.

Table 2.11.B illustrates the soil types and their HSG within the study area.

[1] State of California Seismic Hazard Zone Map Newhall Quadrangle, February 1, 1998.

Table 2.11.B Soil Classification in the Study Area

Soil Type	Hydrologic Soil Group
Milshom Rocky Loam	D
Castaic-Balcom Silty Clay Loam	C
Ojai-Zamora Loam	B
Yolo Loam	B
Handford Sandy Loam	B
Sandy Alluvial Sand	B

Draft Water Quality Report, Psomas, June 2007.

Between SR-14 and north of the Pico Canyon Road/Lyons Avenue interchange, it is anticipated that bedrock (Pico and Saugus Formations) is exposed and would be encountered at shallow depths. The onsite bedrock may be very dense, with interbedded cobbles and conglomerates. Deeper artificial fill and alluvium soils are present from the north toe of the hill to south of the Pico Canyon Road/Lyons Avenue interchange at I-5. This soil unit consists of loose to compact silty sand, clay, and silt, becoming denser with depth.

In the vicinity of the McBean Parkway interchange, dense formation materials are present on the ground surface. North of McBean Parkway, the alignment gently slopes downward to the north; the top of the existing sloping ground surface and low-elevation ground is covered by medium-dense to dense artificial fill material, ranging in depth from 20 to 30 ft bgs. The fill soils, likely derived from on-site materials from the existing I-5 development, consist of pavement, base materials, and medium-dense to dense sandy soils, and firm, fine-grained soil. Naturally deposited material, (alluvium) in this area consists of loose to very dense interbedded silty sand and clayey sand, soft to hard lean clay, and silt.

Between the SR-126 interchange and Parker Road, alluvial deposits are overlain by approximately 10 to 25 ft of loose to medium-dense sand and silty sand, and gravels. The alluvial deposits consist of dense sandy soils located at a depth of approximately 5 ft bgs at the low elevation area near the SR-126 interchange. Very dense layers were encountered at a depth of approximately 40 to 50 ft bgs.

2.11.3 Environmental Consequences

2.11.3.1 Temporary Impacts

No Build Alternative

Under the No Build Alternative, the temporary impacts discussed below for the Build Alternatives would not occur.

Build Alternatives

Temporary impacts are related to construction activities. Alternatives 2 and 3 would alter existing landforms due to construction grading and construction of cut and fill slopes. Construction activities may also temporarily disturb soil outside the project footprint, primarily in the trample zone around work areas, heavy equipment traffic areas, and material laydown areas. Temporary impacts would include soil compaction, sedimentation, and increased possibility of soil erosion.. These impacts are discussed in Section 2.10, Water Quality and Storm Runoff.

The construction activities associated with Alternatives 2 and 3 could be affected by ground motion and liquefaction, and possibly ground rupture (deformation) to some degree if an earthquake were to occur during construction.

With avoidance and/or minimization measures outlined below in Section 2.11.4, potential temporary geologic impacts associated with the Build Alternatives would not be adverse.

Early Implementation Project (EIP)

Similar to the Build Alternatives, construction activities associated with the EIP could be affected by ground motion and liquefaction, and possibly ground rupture (deformation) to some degree if an earthquake were to occur during construction.

With avoidance and/or minimization measures outlined below, potential temporary geologic impacts associated with the EIP would not be adverse.

2.11.3.2 Permanent Impacts

No Build Alternative

Under the No Build Alternative, the permanent impacts discussed below for the Build Alternatives would not occur.

Build Alternatives

The roadway, structures, slopes, and other features of the Build Alternatives may be affected by ground motion, liquefaction, and possibly ground rupture to some degree.

The primary geologic and geotechnical constraints affecting the design and construction of any of the Build Alternatives include:

- Moderate to high ground accelerations due to the presence of nearby active faults, including the San Gabriel, Santa Susana, and Holser Faults
- Impacts due to local shallow groundwater
- Liquefaction and seismically induced settlement in areas of shallow groundwater and loose alluvial soils
- Erosion and surficial instability of hillside areas

Faulting/Seismicity

The possibility of moderate to severe seismic shaking is the most considerable geologic hazard to the project. The study area is located in a region of southern California that is seismically active and under the influence of several fault systems. Table 2.11.A listed the fault systems capable of producing damaging seismic shaking in the study area.

Landslides and Slope Stability

Unstable slopes or excessive erosion were not observed in the study area, and are not expected for new fill slopes with similar or lower inclinations. Retaining walls would be constructed along the center median of the I-5 widening locally from Station 2449+00 to 3099+00 with gaps in the bridge areas. The design wall heights range from 5.9 to 18.3 ft, with an average height of 11 ft. Several retaining walls are also proposed on the right and left widening shoulder, with maximum heights of 23.4 ft and 20.4 ft, respectively.

Liquefaction

The *Preliminary Geotechnical Design Report* (CH2MHill, December 2007) indicates a possibility for liquefaction in areas of shallow groundwater and loose granular soils. North of the Pico Canyon Road/Lyons Avenue/I-5 interchange to the northern project limits are located in mapped, potentially liquefiable zones. The presence of liquefiable soils may affect the competency of the native soil to support widened and new structures or freeway improvements and major seismic events.

Soils

Landform alteration throughout the study area will likely occur due to construction grading.

Expansive and collapsing soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content even without increase in external loads. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or concrete slabs supported on grade. As discussed in the *Preliminary Geotechnical Design Report* (CH2MHill, December 2007), based on the geotechnical review of the soil conditions depicted on the referenced boring logs, the expansive and collapsing soil hazard at the site is considered low to moderate.

Cut slope grading is proposed along the project alignment along the left and right median at nine locations. Approximate cut heights range from 5 to 20 ft, associated with or without retaining walls. New embankments within the project alignment include soil fill being added along both sides of the existing I-5 embankment to accommodate new truck lanes, fill placed for HOV lanes on the center median, and fill being placed for widening and realigning other associated ramps and the shoulder. Fill placement is also proposed for bridge approaches associated with bridge widening. The maximum height for the proposed fill slope is approximately 23 ft, with several smaller fills made along the alignment with heights less than 5 ft.

Early Implementation Project (EIP)

The study area is subject to regional seismic activity and could experience ground motion, liquefaction and possible ground ruture if earthquakes were to occur within the study limits. Additionally, unstable slopes were not observed in the study area, and similar favorable performance is expected for new fill slopes with similar or lower inclinations. Construction of the EIP would be at no greater seismic risk or unstable soil conditions than the Build Alternatives. With avoidance and/or minimization measures outlined below in Section 2.11.4, potential permanent geologic impacts of the Build Alternatives and the EIP would not be adverse.

2.11.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of standard design and construction practices will reduce the project's risk of geologic hazards, such as ground shaking, erosion, liquefaction, and slope instability.

The following measures would avoid or minimize potential geology and soil impacts.

GEO-1 Prior to completion of final design, a design-level geotechnical report shall be prepared, This report will document soil-related constraints and hazards such as slope instability, settlement, liquefaction, or related secondary seismic impacts that may be present. The report will also include:

- Evaluation of expansive soils and recommendations regarding construction procedures and/or design criteria to minimize the impact of these soils on the development of the project.
- Identification of liquefiable areas within the project limits and provision of recommendations for mitigation.

GEO-2 In conjunction with final design, the grading of side slopes will be designed so that surface erosion of the engineered fill is not increased compared to existing, natural conditions.

GEO-3 In conjunction with construction activity, planting of native vegetation with good soil-binding characteristics and low water requirements on engineered slopes will be performed to reduce erosion and slope instability.

GEO-4 A quality assurance/quality control plan will be maintained that includes observing, monitoring, and testing by a geotechnical engineer and/or geologist during construction to confirm that geotechnical/ geologic recommendations are fulfilled, or that if different site conditions are encountered, appropriate changes are made to accommodate such issues.

GEO-5 Prior to completion of final design, the California Department of Transportation (Caltrans) will undertake a detailed review to locate all groundwater wells within the project footprint. Any groundwater wells that occur within the project footprint will be abandoned properly during project construction. As may be required (i.e., for active wells), the water supply provided by the well will be replaced. Replacement water may be provided by a variety of means, such as installing a new well or a connection to municipal supply.

GEO-6 Final design and construction will comply with California Department of Transportation (Caltrans) Seismic Design Criteria and address potential impacts associated with ground shaking, liquefaction, and seismically induced settlement.

GEO-7 Implementation of safe construction practices and compliance with the California Department of Transportation (Caltrans) and California Division of Occupational Safety and Health Administration (Cal-OSHA) requirements would minimize the temporary impacts of construction.

The Build Alternatives would be constructed to Caltrans seismic design criteria and is anticipated to withstand the expected ground shaking in this area, with the likelihood for structural damage substantially reduced or avoided through seismic engineering design.

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2.12 Paleontology

This section is based on the *Paleontological Resources Identification and Evaluation Report with Proposed Impact Mitigation Program for I-5 HOV/Truck Lanes–SR-14 to Parker Road* (LSA Associates, Inc., April 2008).

2.12.1 Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects. (e.g., Antiquities Act of 1906 [16 USC 431–433], Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by the California Environmental Quality Act, the California Code of Regulations, Title 14, Division 3, Chapter 1, Sections 4307 and 4309, and Public Resources Code Section 5097.5.

2.12.2 Affected Environment

Paleontological resources (fossils) are defined as any trace of a past life form. While wood, bones, and shells are the most common fossils, under certain conditions soft tissues, tracks, and trails may be preserved as fossils. Fossils are most commonly found in sedimentary rock layers.

A Paleontological Identification Report and Paleontological Evaluation Report (PIR/PER) (LSA Associates, Inc., April 2008) was prepared to assess the paleontological resource impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes between State Route 14 (SR-14) to Parker Road and to recommend measures to minimize adverse impacts on paleontological resources.

The project area lies within the Transverse Ranges geomorphic province. This east-west-trending mountain range differs greatly from the northwest-trending ranges throughout the rest of the state. It is bounded on the north by the "Big Bend" section of the San Andreas Fault system, which creates north-south compression and rapid uplift. It is distinguished by steep terrain and a nearly complete rock record spanning the Precambrian to the present. The transverse ranges extend from Joshua Tree National Monument on the east offshore to San Miguel Island on the west. It includes the Santa Ynez, Santa Susanna, Santa Monica, San Gabriel, and San Bernardino Mountains, as well as the Santa Clara and Simi Valleys.

The project area includes fossiliferous formations and units ranging from the Late Miocene (between 8 and 5 million years ago [mya] to the late Pleistocene (10,000 years before the present [ybp]). This includes the Late Miocene Towsley Formation, the Pliocene Pico Formation, the Plio-Pleistocene Saugus Formation, and older Quaternary alluvium. Also present are exposures of non fossiliferous recent (<10,000 ybp) Quaternary alluvium.

The formations and paleontological resources identified in the proposed I-5 (HOV)/ Truck Lanes project (project) study area are described in the following sections.

2.12.2.1 Towsley Formation

The Towsley Formation consists of marine sandstone, conglomerate, and mudstone. The basal conglomerate unit is overlain by sandstone and mudstone that contain foraminifera that date to the Mohnian stage of the Late Miocene (approximately 8 to 5 mya). There are two recorded fossil localities within the study area that are attributed to the Towsley Formation. This formation is common in the southern part of the study area.

2.12.2.2 Pico Formation

The Pico Formation consists of Pliocene (5–1.8 mya) marine deposits. The sediment types include clayey siltstone and sandy siltstone, sandstone, and conglomerate. It is up to 600 feet (ft) thick. This formation can be found in two or three locations within the study area, ranging from the southernmost part north to the Towsley Canyon area.

2.12.2.3 Saugus Formation

The Saugus Formation conformably overlies or grades with the underlying Pico Formation and is nonmarine in origin. It is a poorly indurated and sorted, cross-bedded coarse-grained sandstone to pebbly conglomerate. It reaches a maximum thickness of 6,398 ft. It is Late Pliocene (approximately 1.8 mya) to Early Pleistocene (approximately 0.7 mya) in age. This formation can be found in three or four locations of the study area, from south of the Santa Clara river north to Hasley Canyon.

2.12.2.4 Pacoima Formation

The Pacoima Formation is middle to early Pleistocene alluvial fanglomerate. It is composed of a coarse grained reddish brown breccia containing pebble to boulder sized clasts in a sandy mudstone matrix. It rests unconformably on the Saugus

Formation. No fossil resources have been recorded from the Pacoima Formation, probably because the coarse grained nature of this formation is not conductive to the preservation of fossils.

2.12.2.5 Quaternary Alluvial Deposits

Deposits of Quaternary alluvium dating from 1.8 mya to present that have not been given formal formation names are also found within the project area. Alluvium consists of unconsolidated mixtures of conglomerate, gravel, sand, silt, and clay and can include alluvial fan deposits, floodplains, and stream bed deposits. Older alluvial deposits (1.8 mya to 10,000 ybp) commonly contain the remains of extinct Pleistocene fauna, including mammoths, horses, camels, and bison, among others. Younger alluvium (<10,000 ybp) rarely contains fossil remains as not enough time has passed for fossilization to occur. Also, any remains contained in these recent deposits are contemporaneous with modern species.

2.12.2.6 Fossil Localities

Generally, scientifically significant paleontological resources are identified localities or geological deposits containing individual fossils or assemblages of fossils that are unique or unusual, are stratigraphically important, and add to the existing body of knowledge in specific areas stratigraphically, taxonomically, or regionally. Those fossils found undisturbed and not subjected to disturbance after their initial burial and fossilization are particularly important, as they provide information and interpretation of tectonic events, past climates; the relationship between aquatic and terrestrial species; and evolution in general. Table 2.12.A identifies the fossil localities recorded within, or very close to the study area.

2.12.2.7 Paleontological Sensitivity

A formation or rock unit has paleontological sensitivity if it previously has produced, or has characteristics conducive to the presentation of, vertebrate fossils and associated or regionally uncommon invertebrate and plant fossils. All sedimentary rocks and certain volcanic and mildly metamorphosed rocks are considered to have sensitivity for paleontological resources.

Table 2.12.A Fossil Localities within the Project Study Area by Formation

LACM Locality Number	Formation	Specimen	Location
LACM 7421	Towsley	Fossil baleen whale, *Mysticeti*	Southernmost part of the study area, in roadcut on the east side of I-5, south of the intersection of State Route 14 (SR-14)
LACM 6365	Towsley	Sea lion, *Otariidae*	West of the study area, in Pico Canyon
LACM 6145–6146	Pico or Saugus	Marine sharks and fishes, including eagle ray, *Myliobatis*; guitar fish, *Carcharhinus*; basking shark, *Cetorhinus*; and sheepshead, *Semicossyphus*.	Northern part of the study area, west of I-5, north of Towsley Canyon
LACM 5456	Pico	Bonito shark, *Isurus planus*	Southwest of southern part of the study area, in Browns Canyon
LACM 1931	Pico	Fossil right whale, *Balaenidae*	North of Santa Susanna and west-southwest of study area
LACM 6062–6063	Saugus	Lizard, *Gerrhonotus*; pocket gopher, *Thomomys*; horse, *Equus*	North of State Route 126 (SR-126), west of I-5, south of Hasley Canyon
LACM 6871	Saugus	Horse, *Equus*; and dog, *Canidae*	East of I-5, west of Wayside Honor Rancho, between Castaic Creek and San Francisquito Canyon
LACM 6803–6804	Saugus	Fossil camel, *Camelidae;* horse, *Equus*	South of Santa Clara River
LACM 5745	Quaternary deposits	Mastodon, *Mammut*; horse, *Equus*	Just southeast of the study area, between Interstate 210 (I-210) and San Fernando Road, in fill dirt
LACM 3397	Quaternary deposits	Fossil bison, *Bison*	South-southeast of the study area, at or near the Van Norman Reservoir, 75' depth
LACM 7152	Quaternary deposits	Mammoth, *Mammuthus*; Bison, *Bison*	South-southeast of the study area, at or near the Van Norman Reservoir, terrace deposits
LACM 1733	Quaternary deposits	Horse, *Equus*	South-southeast of the study area, at or near the Van Norman Reservoir, unknown depth

Source: *Paleontological Resources Identification and Evaluation Report with Impact Mitigation Program for I-5 HOV/ Truck Lanes—SR-14 to Parker Road* (LSA Associates, Inc. April 2008).

As discussed above, formations and units that contain paleontological resources are located within the study area. The sensitivity of a formation or unit can be designated in one of the following ways based on guidelines developed by the Society of Vertebrate Paleontology (SVP)[1]:

Low Potential. Following a literature search, records check, and field survey, areas may be determined by a qualified vertebrate paleontologist as having low potential for containing significant paleontological resources subject to adverse impacts. This usually includes rock units that are either igneous, or are too young in age.

High Potential. Sedimentary rock units with high potential for containing significant nonrenewable paleontological resources are rock units within which vertebrate or significant invertebrate fossils have been determined to be present or likely to be present. These units include but are not limited to sedimentary formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. High sensitivity ratings include not only the potential for yielding abundant vertebrate fossils but also for production of a few significant fossils that may provide new and significant data (taxonomic, phylogenetic, ecologic, and/or stratigraphic data):

- **High Sensitivity (High A).** Is based on geologic formations or mappable rock units that are known to contain fossilized body elements and trace fossils such as tracks, nests, and eggs.
- **High Sensitivity (High B).** Is a sensitivity equivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface that may be affected during excavation by construction activities. A standard condition is attached to the environmental planning document for the project, specifying that during grading stage review a Paleontological Resource Impact Mitigation Program (PRIMP) is a condition for any excavation that reaches or exceeds a specified depth.

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1 Society of Vertebrate Paleontology (SVP), 1995, *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines*. Society of Vertebrate Paleontology News Bulletin, No. 163, January 1995:22–27

Undetermined Potential. Areas underlain by sedimentary rocks for which literature and unpublished studies are not available have an undetermined potential for containing significant paleontological resources. These areas must be inspected during a field survey conducted by a qualified vertebrate paleontologist. A specific determination of high or low potential for containing significant nonrenewable paleontological resources can then be made.

The majority of sediments within the project area have the potential to contain important paleontological remains. With the exception of areas covered with younger quaternary alluvium, especially in the area of Pico Canyon, the Santa Clara River valley, and Castaic Creek valley, the study area has a High A sensitivity rating. High-sensitivity (High A) geologic formations or mappable rock units are known to contain fossilized body elements and trace fossils such as tracks or burrows.

Excavation for the remainder of the project segment has a sensitivity rating of Low Potential from the surface to a depth of 5 ft in areas mapped as recent Quaternary Alluvium. However, for all excavations that extend deeper than 5 ft below the current ground surface in areas mapped as recent Quaternary Alluvium in the Pico Canyon, Santa Clara River valley, and Castaic Creek valley areas, the sensitivity rating increases to High B. High sensitivity (High B) is a sensitivity equivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface that may be encountered during excavation by construction activities.

2.12.3 Environmental Consequences

2.12.3.1 Temporary Impacts

No Build Alternative

Under the No Build Alternatives, temporary impacts discussed above for the Build Alternatives would not occur for the project.

Build Alternatives

Impacts to paleontological resources would result from construction of either of the two Build Alternatives, not from operation of the facility itself. Impacts to paleontological resources are considered permanent, not temporary, as discussed below.

Early Implementation Project (EIP)

The EIP impacts to paleontological resources would result from construction of the median retaining walls. Impacts to paleontological resources are considered permanent, not temporary, as discussed below.

2.12.3.2 Permanent Impacts

No Build Alternative

The No Build Alternative would not include any excavation in the project area. Therefore, the No Build Alternative would result in no adverse impacts related to paleontological resources.

Build Alternatives

The majority of geologic formations within the project area have a high potential for yielding important fossils; therefore, potential direct adverse impacts to paleontological resources could result from ground-disturbing activities associated with the clearing of vegetation and soil, excavation, and construction of the proposed improvement. Although construction would be a short-term activity, the loss of some fossil remains and the fossil-bearing rocks would be a permanent adverse impact of the project based on the scientific significance of formations in the project area.

The PIR/PER prepared for the project (LSA Associates, Inc., April, 2008) determined that there was a potential to encounter sediments that can contain significant paleontological resources during ground disturbing activities The significance of these resources is summarized above. As these sensitive sediments have the potential to be encountered during excavations, which would occur during the construction of this project, there is no way to avoid encountering them.

With implementation of the mitigation measure described below, potential permanent paleontological impacts would not be adverse.

Early Implementation Project (EIP)

Potential EIP direct impacts to paleontological resources could result from ground-disturbing activities associated with the clearing of vegetation and soil, excavation, and construction of the median retaining walls. Although construction would be a short-term activity, the loss of some fossil remains and the fossil-bearing rocks would be a permanent adverse impact of the project based on the scientific significance of formations in the project area.

With implementation of the avoidance/minimization measure described below, potential permanent paleontological impacts would not be adverse.

2.12.4 Avoidance, Minimization, and/or Mitigation Measure

The PIR/PER prepared for the project did not anticipate special paleontological situations that would require project redesign to avoid critical localities or strata. The presence of sediments that are suitable for containing significant nonrenewable vertebrate fossils resources is indicated by the positive results of the literature review and reinforces the high potential for encountering them during construction of the I-5 HOV/Truck Lanes project.

Therefore, a PMP is recommended to address areas within the maximum footprint of project disturbance that contain native sediments that will be contacted by excavation. This PMP should be synthesized from outlines and guidelines provided by the California Department of Transportation (Department), and the Society of Vertebrate Paleontology (SVP), and should be specifically tailored to the formations and geologic units within the I-5 HOV/Truck Lanes maximum footprint of project disturbance. It is recommended that the PMP be written after selection of a final engineering design and in the early planning stages of reports documenting and describing impact mitigation programs that must accompany final project design and development.

Since the geology of California is diverse and the nature of the fossils that it contains varies from one outcrop to the next, the Department does not provide a generic paleontological resource impact mitigation, but instead presents a format for the PMP that can be utilized by the professional project paleontologist who has been retained to manage paleontological resources during project development.

PAL-1 Prior to the completion of the Plans, Specifications, and Estimates (PS&E), in accordance with the guidelines on the Department's Standard Environmental Reference (SER), Volume I, Chapter 8[1], a Paleontological Mitigation Plan (PMP) will be prepared by a qualified paleontologist for inclusion in the PS&E and implemented during the excavation phase of the project. The PMP should generally discuss the level of sensitivity of formations encountered along the project

[1] http://www.dot.ca.gov/ser/vol1/sec3/physical/Ch08Paleo/chap08paleo.htm

alignment; monitoring methods for areas identified as likely to contain paleontological resources (High A- and High B-rated sediments); salvage methods and procedures; resource collection, processing, identification, documentation, and curation activities and procedures; and make a recommendation for the preparation of a Paleontological Mitigation Report (PMR), at the conclusion of the project, that follows the Department SER Volume I, Chapter 8 guidelines. The PMP will include, but not be limited to, the following steps:

- A qualified paleontological monitor, working under the direction of a qualified professional paleontologist, will be present at pre-grade meeting to explain mitigation methods and procedures to the grading crew.
- The paleontological monitor shall also be present on site on a full-time basis during ground-disturbing/excavation activities in sediments with a high potential for containing paleontological resources. The monitor will inspect cuts for fossils at all times, and will be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be equipped to rapidly remove any fossil specimens encountered during excavation. During monitoring, samples will be collected and processed to recover microvertebrate fossils. Processing will include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains.
- On encountering a large deposit of bone, the monitor will salvage all bone in the area using additional field staff, if necessary, and in accordance with modern paleontological techniques.
- All fossils collected will be prepared to a reasonable point of identification. Excess sediment or matrix will be removed from the specimens to reduce the bulk of the material and the storage cost. Itemized catalogs of all material collected and identified will be provided to a museum repository along with the specimens.
- Recommend that a Paleontological Mitigation Report (PMR) signifying completion of the PMP be prepared and submitted to the Lead Agencies and the institutional repository. The PMR will discuss monitoring methods, the results of the monitoring effort,

the significance of any recovered resources and include the fossil catalog.

- Recommend that all fossils collected during this work, along with the itemized inventory of these specimens and the PMR, be deposited in an established institutional repository, such as a museum, for permanent curation and storage.

2.13 Hazardous Waste/Materials

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to hazardous waste is based on an *Initial Site Assessment - Interstate SR-5 From SR-14 to SR-126 North County Combined Highway Corridor Study, Los Angeles County, California* (Diaz, Yourman & Associate, March 5, 2003), an approved *Project Study Report/Project Development Support* (PSR/PDS) (California Department of Transportation [Caltrans], March 2003), a *Supplemental Initial Site Assessment Report* (S-ISA) (Caltrans, July 2007) , and *Addendum for the Supplemental Initial Site Assessment Report* (Caltrans memorandum, January 15, 2008).

2.13.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

2.13.2 Affected Environment

Based on the review of environmental databases, site reconnaissance, and historical research, the following environmental concerns were identified:

- An underground storage tank (UST) registered to the Ashdon Development,which is currently a Shell Station(28120 The Old Road, Valencia), is located adjacent to the west side of the I-5 southbound on-ramp at The Old Road exit. The UST is approximately 98 feet (ft) from the existing Caltrans right-of-way.
- A UST registered to the Texaco Star Market (28070 The Old Road, Valencia) is located adjacent to the west side of the I-5 southbound on-ramp at The Old Road exit. The UST is approximately 66 ft from Caltrans existing right of way.
- As part of the Phase I and Phase II Environmental Site Assessment for the parcel located at the northeast corner of The Old Road and Hasley Canyon Road, investigations were conducted to ascertain the presence or absence of potential soil contamination and determine possible impacts to groundwater resulting from the former Shell gasoline station. Laboratory results indicated that gasoline hydrocarbons and their related aromatic components were only detected in the 15- and 20-ft samples of the fill. The concentrations found were not very high and indicated old, weathered gasoline. No contaminated soil was found above or below this layer. However, the presence of groundwater contamination and its locations with respect to the former tanks indicates that the former USTs may have contributed to the underlying groundwater contamination. The plumes do not contain high concentrations of contaminants and do not appear to be widespread. A groundwater monitoring plan was approved by the Regional Water Quality Control Board (RWQCB). The Groundwater Monitoring Report dated April 16, 2007, indicated that no gasoline-related hydrocarbons were found in these wells over one year. Furthermore, no diesel-range or oil-range

hydrocarbons, or any volatile priority pollutants have been detected in these wells. Accordingly, because of minimal contamination in soils and absence of any groundwater contamination, the RWQCB issued a closure letter to confirm the completion of the site investigation and remedial action for the underground storage tank(s) formarly located at the above-described location.

- Twelve hazardous materials or petroleum substances spills were listed in the Emergency Response Notification System (ERNS) and State Spills 90 (SPILLS) that may involve the I-5 were listed within the unmappable section of the environmental database report. No additional information was available from the database report.
- Two operational oil pumps located on the southbound side of I-5, approximately 0.1 to 0.3 miles west of I-5 and 3,280 ft north of Hasley Canyon Road were observed. In addition, there are several oil wells that had been plugged and abandoned located adjacent to the project study area.
- Several pole-mounted transformers (polychlorinated biphenyls [PCBs] containing equipment) were observed adjacent to the Caltrans right of way.
- Asbestos-containing materials (ACMs) within joint compound in bridge structures and utility corridors, aerially deposited lead (ADL) from vehicle exhaust, lead-based paint (LBP) within paint onold buildings, and heavy metals (such as lead and chromium) within yellow traffic stripes (YTS) were also indicated in the previous reports as potential hazardous wastes concerns.

2.13.3 Environmental Consequences

2.13.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in temporary impacts related to hazardous wastes.

Alternative 2: Reduced Median Alternative

Petroleum Hydrocarbons

A portion of the parcels containing the Texaco Star Mart (28070 The Old Road; APN 282-6121-001 and 282-6121-002) would be used as temporary construction easements (TCEs). According to the database search, a UST is located at this location that has the potential for petroleum hydrocarbon contamination. However, because the parcels would not be acquired and would only be used for TCEs, these parcels do not pose a hazardous waste concern under Alternative 2.

The parcel at the northeast corner of The Old Road and Hasley Canyon Road is a concern only if any subsurface disturbance or groundwater is encountered near this parcel, which is not planned as part of the construction of Alternative 2.

Because the exact locations of the 12 hazardous chemicals and petroleum substances spill incident sites listed on the ERNS and SPILLS are unknown and no further information is available, these sites may pose hazardous waste concerns during construction activities. With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to petroleum hydrocarbons would not be adverse.

Naturally Occurring Oil Seepage and Petroleum/Natural Gas

Given the proximity of the two operational crude oil pumps, as well as the abandoned oil pumps, there is a potential that naturally occurring oil seepage and petroleum gas (or natural gas) may be encountered during soil excavation. Excavated soil, if it contains naturally occurring oil, shall be adequately handled and disposed of off site or reused on site with approval from the RWQCB. Hydrogen sulfide gas is a toxic and flammable gas that is a component of the petroleum gas or natural gas. If present, petroleum gas or natural gas would pose a potential health concern and safety issue during construction activities. With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to naturally occurring oil seepage and petroleum and natural gas would not be adverse.

ACM

ACMs may be present within the joint compound in bridge structures, underground transited utility pipe, or any structures constructed before 1980. As there are no structures being acquired for Alternative 2, there is no potential to encounter ACM from buildings within the proposed right of way. With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to ACM would not be adverse.

ADL

ADL from the past use of leaded gasoline may be present in hazardous concentrations in unpaved areas adjacent to the roadway. With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to ADL would not be adverse.

Lead and Chromium

Lead and chromium may be present within yellow thermoplastic and paint traffic stripes and pavement markings in concentrations that exceed threshold values established by the California Health and Safety Code and Title 22 of the California Code of Regulations. The yellow thermoplastic and yellow paint stripes may produce toxic fumes when heated. With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to lead and chromium would not be adverse.

LBP may be present in existing old buildings. As there are no buildings being acquired for Alternative 2, there is no potential to encounter LBP.

Transformers

Pole-mounted transformers have the potential to contain PCBs. However, these transformers would not likely pose a potential impact during construction activities. The transformers in the project area are owned and maintained by Southern California Edison (SCE). According to SCE, concentrations of PCBs in its transformers are less than 100 parts per million (ppm), which is well below the Environmental Protection Agency (EPA) designation of 500 ppm as containing PCBs. In addition, utilities companies have replaced most PCB-containing transformers over the past 20 years. Therefore, transformers are not considered a potential environmental concern unless they are leaking. With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to leaking transformers would not be adverse.

Alternative 3: Full Median Alternative

Petroleum Hydrocarbons

A portion of the parcels containing the Texaco Star Mart (28070 The Old Road; APN 282-6121-001 and 282-6121-002) and the Shell Station (28070 The Old Road; APN 282-6121-003) would be used as TCEs. According to the database search, these parcels are listed as containing USTs, which have the potential for petroleum hydrocarbon contamination. However, because the parcels would not be acquired, and would only be used for TCEs, these parcels do not pose a termporary hazardous waste concern under Alternative 3.

The parcel at the northeast corner of The Old Road and Hasley Canyon Road is a concern only if any subsurface disturbance or groundwater is encountered near this parcel, which is not planned as part of the construction of Alternative 3.

Hazardous waste impacts related to past spills, petroleum gas, natural gas, ACMs, ADL, lead, chromium, and PCBs are the same as those discussed under Alternative 2 above.

With implementation of the measures discussed below in Section 2.13.4, potential temporary impacts related to past spills, petroleum gas, natural gas, ACMs, ADL, lead, chromium, and PCBs would not be adverse.

Early Implementation Project (EIP)

There are no known hazardous materials or hazardous waste sites within the EIP construction area. There may be the potential to encounter unknown wastes or contaminated soil during construction of the EIP improvements.

Similar to the Build Alternatives, ADL from vehicle exhaust may be encountered during soil disturbance activities conducted for the EIP improvements.

The Gavin Canyon undercrossings are to be widened as part of EIP improvements. There may be the potential of asbestos-containing materials, LBP, and lead and chromium (within yellow thermoplastic traffic stripes and pavement markings) associated with these structures. The potential hazardous materials within these structures would need to be tested, properly removed, and disposed of appropriately.

Pole-mounted transformers were identified within the project right of way. All pole-mounted transformers within the project area, including the construction area for the EIP, would be inspected for leaks. Leaking transformers will be considered a PCB hazard unless tested and will be handled appropriately.

With implementation of the measures identified in Section 2.13.4, potential temporary impacts to hazardous waste/materials would not be adverse.

2.13.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in permanent impacts related to hazardous wastes.

Alternative 2: Reduced Median Alternative

Permanent impacts (direct or indirect) related to hazardous materials are not anticipated as a result of implementation of Alternative 2 since the operation of the project would not generate any hazardous waste.

Alternative 3: Full Median Alternative

Permanent impacts (direct or indirect) related to hazardous materials are not anticipated as a result of implementation of Alternative 3 since the operation of the project would not generate any hazardous waste.

Early Implementation Project (EIP)

Similar to the Build Alternatives, the EIP would not generate hazardous waste and is not expected to result in permanent hazardous waste impacts.

2.13.4 Avoidance, Minimization and/or Mitigation Measures

The following measures would avoid or minimize impacts related to hazardous materials and hazardous wastes during construction of Alternative 2, 3, or the EIP.

HW-1 If recognized environmental concerns such as odor and discoloration of soil are encountered during construction, a Phase II Hazardous Waste Site Investigation shall be performed. This requirement shall be included in the Plans, Specifications and Estimates (PS&E).

HW-2 During soil excavation deeper than 10 feet (ft), on-site soil gas monitoring will be conducted with photoionization detectors (PID) or flame ionization detectors (FID). This requirement shall be included in the Plans, Specifications and Estimates (PS&E).

HW-3 Asbestos-containing material (ACM) and lead-based paint (LBP) surveys shall be conducted during construction for any buildings or structures with the potential of ACMs and/or LBP concerns that would be demolished. If ACMs and/or LBP are detected, the PS&E will require a licensed contractor to remove the ACMs and/or LBP materials prior to demolition.

HW-4 During preparation of the Plans, Specifications and Estimates (PS&E), Caltrans will inspect utility pole-mounted transformers within the project area for leaks. Leaking transformers will be considered a

polychlorinated biphenyl (PCB) hazard unless tested and will be handled accordingly.

HW-5 During construction, yellow traffic stripes and pavement marking material shall be removed, collected, and tested in accordance with Standard Special Provision (SSP) XE 14-001, "Remove Yellow Traffic Stripe and Pavement Marking (Hazardous Waste)."

HW-6 During preparation of the Plans, Specifications and Estimates (PS&E), soil sampling and testing for aerially deposited lead (ADL) will be conducted in unpaved locations adjacent to Interstate 5 (I-5) within the project limits. The analytical results of the soil sampling will determine the appropriate handling of the soil and disposal of surplus materials. Excavated hazardous soils will require off-site disposal as hazardous waste at a permitted facility. Refer to Standard Special Provision (SSP) XE S5-740 and XE 19-900 for additional information on the disposal of soils affected with ADL.

HW-7 If suspect hazardous waste or underground tanks are encountered during construction, the contractor will stop work and follow the procedures outlined in Appendix E, the California Department of Transportation (Caltrans) Unknown Hazards Procedures for Construction.

HW-8 If property is acquired from 28070 The Old Road and/or 28120 The Old Road, Valencia, a detailed hazard waste site investigation for soil and groundwater shall be conducted during Plans, Specifications and Estimates (PS&E).

2.14 Air Quality

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to air quality is based on the *Air Quality Analysis* (LSA Associates, Inc., September 2008).

2.14.1 Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO_2, O_3, and PM. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Southern California Association of Governments (SCAG) for Southern California (Los Angeles, Orange, and portions of San Bernardino County and Western Riverside Counties) and the appropriate federal agencies, such as the Federal Highway Administration (FHWA), make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP

must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is "nonattainment" or "maintenance" for CO and/or PM. A region is a "nonattainment" area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or PM analysis performed for the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in "nonattainment" areas the project must not cause any increase in the number and severity of violations. If a known CO or PM violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

2.14.2 Affected Environment

2.14.2.1 Climatic Conditions

The project area is located in the Santa Clarita region of Los Angeles County, an area within the South Coast Air Basin (Basin) that includes Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the Basin is administered by the SCAQMD, a regional agency created for the Basin.

The Basin climate is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern boundary, and high mountains surround the rest of the Basin. The region lies in the semipermanent high-pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, and Santa Ana wind conditions do occur.

The annual average temperature, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F), varies little throughout the Basin. With a more pronounced

oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site that monitors temperature is the San Fernando Station.[1] The annual average maximum temperature recorded at this station is 78.2°F, and the annual average minimum is 49.3°F. January is typically the coldest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin along the coastal side of the mountains. The climatological station closest to the site that monitors precipitation is the San Fernando Station. Average rainfall measured at this station varied from 3.53 inches in January to 0.41 inches or less between May and October, with an average annual total of 16.16 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific High. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed from midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the vicinity of the project area blow predominantly from the east southeast, with relatively low velocities. Wind speeds in the project area average about 4 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, northerly or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

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[1] Western Regional Climatic Center. 2007. http://www.wrcc.dri.edu (accessed December 3, 2007).

Inversion layers are important in determining O_3 formation. O_3 and its precursors will mix and react to produce higher concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as CO. Particulate matter less than 10 microns in size (PM_{10}) is both directly emitted and created indirectly in the atmosphere as a result of chemical reactions. Concentration levels are directly related to inversion layers due to the limitation of mixing space.

Surface or radiation inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, when heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air; this heating stimulates the ground level air to float up through the inversion layer.

The combination of stagnant wind conditions and low inversions produces the greatest concentration of pollutants. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and oxides of nitrogen because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

2.14.2.2 Criteria Pollutants

Pursuant to the Clean Air Act (CAA) of 1970, the EPA established the NAAQS. The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health. The NAAQS are two-tiered: primary, to protect public health, and secondary, to prevent degradation to the environment (e.g., impairment of visibility, damage to vegetation and property). Likewise, in California, the State has implemented air quality standards or criteria for the six pollutants known as the California Ambient Air Quality Standards (CAAQS). Table 2.14.A delineates the NAAQS and CAAQS for the criteria pollutants.

Table 2.14.A Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[2,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	No federal standard	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Nondispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Nondispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (56 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 µg/m^3)		–		
Lead[8]	30-day average	1.5 µg/m^3	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3	Same as Primary Standard	
	Rolling 3-Month Average[9]	–		0.15 µg/m^3		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Ultraviolet Fluorescence	0.030 ppm (80 µg/m^3)	–	Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	–	
	3-Hour	–		–	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		–	–	
Visibility-Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[8]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008); California Air Resources Board (November 17, 2008).

See footnotes on next page.

Footnotes:

[1] California standards for O_3; CO (except Lake Tahoe); sulfur dioxide (1- and 24-hour); NO_2; suspended PM, PM_{10}; and visibility-reducing particles are values not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than O_3, PM, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 mg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the EPA for further clarification and current federal policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent procedure that can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[9] National lead standard, rolling 3-month average: final rule signed October 15, 2008.

In addition to the standards listed in Table 2.14.A, the EPA is proposing to implement a one-hour federal standard for NO_2. The EPA proposes to set the level for this new standard between 80 and 100 parts per billion. If implemented, the State will be required to submit updated State Implementation Plans (SIPs) that provide for the attainment and maintenance of the proposed standard.

2.14.3 Environmental Consequences

Caltrans has developed Protocols for assessing air pollutant emissions for transportation projects and the conformity requirements that apply to the proposed project within a basin that has a "nonattainment" or an "attainment/maintenance" status. These procedures and guidelines comply with the 1990 CAA Amendments, federal conformity rules, state and local adoptions of federal conformity rules, and NEPA and CEQA requirements.

Conformity with the Clean Air Act takes place on two levels: first, at the regional level and second, at the project level. The proposed project must conform at both levels to satisfy the conformity requirements.

2.14.3.1 Regional Air Quality Conformity

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO_2, O_3, and PM. California is in attainment for the other criteria pollutants. At the regional level, RTP are developed that include all of the transportation projects planned for a region over a period of years, usually at least 25 years. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the metropolitan planning organizations (such as SCAG for the Southern California region, which includes Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties, and the appropriate federal agencies, such as the FHWA and the Federal Transit Administration [FTA]) make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for the purposes of project-level analysis.

The proposed project is fully funded and is in the 2008 RTP, which was found to conform by SCAG on May 8, 2008, and the FHWA/FTA adopted the air quality conformity finding on June 5, 2008. The project is also included in 2008 Regional Transportation Improvement Program (RTIP) (RTIP Project ID: LAE0465, In L.A./ Santa Clarita on Route 5 from State Route 14 to Parker Road, HOV, Truck and Auxiliary Lane Improvements, page 4). The 2008 RTIP was found to conform by FHWA/FTA on November 17, 2008. The design concept and scope of the proposed project is consistent with the project description in the 2008 RTP, the 2008 RTIP, and the assumptions in the SCAG regional emissions analysis.

2.14.3.2 Project-Level Air Quality Conformity

Air quality monitoring stations are located and maintained by the local air districts and State air quality regulating agencies. Data collected at permanent monitoring stations are used by the EPA to identify regions as “attainment” or “nonattainment,” depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of attainment, such as marginal, moderate, serious, severe, and extreme, are used to classify each air basin in the state

on a pollutant-by-pollutant basis. The classifications are used as a foundation to create air quality management strategies to improve air quality and comply with the NAAQS.

The proposed project qualifies under the Section 6005 Pilot Program of the Safe, Accountable, Flexible, Efficient Transportation Equity Act-A Legacy for Users (SAFETEA-LU). The FHWA has not delegated the responsibilities for conformity determination for Section 6005 projects. An Air Quality Conformity Analysis was prepared and submitted to the FHWA on June 23, 2009, requesting a Project-Level Conformity Determination after the selection of Alternative 2 as the Preferred Alternative. In a letter dated July 13, 2009, the FHWA found that the Conformity Determination for the proposed project conformed to the SIP, in accordance with 40 Code of Federal Regulations (CFR) Part 93. This letter and Conformity Determination can be referenced in Appendix L of this environmental document.

2.14.3.3 Monitored Air Quality

The site is located within SCAQMD jurisdiction. The SCAQMD maintains ambient air quality monitoring stations throughout the Basin. Figure 2.14.1 shows the locations of the air quality monitoring stations in the Basin. The Santa Clarita Air Quality Monitoring Station monitors four of the five criteria pollutants: O_3, NO_2, PM_{10}, and CO (see Table 2.14.B). The next closest monitoring station that monitors particulate matter less than 2.5 microns in size ($PM_{2.5}$) is the Burbank station. Air quality trends identified from data collected at both air quality monitoring stations between 2003 and 2007 are listed in Table 2.14.B and are discussed below.

From the ambient air quality data listed, it can be seen that CO levels are below the relevant State and federal standards. One-hour O_3 levels exceeded the State standard in each of the past five years. O_3 exceeded the State one-hour standard 31 to 89 times per year during the last five years. Eight-hour O_3 levels exceeded the federal standard in each of the past five years. O_3 exceeded the federal eight-hour standard from 17 to 69 times per year during the last five years. The PM_{10} level in the proposed project area exceeded the State standard from one to eight days in the past five years and exceeded the federal PM_{10} standard once in 2007. The $PM_{2.5}$ levels exceeded the federal standard once in 2003. The NO_2 level in the project did not exceed the State or federal standards in the past five years.

Table 2.14.B Ambient Air Quality Measurements at the Santa Clarita and Burbank Air Monitoring Stations

Pollutant	Standard	2007	2006	2005	2004	2003
Carbon Monoxide (CO)						
Max 1-hr concentration (ppm)		1.9	2.0	2.2	5.2	3.3
No. days exceeded: State	> 20 ppm/1-hr	0	0	0	0	0
Federal	> 35 ppm/1-hr	0	0	0	0	0
Max 8-hr concentration (ppm)		1.2	1.3	1.3	3.7	1.7
No. days exceeded: State	$\geq$ 9.1 ppm/8-hr	0	0	0	0	0
Federal	$\geq$ 9.5 ppm/8-hr	0	0	0	0	0
Ozone (O_3)						
Max 1-hr concentration (ppm)		0.135	0.156	0.173	0.158	0.194
No. days exceeded: State	> 0.09 ppm/1-hr	31	62	65	69	89
Ozone (O_3)						
Max 8-hr concentration (ppm)		0.110	0.120	0,141	0.133	0.152
No. days exceeded: Federal	> 0.08 ppm/8-hr	17	40	47	52	69
Particulates (PM_{10})						
Max 24-hr concentration (ppm)		167	53	55	54	72
No. days exceeded: State	> 50 $\mu g/m^3$	3	1	1	1	8
Federal	> 150 $\mu g/m^3$	1	0	0	0	0
Particulates ($PM_{2.5}$) [1,2]						
Max 24-hr concentration (ppm)		56.5	50.7	63.1	60.1	120.6
No. days exceeded: Federal	> 35 $\mu g/m^3$	0	0	0	0	1
Nitrogen Dioxide (NO_2)						
Max 1-hr concentration (ppm): State	> 0.18 ppm/1-hr	0.084	0.080	0.087	0.090	0.120
No. days exceeded		0	0	0	0	0
Annual avg. concentration: Federal	0.053 ppm annual avg.	0.020	0.018	0.019	0.020	0.021
No. days exceeded		0	0	0	0	0

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008).

[1] Data is from the Burbank station.

[2] The exceedances of the federal 24-hour $PM_{2.5}$ standard are based on the old 65 $\mu g/m^3$ standard.

ppm = parts per million

$\mu g/m^3$ = micrograms per cubic meter

Historical ambient air quality data are used to classify the attainment status for the Basin. As a result of the nonattainment status, the region is required to prepare an Air Quality Management Plan (AQMP) for O_3, which consists of emission reduction strategies and implementation of these strategies. The implementation of the AQMP for the region is the responsibility of many agencies, including all of the local air districts, SCAG, and the California Air Resources Board (ARB). The South Coast Air Basin attainment status for each of the criteria pollutants is listed in Table 2.14.C.

Table 2.14.C Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment	Standard Revoked June 2005
O_3 8-hour	Not Established	Severe 17 Nonattainment[1]
PM_{10}	Nonattainment	Serious Nonattainment[2]
$PM_{2.5}$	Nonattainment	Nonattainment[3]
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
All others	Attainment/Unclassified	Attainment/Unclassified

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008).

[1] SCAQMD has requested that the federal 8-hour O_3 attainment status be changed to extreme, with an attainment date of 2023.

[2] In October 2006, the EPA, in its final rule revision, eliminated the annual PM_{10} standard.

[3] The $PM_{2.5}$ nonattainment designation is based on the 1997 standard. In 2006, the EPA revised the 24-hour standard. The 2006 $PM_{2.5}$ new standard of 35 $\mu g/m^3$ applies to conformity and project level hot-spot analysis 1 year after the effective date of the new designation (April 2010).

Because the South Coast Air Basin, with the inclusion of the proposed project, is in nonattainment and/or attainment/maintenance for PM_{10}, $PM_{2.5}$, and CO the following analyses were conducted for the proposed project:

- CO Hot Spot analysis
- Particulate Matter (PM_{10} and $PM_{2.5}$) Hot Spot analysis

2.14.3.4 Temporary Impacts

The following discussion is of the temporary impacts that have the potential to affect air quality from the proposed project alternatives.

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in temporary impacts to air quality.

Alternative 2: Reduced Median Alternative

Short-term air pollutant emissions associated with the project would occur as a result of construction activities and would include fugitive dust from grading/site preparation and equipment exhaust. Construction of the project would not require more than five years to complete. Therefore, a detailed construction air quality analysis is not required for conformity purposes.

Exhaust Emissions

Construction activities produce combustion emissions from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Exhaust emissions during the construction envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. With the measures outlined below in Section 2.14.4, potential temporary air quality impacts related to exhaust emissions for Alternative 2 would not be adverse.

Fugitive Dust

Construction activities produce fugitive dust from various sources such as site grading/site preparation, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Fugitive dust emissions during the construction envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized fugitive dust emissions. With the measures outlined below in Section 2.14.4, potential temporary air quality impacts related to fugitive dust for Alternative 2 would not be adverse.

Naturally Occurring Asbestos

The project is located in Los Angeles County, which is among the counties listed as containing serpentine and ultramafic rock, which may contain asbestos. However, only Catalina Island has been found to contain deposits of these types of rocks. Hence, they are not found in the project area. Therefore, there would be no impact from naturally occurring asbestos during project construction.

Alternative 3: Full Median Alternative

Temporary air quality impacts resulting from construction of Alternative 3 would be similar to those discussed above for Alternative 2. However, Alternative 3 may result in more construction emissions due to more grading and structural work compared to Alternative 2. However, with the measures outlined below in Section 2.14.4, potential temporary air quality impacts related to exhaust emissions and fugitive dust for Alternative 3 would not be adverse.

Early Implementation Project (EIP)

Similar to the Build Alternatives, there would be short-term air pollutant emissions associated with construction activities. The use of construction equipment would

result in localized exhaust, and fugitive dust emissions from grading and/or site preparation. With the measures outlined below in Section 2.14.4, potential temporary air quality impacts related to exhaust emissions and fugitive dust for the EIP would not be adverse.

2.14.3.5 Permanent Impacts

The following discussion is of the permanent impacts that have the potential to affect air quality from the proposed project alternatives.

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in permanent impacts to air quality.

Alternative 2: Reduced Median Alternative

Carbon Monoxide

CO is used as an indicator of a project's direct and indirect impact on local air quality because CO does not readily disperse in the local environment in cool weather when the wind is fairly still. The Caltrans *Transportation Project-Level Carbon Monoxide Protocol* (December 1997) was used to assess the project's impact on the local CO concentrations. Based on this protocol, a screening analysis was conducted to determine whether the project would result in any CO hot spots. A detailed CO hot-spot analysis was not required. Based on the screening analysis conducted for the *Air Quality Analysis*, localized emissions of CO may increase with implementation of the proposed project. The project is not expected to result in worsening of air quality or create new violations of the CO standard; therefore, impacts related to CO would not be adverse.

Particulate Matter (PM_{10} and $PM_{2.5}$)

The project is within a federal nonattainment area for $PM_{2.5}$ and PM_{10}; therefore, a hot-spot analysis is required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in section 93.123(b)(1) as an air quality concern. As the project would widen an existing highway with a high percentage of truck traffic, it is potentially a Project of Air Quality Concern (POAQC).

A PM hot-spot analysis was conducted based on the *Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and*

Maintenance Areas developed by the EPA, the FHWA, and utilizing the EMFAC 2007 emissions factors. The $PM_{2.5}$ and PM_{10} hot-spot analysis (LSA, August 2008) was submitted at the Transportation Conformity Working Group (TCWG) on June 24, 2008. It was determined by the EPA, FHWA, and Caltrans that the hot-spot analysis was acceptable for NEPA circulation on August 26, 2008 (Appendix L).

Based on the results of the $PM_{2.5}$ and PM_{10} Analyses, implementation of the proposed project would reduce the total $PM_{2.5}$ and PM_{10} emissions generated along the proposed project's segment of I-5 (Tables 2.14.D and 2.14.E). The reduction in emissions is due to the increase in average vehicle speeds and the corresponding reduction in exhaust emission rates. The tire wear, brake wear, and road dust emissions are vehicle miles traveled (VMT) dependent and not affected by vehicle speeds. Therefore, the proposed project would not reduce the tire wear, break wear, and road dust related emissions.

Table 2.14.D Daily $PM_{2.5}$ Emissions (pounds per day)

Traffic Condition	Exhaust Emissions	Tire Wear	Brake Wear	Road Dust	Total	Change from No Build
Existing	164.5	13.1	23.6	1,417.9	1,619.1	-
2015 No Build	157.1	16.9	31.0	1,710.8	1,915.8	-
2015 Build	133.8	16.9	31.0	1,710.8	1,892.5	-23.3
2030 No Build	207.7	22.2	40.9	2,192.1	2,462.9	-
2030 Build	136.3	22.2	40.9	2,192.1	2,391.6	-71.3

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008).

Table 2.14.E Daily PM_{10} Emissions (pounds per day)

Traffic Condition	Exhaust Emissions	Tire Wear	Brake Wear	Road Dust	Total	Change from No Build
Existing	329.0	52.2	65.7	13,586.0	14,032.9	-
2015 No Build	245.6	67.3	85.5	16,826.6	17,225.0	-
2015 Build	221.9	67.3	85.5	16,826.6	17,201.3	-23.7
2030 No Build	242.2	88.9	112.8	21,783.1	22,227.0	-
2030 Build	173.8	88.9	112.8	21,783.1	22,158.6	-68.4

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008).

The PM analysis also concluded that it is not expected that changes to $PM_{2.5}$ and PM_{10} emissions levels associated with the project would result in new violations of the federal air quality standards for the following reasons:

- The project would not increase the daily traffic volumes along I-5 within the project vicinity.
- The traffic volumes within the vicinity of the Santa Clarita and Burbank air quality monitoring stations are consistent with the existing traffic volumes along I-5.
- The ambient PM_{10} concentrations have not exceeded the 24-hour or annual federal standard within the past six years.
- Based on the local monitoring data and the 2007 AQMP, the 24-hour and annual average $PM_{2.5}$ concentrations within the project area would be reduced to below the federal standard by 2015.
- By 2030 the roadway links within the proposed project area will be operating, during the p.m. peak hour, at LOS D through F without improvements. The proposed build alternatives would improve the LOS to C through F.
- The proposed project would reduce the total $PM_{2.5}$ and PM_{10} exhaust emissions generated along the proposed project alignment when compared to the no project conditions.

For these reasons, future new or worsened $PM_{2.5}$ and PM_{10} violations of any standards are not anticipated; therefore, the project meets the conformity hot-spot requirements in 40 CFR 93-116 and 93-123 for both $PM_{2.5}$ and PM_{10} and impacts related to $PM_{2.5}$ and PM_{10} would not be adverse.

Mobile Source Air Toxics

The proposed project is required to include an analysis of MSAT as part of the NEPA process for highways. Most air toxics originate from human-made sources, including on-road mobile sources, nonroad mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

MSATs are a subset of the 188 air toxics defined by the CAA. The MSATs are compounds emitted from highway vehicles and nonroad equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead federal agency for administering the CAA and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources, 66 FR

17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the CAA. In its rule, EPA examined the effects of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low-emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy-duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent (to 65 percent), and will reduce on-highway diesel particulate emissions by 87 percent

As a result, the EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary 6 MSATs.

Information that is Unavailable or Incomplete

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and then a final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science, both of which prevent a more complete determination of the MSAT health impacts of the project, as described below:

- **Emissions.** The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 and EMFAC2007 are used to predict emissions at a regional level, they have limited applicability at the project level. MOBILE 6.2 is a trip-based model with emission factors based on a typical trip length of 7.5 miles and an average speed for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects and cannot adequately capture emissions effects of smaller projects. For PM, the model results are not sensitive to average trip speed, although the other MSAT emission

rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both PM and MSATs are based on a limited number of tests of mostly older-technology vehicles. Last, in its discussions of PM under the conformity rule, the EPA has identified problems with MOBILE 6.2 as an obstacle to quantitative analysis. Similar limitations apply to EMFAC2007.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE 6.2 is an adequate tool for projecting emissions trends and performing relative analyses between alternatives for very large projects, but it is not sufficiently sensitive to capture the effects of travel changes due to smaller projects or to predict emissions near specific roadside locations.

- **Dispersion.** The tools to predict dispersion of MSATs are also limited. The EPA's current regulatory models, CALINE4 (a Caltrans model used inside California only) and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of CO to determine compliance with the federal AAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The National Highway Cooperative Research Program (NHCRP) is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, the FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.
- **Exposure Levels and Health Effects.** Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis limit the ability to reach meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roads and to determine the part of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because insupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emission rates) over a 70-year

period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATS

Research into the health impacts of MSATs is ongoing. For different emission types, a variety of studies show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emission levels found in occupational settings) or show that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of the EPA's efforts. Most notably, the EPA conducted the National Air Toxics Assessment (NATA, 1996) to evaluate modeled estimates of human exposure applicable at the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The EPA is in the process of assessing the risks of various kinds of exposure to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment (http://www.epa.gov/iris). The following toxicity information for the six prioritized MSATs was taken from the IRIS database Weight of Evidence Characterization summaries. The following information, from the EPA's IRIS database, represents the EPA's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures:

- Benzene is characterized as a known human carcinogen.
- The potential carcinogenicity of acrolein cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.

- Formaldehyde is a probable human carcinogen, based on limited evidence in humans and sufficient evidence in animals.
- 1,3-butadiene is characterized as carcinogenic to humans by inhalation.
- Acetaldehyde is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- Diesel exhaust (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. DE is the combination of diesel PM and DE organic gases.
- DE also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures to DE may impair pulmonary function and could produce symptoms such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

Other studies have addressed MSAT health impacts in proximity to roadways. The Health Effects Institute, a nonprofit organization funded by the EPA, the FHWA, and the industry, has undertaken a major series of studies to research near-road MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roads is related to adverse health outcomes, particularly respiratory problems.[1] Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, these studies do not provide information that would be useful to alleviate the uncertainties listed above and allow for a more comprehensive evaluation of the health impacts specific to the project.

In February 2006, the FHWA issued guidance to advise FHWA Division offices on when and how to analyze MSATs in the NEPA process for highways. The guidance is described as interim because MSAT science is still evolving. As the science

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[1] South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 studies on the relationship between health and air quality); NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

progresses, FHWA will update the guidance. This analysis follows current FHWA guidance. EMFAC2007, an emission inventory model developed by the California Air Resources Board (ARB) and approved by FHWA, was used to quantitatively analyze MSAT emissions. The analysis focuses on six MSAT pollutants identified by the EPA as being the highest-priority MSATs (diesel particulate matter [DPM], acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene).

The MSAT analysis indicates that a substantial decrease in MSAT emissions can be expected for the proposed alternatives from the base year (2006) levels through future year levels. This decrease is prevalent throughout the highest-priority MSATs and the analyzed alternatives (No Build and Build), regardless of the difference in mainline configurations as depicted in the figures. This decrease is also consistent with the aforementioned EPA study that projects a significant reduction in on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde between 2000 and 2020. Based on the analysis for this project, as shown in Tables 2.14.F and 2.14.G, reductions in existing MSAT levels expected by 2030 are: 25 percent of DPM, 39 percent of benzene, 48 percent of 1,3-butadiene, 35 percent of acetaldehyde, 47 percent of acrolein, and 36 percent of formaldehyde. These projected reductions are achieved, while total VMTs for the Alternatives increase by approximately 44 to 218 percent in 2030.

Table 2.14.F 2015 Changes in Total Project MSAT Emission Rates

2015 Toxic Air Contaminant	Existing Emissions (gms/day)	2015 No Build Emissions (gms/day)	2015 Build Emissions		
			(gms/day)	Δ % from Existing	Δ % from No Build
Diesel PM	27,555	18,029	16,687	-39%	-7%
Benzene	13,471	7,408	7,467	-45%	1%
1,3-Butadiene	2,702	1,332	1,418	-48%	6%
Acetaldehyde	5,394	3,457	2,982	-45%	-14%
Acrolein	608	298	322	-47%	8%
Formaldehyde	14,937	9,053	8,276	-45%	-9%
Average Percent Change				-43%	-6%

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008).

Table 2.14.G 2030 Changes in Total Project MSAT Emission Rates

2030 Toxic Air Contaminant	Existing Emissions (gms/day)	2030 No Build Emissions (gms/day)	2030 Build Emissions (gms/day)	Δ % from Existing	Δ % from No Build
Diesel PM	27,555	29,347	20,635	-25%	-30%
Benzene	13,471	10,898	8,173	-39%	-25%
1,3-Butadiene	2,702	1,724	1,405	-48%	-19%
Acetaldehyde	5,394	6,874	3,518	-35%	-49%
Acrolein	608	377	321	-47%	-15%
Formaldehyde	14,937	16,655	9,509	-36%	-43%
			Average Percent Change	-33%	-34%

Source: *Air Quality Analysis* (LSA Associates, Inc., September 2008).

Difference of varying degrees is noted in the projected individual MSAT emissions. In 2015, implementation of the project would increase acrolein by 8 percent while reducing acetaldehyde by 14 percent. The total change in MSAT emissions in 2015 would be a reduction of 6 percent. In 2030, implementation of the project would decrease all of the MSAT emissions, from a 19 percent decrease for 1.3-butadiene to a 49 percent decrease for acetaldehyde. The total change in MSAT emissions, in 2030 would be a decrease of 34 percent. Difference in MSAT emissions among the proposed alternatives is also noted in Tables 2.14.F and 2.14.G.

As shown in Table 2.14.F, implementation of the project alternatives would result in a slight increase in some of the MSAT emissions in 2015. However, the 2015 Build and No Build Alternatives emissions would be lower than the existing (2006) emissions for all roadway segments and all MSAT pollutants. In addition, as shown in Table 2.14.G, by 2030 the project, when compared to the No Build Alternative, would reduce the total MSAT emissions within the project area when compared to the existing (2006) and 2030 No Build Alternative.

In summary, while the project alternatives would result in a small increase in localized MSAT emissions in 2015 compared to the No Build scenario, the EPA's vehicle and fuel regulations, coupled with fleet turnover, would cause substantial reductions over time that would cause regionwide MSAT levels to be substantially lower than they are today and project impacts related to MSAT would not be adverse.

Climate Change is discussed in Chapter 3, California Environmental Quality Act Evaluation later in this document.

Alternative 3: Full Median Alternative

Because Alternative 3 proposes the same lane configuration as Alternative 2, and traffic volumes would be the same under both Alternatives, permanent air quality impacts resulting from construction of Alternative 3 would be the same as those discussed above for Alternative 2 and would not be considered adverse.

Early Implementation Project (EIP)

The air quality analysis for the Build Alternatives also includes the EIP improvements, and would increase the average vehicle speeds along I-5 without increasing the daily traffic volumes. This is due to there being few alternative routes to I-5 within the project vicinity. The reduction in the traffic congestion resulting from the removal of the truck/passenger vehicle conflicts would reduce the vehicle emissions along this portion of the I-5 corridor.

Additionally, an MSAT analysis and a fugitive dust hot-spot analysis were conducted for the traffic conditions along the segment from Pico/Lyons to Calgrove Boulevard and from Calgrove Boulevard to SR-14. In 2015, the proposed project would reduce MSAT emissions by 7 to 31 percent, fine particulate matter ($PM_{2.5}$) emissions by 24 percent, and coarse particulate matter (PM_{10}) emissions by 1 percent over the 2015 No Build Alternative. The analysis for the EIP under the 2015 scenario would result in local and regional air quality benefits.

2.14.4 Avoidance, Minimization and/or Mitigation Measures

The following SCAQMD standard measures would avoid or minimize air pollutant emissions associated with proposed project and EIP construction activities:

- The construction contractor will adhere to the requirements of Southern California Air Quality Management District (SCAQMD) rules and regulations (Rule 1108) on cutback and emulsified asphalt paving materials.
- To reduce fugitive dust emissions, the construction contractor will adhere to the requirements of Southern California Air Quality Management District SCAQMD Rule 403. The Best Available Control Measures (BACMs) specified in SCAQMD's Rule 403 will be incorporated into the project construction.

The BACMs are listed below in Table 2.14.H.

Table 2.14.H Best Available Control Measures

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 prewatering 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 • Prewater material prior to loading into crusher • Monitor crusher emissions opacity • Apply water to crushed material to prevent dust plumes
Cut and fill	05-1 Prewater soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	• For large sites, prewater 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

Table 2.14.H Best Available Control Measures

Source Category	Control Measure	Guidance
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 Preapply water to depth of proposed cuts; and 08-2 Reapply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 ft 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
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 rainy season

Table 2.14.H Best Available Control Measures

Source Category	Control Measure	Guidance
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
Screening	12-1 Prewater 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 mph • 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 8 ft 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
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 used only on established parking areas/haul routes

Table 2.14.H Best Available Control Measures

Source Category	Control Measure	Guidance
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.	• Prewatering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pretrench to 18 in, soak soils via the pretrench, 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 Prewater material prior to loading; and 17-2 Ensure that freeboard exceeds 6 in (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
Unpaved roads/ parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	• Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
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.	

In addition to the SCAQMD standard measures to reduce construction emissions, the Caltrans Standard Construction Specifications (Sections 10 and 18 for dust control and Section 39-306 for asphalt concrete plant) will be adhered to in order to reduce emissions. The standard Caltrans specifications to minimize the emission of fugitive dust are listed below.

- All disturbed areas, including storage piles, not being actively utilized for construction purposes will be effectively stabilized for dust emissions using water, chemical stabilizers/suppressants, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads will be effectively stabilized for dust emissions using water or chemical stabilizers/suppressants.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities will be effectively controlled for fugitive dust emissions by utilizing applications of water or by presoaking.
- When materials are transported off site, all material will be covered or effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container will be maintained.
- All operations will limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. The use of blower devices is expressly forbidden.
- Following the addition of materials to or the removal of materials from the surface of outdoor storage piles, said piles will be effectively stabilized for fugitive dust emissions utilizing sufficient water or chemical stabilizers/suppressants.
- Traffic speeds on unpaved roads will be limited to 15 miles per hour.
- Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
- Wheel washers for all exiting trucks will be installed, or all trucks and equipment will be washed off before leaving the site.
- Wind breaks will be installed at windward side(s) of construction areas.
- Excavation and grading activity will be suspended when winds exceed 20 miles per hour.
- Area subject to excavation, grading, and other construction activity will be limited at any one time.

In addition to the standard conditions listed above, the following measure will be implemented to reduce air pollutants generated by vehicle and equipment exhaust during the project construction phase:

AQ-1 Pursuant to 40 Code of Federal Regulations (CFR) 93.115 and 93.117, construction activities shall be required to comply with the mitigation and control measures included in Appendix IV-A of the 2007 Air Quality Management Plan (AQMP).

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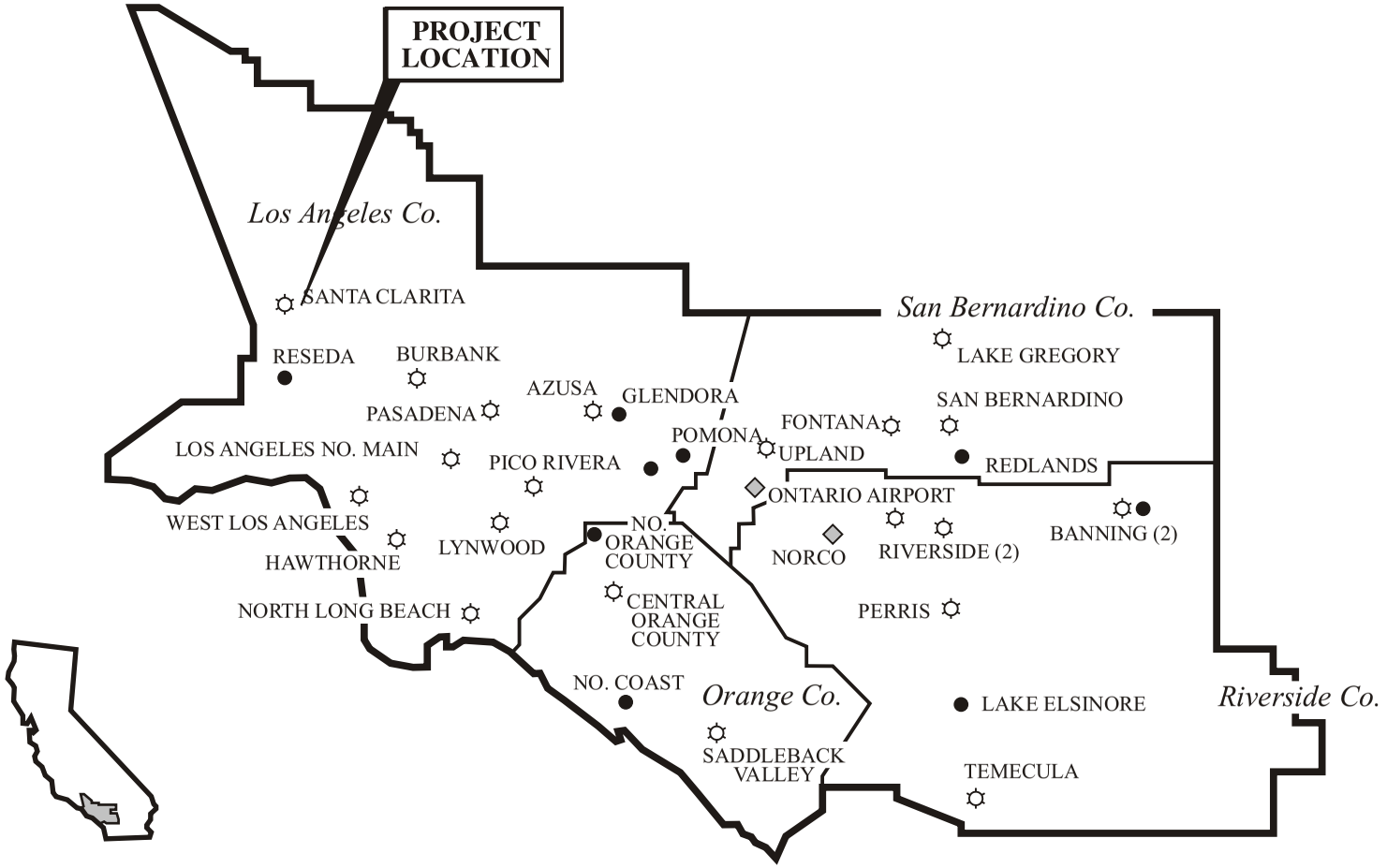

FIGURE 2.14.1

LEGEND:

- ☼ Gaseous and Particulate Monitoring Site
- ● Gaseous Pollutant Monitoring Only
- ◇ Particulate Sampling Only

N

I-5 HOV/Truck Lanes Project

SCAQMD Air Monitoring Network
Within the South Coast Air Basin

07-LA5-PM R45.4/R59.0
EA 2332E0

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2.15 Noise

The analysis of noise impacts of the proposed Interstate 5 (I-5) High Occupancy Vehicle (HOV)/Truck Lanes Project (project) is based on the *Noise Impact Analysis* (LSA Associates, Inc., August 2008), the Noise Abatement Recommendation (NAR) (Caltrans, August 2009), and the *Noise Study Report Addendum* (LSA Associates, Inc., June 2009)

2.15.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

2.15.1.1 California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible. The rest of this section will focus on the NEPA-23 CFR 772 noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

2.15.1.2 National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA involvement (and Caltrans, as assigned), the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 2.15.A lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

Table 2.15.A Noise Abatement Criteria

Activity Category	NAC Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activities
A	57 dBA Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 dBA Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 dBA Exterior	Developed lands, properties, or activities not included in Categories A or B above.
D	—	Undeveloped lands.
E	52 dBA Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

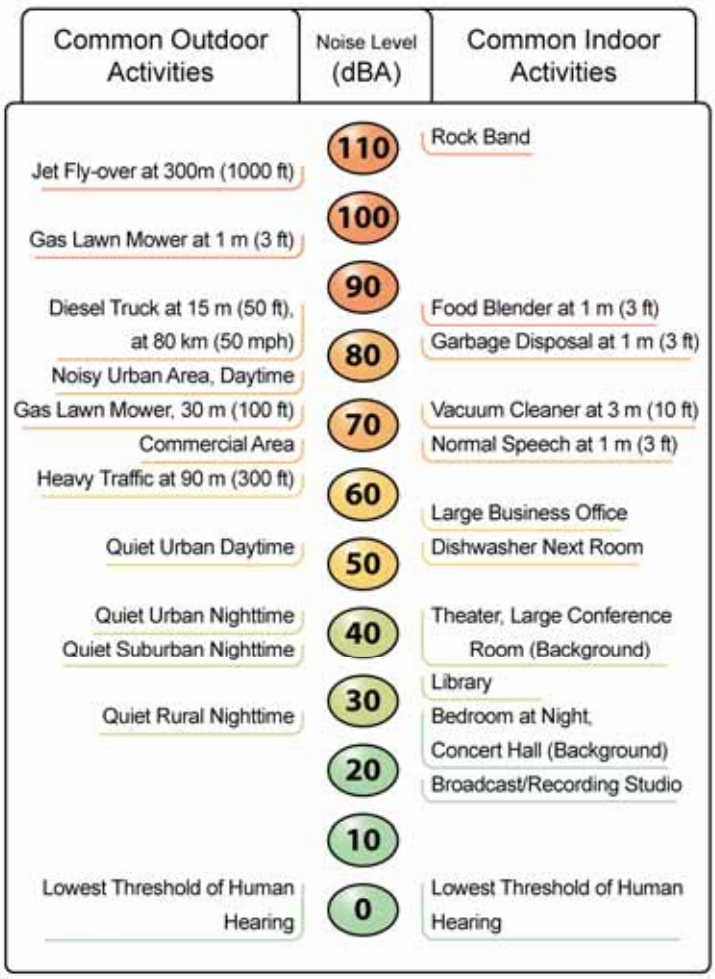
Table 2.15.B lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

In accordance with the California Department of Transportation's (Caltrans) *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects,* (August 2006), a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 A-weighted decibels [dBA] or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Caltrans *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, and other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit

Table 2.15.B Typical Noise Levels



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analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agency input, newly constructed development versus development predating 1978, and the cost per benefited residence.

2.15.2 Affected Environment

2.15.2.1 Surrounding Land Use and Sensitive Receptors

Existing land uses in the vicinity of the project area include single- and multifamily residential, office, industrial, commercial, school, church, and recreational uses. In addition, two future planned residential developments and one future planned commercial development are located within the project area.

A total of 312 sensitive receptor locations, as shown in Figure 2.15.1, were selected to represent the existing land uses in the project vicinity. Receptors, as used in this section, are those locations at which noise impacts were evaluated. As shown in Table 2.15.C, the majority of the sensitive receptor locations consist of residential land uses.

2.15.2.2 Existing Noise Levels

The primary source of noise in the project area is traffic on the I-5 freeway and local streets such as The Old Road and Castaic Road. Ambient 10-minute noise measurements were conducted to document existing noise levels at 68 representative sensitive receptor locations along the project alignment. Ambient long-term (24-hour) noise level measurements were also conducted at 7 locations to adjust the existing noise levels to the peak traffic noise hour. The noise monitoring locations are shown in Figure 2.15.1. Monitored locations are those sensitive receptor locations at which noise level measurements were conducted.

Short-term noise level measurements were used to calibrate the existing noise levels in the noise model (Traffic Noise Model [TNM] 2.5) for the 312 modeled sensitive receptors in the project area. Modeled receptors are those sensitive receptor locations at which noise modeling was conducted to determine future noise levels and noise impacts. Traffic volumes were obtained from the *I-5 PA&ED HOV & Truck Lane–SR-14 to Parker Road Traffic Study* (Austin-Foust Associates, Inc., October 2007) and the *I-5 PA&ED HOV & Truck Lane–SR-14 to Parker Road Supplemental Traffic Data* (Austin-Foust Associates, Inc., August 2008). The modeled noise levels

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-1/M-1[2]	Castaic Road	Sports Complex	5	B (67)	**67**[3]	**67**	**70**
R-2	Planned Residential	Residential	1	B (67)	N/A[4]	53	55
R-3	Planned Residential	Residential	1	B (67)	N/A	55	57
R-4	Planned Residential	Residential	1	B (67)	N/A	56	58
R-5	Planned Residential	Residential	1	B (67)	N/A	62	64
R-6	Planned Residential	Residential	1	B (67)	N/A	61	63
R-7	Planned Residential	Residential	1	B (67)	N/A	53	55
R-8	Planned Residential	Residential	1	B (67)	N/A	56	58
R-9	Planned Residential	Residential	1	B (67)	N/A	56	58
R-10	Planned Residential	Residential	1	B (67)	N/A	61	63
R-11	Planned Residential	Residential	2	B (67)	N/A	61	63
R-12	Planned Residential	Residential	2	B (67)	N/A	62	64
R-13	Planned Residential	Residential	1	B (67)	N/A	64	**66**
R-14	Planned Residential	Residential	1	B (67)	N/A	**66**	**68**
R-15	Daisy Court	Residential	3	B (67)	N/A	**69**	**70**
R-16	Daisy Court	Residential	5	B (67)	N/A	**67**	**68**
R-17	Daisy Court	Residential	2	B (67)	N/A	**66**	**67**
R-18	Iris Place	Residential	1	B (67)	N/A	**66**	**67**
R-19	Primrose Lane	Residential	3	B (67)	N/A	62	63
R-20	Iris Place	Residential	2	B (67)	N/A	62	63
R-21	Iris Place	Residential	1	B (67)	N/A	65	**66**
R-22	Primrose Lane	Residential	3	B (67)	N/A	60	61
R-23	North Spring Meadow Court	Residential	3	B (67)	N/A	**69**	**70**
R-24	Marigold Circle	Residential	6	B (67)	N/A	**68**	**69**
R-25	Marigold Circle	Residential	3	B (67)	N/A	**68**	**69**
R-26	Morning Glory Place	Residential	2	B (67)	N/A	**67**	**68**
R-27	Morning Glory Place	Residential	2	B (67)	N/A	62	63
R-28	Marigold Circle	Residential	3	B (67)	N/A	63	64
R-29	Marigold Circle	Residential	3	B (67)	N/A	61	62
R-30	Cedar Oak Lane	Residential	3	B (67)	N/A	65	**66**
R-31	Cedar Oak Lane	Residential	5	B (67)	N/A	65	**66**
R-32	Cedar Oak Lane	Residential	3	B (67)	N/A	65	**66**
R-33/M-5	Cedar Oak Lane	Residential	2	B (67)	62	61	62
R-34	Wedgewood Court	Residential	2	B (67)	N/A	59	60
R-35	Wedgewood Court	Residential	1	B (67)	N/A	**67**	**68**
R-36	Cedar Oak Lane	Residential	2	B (67)	N/A	64	65
R-37	Cedar Oak Lane	Residential	2	B (67)	N/A	**66**	**67**
R-38	Cedar Oak Lane	Residential	2	B (67)	N/A	63	64
R-39	Cedar Oak Lane	Residential	2	B (67)	N/A	**66**	**67**
R-40/M-6	The Old Road	Residential	1	B (67)	63	62	63
R-41	Holmby Court	Residential	5	B (67)	N/A	62	64
R-42	London Court	Residential	4	B (67)	N/A	54	56
R-43	Desert Rose Drive	Residential	5	B (67)	N/A	65	**67**
R-44/M-9	Desert Rose Drive	Residential	9	B (67)	**73**	**72**	**74**
R-45	Saguaro Street	Residential	3	B (67)	N/A	61	62
R-46	Desert Rose Drive	Residential	4	B (67)	N/A	52	54
R-47/M-10	Desert Rose Drive	Residential	4	B (67)	52	52	54

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-48	Saguaro Street	Residential	1	B (67)	N/A	53	55
R-49	Saguaro Street	Residential	3	B (67)	N/A	62	63
R-50/M-11	Saguaro Street	Residential	7	B (67)	63	63	64
R-51	Saguaro Street	Residential	7	B (67)	N/A	**67**	**68**
R-52	Saguaro Street	Residential	7	B (67)	N/A	**67**	**68**
R-53/M-13	Saguaro Street	Residential	7	B (67)	**70**	**69**	**70**
R-54	Saguaro Street	Residential	4	B (67)	N/A	63	64
R-55	Saguaro Street	Residential	1	B (67)	N/A	58	59
R-56	Saguaro Street	Residential	3	B (67)	N/A	60	61
R-57	Saguaro Street	Residential	6	B (67)	N/A	63	64
R-58/M-14	Saguaro Street	Residential	2	B (67)	58	58	59
R-59	Saguaro Street	Residential	2	B (67)	N/A	54	55
R-60	Firebrand Drive	Residential	2	B (67)	N/A	57	59
R-61	Firebrand Drive	Residential	2	B (67)	N/A	56	58
R-62	Sedona Way	Residential	1	B (67)	N/A	53	54
R-63	Ashby Court	Residential	1	B (67)	N/A	53	55
R-64	Salem Court	Residential	2	B (67)	N/A	54	56
R-65	Salem Court	Residential	1	B (67)	N/A	55	57
R-66	Hartford Avenue	Residential	2	B (67)	N/A	57	59
R-67	Quincy Street	Residential	2	B (67)	N/A	55	57
R-68	Fenway Court	Residential	2	B (67)	N/A	55	57
R-69	Fenway Court	Residential	2	B (67)	N/A	51	53
R-70/M-17	Buckskin Drive	Residential	3	B (67)	52	53	55
R-71	Ashby Court	Residential	1	B (67)	N/A	53	55
R-72	Salem Court	Residential	2	B (67)	N/A	58	60
R-73	Quincy Street	Residential	2	B (67)	N/A	56	58
R-74	Quincy Street	Residential	1	B (67)	N/A	49	51
R-75	Fenway Court	Residential	3	B (67)	N/A	46	48
R-76	Buckskin Drive	Residential	2	B (67)	N/A	45	47
R-77	Ashby Court	Residential	1	B (67)	N/A	51	53
R-78	Ashby Court	Residential	8	B (67)	N/A	53	55
R-79	Salem Court	Residential	1	B (67)	N/A	57	59
R-80	Quincy Street	Residential	2	B (67)	N/A	56	58
R-81	The Old Road	Classroom	1	B (67)	N/A	58	60
R-82/M-19	The Old Road	Hotel	1	B (67)	63	62	65
R-83	Wayne Mills Place	Hotel	1	C (72)	N/A	52	55
R-84/M-20	Wayne Mills Place	Hotel	1	C (72)	63	63	**66**
R-85	Playa Serena Drive	Residential	2	B (67)	N/A	**67**	**70**
R-86	Playa Serena Drive	Residential	3	B (67)	N/A	**68**	**71**
R-87/M-21	Los Arqueros Drive	Residential	2	B (67)	**67**	**67**	**70**
R-88	Playa Serena Drive	Residential	1	B (67)	N/A	60	63
R-89	Playa Serena Drive	Residential	1	B (67)	N/A	57	60
R-90	Baviera Way	Residential	3	B (67)	N/A	64	**67**
R-91	Baviera Way	Residential	3	B (67)	N/A	**67**	**70**
R-92	Baviera Way	Residential	2	B (67)	N/A	**67**	**70**
R-93	Baviera Way	Residential	6	B (67)	N/A	48	51
R-94	Baviera Way	Residential	6	B (67)	N/A	48	51
R-95	Baviera Way	Residential	6	B (67)	N/A	52	55

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-96/M-23	Sycamore Meadow Drive	Residential	6	B (67)	**67**	**66**	**69**
R-97	Sycamore Meadow Drive	Residential	6	B (67)	N/A	62	65
R-98	Eagle Lane	Residential	4	B (67)	N/A	60	63
R-99	Sycamore Meadow Drive	Residential	8	B (67)	N/A	52	55
R-100/M-25	Silver Aspen Way	Residential	1	B (67)	**72**	**72**	**74**
R-101	Silver Aspen Way	Residential	4	B (67)	N/A	**69**	**71**
R-102	Silver Aspen Way	Residential	12	B (67)	N/A	**69**	**71**
R-103	Silver Aspen Way	Residential	12	B (67)	N/A	39	41
R-104	Silver Aspen Way	Residential	12	B (67)	N/A	62	64
R-105	Silver Aspen Way	Residential	12	B (67)	N/A	63	65
R-106	Silver Aspen Way	Residential	2	B (67)	N/A	60	63
R-107	Silver Aspen Way	Residential	1	B (67)	N/A	59	62
R-108	Silver Aspen Way	Residential	3	B (67)	N/A	64	**67**
R-109/M-29	Twin Oaks Place	Residential	1	B (67)	62	62	64
R-110	The Old Road	Commercial	1	C (72)	N/A	59	61
R-111/M-30	Twin Oaks Place	Residential	1	B (67)	57	57	59
R-112	Twin Oaks Place	Residential	1	B (67)	N/A	59	61
R-113/M-31	Rockwell Canyon Road	College	1	B (67)	56	57	60
R-114	The Old Road	Commercial	1	C (72)	N/A	54	55
R-115/M-32	Tournament Road	College	1	B (67)	58	59	60
R-116	Tournament Road	College	1	B (67)	N/A	63	64
R-117	Tournament Road	College	1	B (67)	N/A	60	61
R-118	Sand Wedge Lane	Residential	5	B (67)	N/A	63	**67**
R-119/M-33	Sand Wedge Lane	Residential	5	B (67)	64	63	**67**
R-120	Masters Cup Way	Residential	7	B (67)	N/A	63	**67**
R-121	Masters Cup Way	Residential	5	B (67)	N/A	63	**67**
R-122	Sand Wedge Lane	Residential	4	B (67)	N/A	60	64
R-123	Sand Wedge Lane	Residential	5	B (67)	N/A	60	64
R-124	Masters Cup Way	Residential	8	B (67)	N/A	59	63
R-125	Masters Cup Way	Residential	10	B (67)	N/A	61	65
R-126	Vista Fairways Drive	Clubhouse	1	C (72)	N/A	55	56
R-127	Altos Drive	Residential	3	B (67)	N/A	**67**	**68**
R-128	Altos Drive	Residential	3	B (67)	N/A	57	58
R-129	Farrow Drive	Residential	3	B (67)	N/A	**67**	**68**
R-130	Farrow Drive	Residential	2	B (67)	N/A	61	62
R-131	Farrow Drive	Residential	1	B (67)	N/A	58	59
R-132	Farrow Drive	Residential	2	B (67)	N/A	59	60
R-133	Sagecrest Circle	Residential	2	B (67)	N/A	62	64
R-134	Sagecrest Circle	Residential	2	B (67)	N/A	60	62
R-135	Sagecrest Circle	Residential	2	B (67)	N/A	57	59
R-136	Hazelcrest Lane	Residential	2	B (67)	N/A	54	56
R-137	Hazelcrest Lane	Residential	3	B (67)	N/A	55	57
R-138	Hazelcrest Lane	Residential	3	B (67)	N/A	56	58
R-139/M-37	Hazelcrest Lane	Residential	3	B (67)	55	55	57
R-140	Laurelcrest Lane	Residential	2	B (67)	N/A	65	**67**
R-141	Sagecrest Circle	Residential	1	B (67)	N/A	48	50

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-142/M-38	Bracken Lane	Residential	1	B (67)	57	57	59
R-143	Laurelcrest Lane	Residential	2	B (67)	N/A	54	56
R-144	Laurelcrest Lane	Residential	2	B (67)	N/A	56	58
R-145	Foxtail Court	Residential	2	B (67)	N/A	**71**	**73**
R-146/M-39	Foxtail Court	Residential	2	B (67)	**72**	**72**	**74**
R-147/M-40	Foxtail Court	Residential	2	B (67)	**72**	**71**	**73**
R-148	Foxtail Court	Residential	2	B (67)	N/A	**67**	**69**
R-149	Foxtail Court	Residential	2	B (67)	N/A	**68**	**70**
R-150	Foxtail Court	Residential	3	B (67)	N/A	63	65
R-151	Foxtail Court	Residential	1	B (67)	N/A	59	61
R-152	Sargasso Court	Residential	1	B (67)	N/A	**68**	**70**
R-153	Sargasso Court	Residential	2	B (67)	N/A	65	**67**
R-154	Sargasso Court	Residential	2	B (67)	N/A	63	65
R-155	Sargasso Court	Residential	1	B (67)	N/A	**66**	**68**
R-156	Sargasso Court	Residential	2	B (67)	N/A	60	62
R-157	Sargasso Court	Residential	2	B (67)	N/A	58	60
R-158	Sargasso Court	Residential	2	B (67)	N/A	58	60
R-159	Wintergreen Court	Residential	2	B (67)	N/A	62	64
R-160	Wintergreen Court	Residential	2	B (67)	N/A	62	64
R-161	Wintergreen Court	Residential	2	B (67)	N/A	62	64
R-162	Wintergreen Court	Residential	2	B (67)	N/A	61	63
R-163	Wintergreen Court	Residential	2	B (67)	N/A	57	59
R-164	Wintergreen Court	Residential	2	B (67)	N/A	53	55
R-165	Wintergreen Court	Residential	1	B (67)	N/A	57	59
R-166	Wintergreen Court	Residential	2	B (67)	N/A	51	53
R-167	Wintergreen Court	Residential	2	B (67)	N/A	50	52
R-168	Wintergreen Court	Residential	2	B (67)	N/A	48	50
R-169	Wintergreen Court	Residential	2	B (67)	N/A	47	49
R-170	Wintergreen Court	Residential	2	B (67)	N/A	49	51
R-171	Sagecrest Circle	Residential	2	B (67)	N/A	62	64
R-172	Sagecrest Circle	Residential	2	B (67)	N/A	60	62
R-173	Sagecrest Circle	Residential	2	B (67)	N/A	60	62
R-174	Sagecrest Circle	Residential	2	B (67)	N/A	59	61
R-175	Sagecrest Circle	Residential	2	B (67)	N/A	57	59
R-176	Sagecrest Circle	Residential	2	B (67)	N/A	52	54
R-177	Sagecrest Circle	Residential	2	B (67)	N/A	51	53
R-178	La Glorita Circle	Residential	2	B (67)	N/A	63	65
R-179	La Glorita Circle	Residential	1	B (67)	N/A	58	60
R-180	La Glorita Circle	Residential	2	B (67)	N/A	57	59
R-181	La Glorita Circle	Residential	2	B (67)	N/A	56	58
R-182	Markel Drive	Residential	2	B (67)	N/A	55	57
R-183	Markel Drive	Residential	1	B (67)	N/A	54	56
R-184	Markel Drive	Residential	2	B (67)	N/A	53	55
R-185	Markel Drive	Residential	1	B (67)	N/A	52	54
R-186	Markel Drive	Residential	2	B (67)	N/A	52	54
R-187	Denise Place	Residential	2	B (67)	N/A	62	64
R-188	Lisa Kelton Place	Residential	3	B (67)	N/A	62	64
R-189	Cheryl Kelton Place	Residential	2	B (67)	N/A	**72**	**74**
R-190	Jennifer Place	Residential	3	B (67)	N/A	**69**	**71**

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-191	Wabuska Street	Residential	2	B (67)	N/A	**66**	**68**
R-192/M-44	Denise Place	Residential	2	B (67)	58	59	61
R-193	Lisa Kelton Place	Residential	2	B (67)	N/A	54	56
R-194	Cheryl Kelton Place	Residential	2	B (67)	N/A	64	**66**
R-195/M-46	Cheryl Kelton Place	Residential	2	B (67)	58	60	62
R-196	Wabuska Street	Residential	2	B (67)	N/A	60	62
R-197	Denise Place	Residential	2	B (67)	N/A	58	60
R-198	Lisa Kelton Place	Residential	2	B (67)	N/A	53	55
R-199	Cheryl Kelton Place	Residential	2	B (67)	N/A	62	64
R-200	Cheryl Kelton Place	Residential	2	B (67)	N/A	58	60
R-201	Wabuska Street	Residential	1	B (67)	N/A	59	61
R-202/M-47	Hawkbryn Avenue	Residential	1	B (67)	65	65	**66**
R-203	Hawkbryn Avenue	Residential	1	B (67)	N/A	58	59
R-204	Hawkbryn Avenue	Residential	1	B (67)	N/A	56	57
R-205	Hawkbryn Avenue	Residential	1	B (67)	N/A	57	58
R-206	Hawkbryn Avenue	Residential	1	B (67)	N/A	55	56
R-207	Hawkbryn Avenue	Residential	1	B (67)	N/A	55	56
R-208	Hawkbryn Avenue	Residential	2	B (67)	N/A	54	55
R-209	Hawkbryn Avenue	Residential	2	B (67)	N/A	54	55
R-210/M-48	Hawkbryn Avenue	Residential	4	B (67)	57	58	59
R-211	Hawkbryn Avenue	Residential	2	B (67)	N/A	55	56
R-212	Hawkbryn Avenue	Residential	2	B (67)	N/A	53	54
R-213	Hawkbryn Avenue	Residential	2	B (67)	N/A	53	54
R-214	Hawkbryn Avenue	Residential	1	B (67)	N/A	57	58
R-215	Hawkbryn Avenue	Residential	1	B (67)	N/A	57	58
R-216	Hawkbryn Avenue	Residential	1	B (67)	N/A	55	56
R-217	Hawkbryn Avenue	Residential	1	B (67)	N/A	54	55
R-218	Hawkbryn Avenue	Residential	1	B (67)	N/A	58	59
R-219	Hawkbryn Avenue	Residential	1	B (67)	N/A	58	59
R-220	Hawkbryn Avenue	Residential	1	B (67)	N/A	58	59
R-221	Hawkbryn Avenue	Residential	1	B (67)	N/A	58	59
R-222	Approved Residential	Residential	2	B (67)	N/A	**66**	**68**
R-223	Approved Residential	Residential	2	B (67)	N/A	60	62
R-224	Approved Residential	Residential	2	B (67)	N/A	62	64
R-225	Approved Residential	Residential	2	B (67)	N/A	64	**66**
R-226	Approved Residential	Residential	2	B (67)	N/A	64	**66**
R-227	Approved Residential	Residential	2	B (67)	N/A	57	59
R-228	Approved Residential	Residential	2	B (67)	N/A	55	57
R-229	Approved Residential	Residential	2	B (67)	N/A	58	60
R-230	Fourl Road	Residential	2	B (67)	N/A	64	64
R-231	Fourl Road	Residential	4	B (67)	N/A	60	60
R-232	Fourl Road	Residential	4	B (67)	N/A	65	65
R-233/M-49	Fourl Road	Residential	3	B (67)	63	62	62
R-234	Fourl Road	Residential	3	B (67)	N/A	59	60
R-235	Carland Drive	Residential	1	B (67)	N/A	51	52
R-236	Carland Drive	Residential	2	B (67)	N/A	52	53
R-237/M-50	Fambrough Street	Residential	2	B (67)	57	58	59
R-238	Fourl Road	Residential	2	B (67)	N/A	52	53
R-239	Fourl Road	Residential	2	B (67)	N/A	52	53

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-240	Carland Drive	Residential	1	B (67)	N/A	51	52
R-241	Carland Drive	Residential	2	B (67)	N/A	50	51
R-242	Fambrough Street	Residential	2	B (67)	N/A	53	54
R-243	Fambrough Street	Residential	2	B (67)	N/A	56	57
R-244	Fourl Road	Residential	3	B (67)	N/A	59	61
R-245	Fourl Road	Residential	3	B (67)	N/A	55	57
R-246/M-51	Fourl Road	Residential	2	B (67)	50	51	53
R-247	Daisetta Drive	Residential	2	B (67)	N/A	51	53
R-248	Daisetta Drive	Residential	3	B (67)	N/A	45	47
R-249	Fourl Road	Residential	3	B (67)	N/A	50	52
R-250	Fourl Road	Residential	3	B (67)	N/A	46	48
R-251	Daisetta Drive	Residential	1	B (67)	N/A	46	48
R-252	Adamsboro Drive	Residential	2	B (67)	N/A	51	53
R-253	Valley Oak Court	Residential	2	B (67)	N/A	59	61
R-254	Valley Oak Court	Residential	3	B (67)	N/A	56	58
R-255	La Salle Canyon Road	Residential	1	B (67)	N/A	60	60
R-256/M-53	La Salle Canyon Road	Residential	1	B (67)	59	59	59
R-257	La Salle Canyon Road	Residential	1	B (67)	N/A	55	55
R-258	La Salle Canyon Road	Residential	1	B (67)	N/A	56	56
R-259	La Salle Canyon Road	Residential	1	B (67)	N/A	48	48
R-260	La Salle Canyon Road	Residential	1	B (67)	N/A	48	48
R-261/M-55	La Salle Canyon Road	Residential	1	B (67)	48	48	48
R-262	La Salle Canyon Road	Residential	1	B (67)	N/A	48	48
R-263	La Salle Canyon Road	Residential	1	B (67)	N/A	48	48
R-264	La Salle Canyon Road	Residential	1	B (67)	N/A	47	47
R-265/M-54	La Salle Canyon Road	Residential	1	B (67)	60	60	60
R-266	La Salle Canyon Road	Residential	4	B (67)	N/A	37	37
R-267	La Salle Canyon Road	Residential	1	B (67)	N/A	47	47
R-268	La Salle Canyon Road	Residential	1	B (67)	N/A	39	39
R-269/M-56	La Salle Canyon Road	Residential	1	B (67)	48	48	48
R-270	La Salle Canyon Road	Residential	1	B (67)	N/A	42	42
R-271	La Salle Canyon Road	Residential	1	B (67)	N/A	46	46
R-272/M-57	La Salle Canyon Road	Residential	3	B (67)	49	49	49
R-273/M-58	The Old Road	Residential	1	B (67)	65	65	65
R-274	The Old Road	Church Playground	1	B (67)	N/A	**68**	**68**
R-275	The Old Road	Residential	1	B (67)	N/A	64	64
R-276	The Old Road	Residential	5	B (67)	N/A	63	63
R-277/M-59	The Old Road	Residential	5	B (67)	64	63	63
R-278	The Old Road	Residential	5	B (67)	N/A	60	60
R-279	The Old Road	Residential	5	B (67)	N/A	63	63
R-280	The Old Road	Residential	1	B (67)	N/A	63	63
R-281	The Old Road	Residential	1	B (67)	N/A	59	59
R-282	The Old Road	Residential	1	B (67)	N/A	60	60
R-283/M-60	The Old Road	Residential	5	B (67)	60	60	60
R-284	The Old Road	Residential	2	B (67)	N/A	59	59
R-285	The Old Road	Residential	2	B (67)	N/A	60	60
R-286	The Old Road	Residential	3	B (67)	N/A	59	59
R-287	The Old Road	Residential	6	B (67)	N/A	62	62

Table 2.15.C Existing Traffic Noise Levels, dBA $L_{eq}(h)$

Rec No.	Location	Type of Development	No. of Units Represented	Noise Abatement Category	Measured Noise Level	Modeled Existing Noise Level	Existing Noise Level[1]
R-288	The Old Road	Residential	4	B (67)	N/A	62	62
R-289/M-6[2]	The Old Road	Residential	1	B (67)	47	47	47
R-290/M-63	Coltrane Avenue	Residential	1	B (67)	**73**	**72**	**72**
R-291	Coltrane Avenue	Residential	1	B (67)	N/A	61	62
R-292	Farrow Drive	Residential	1	B (67)	N/A	64	65
R-293	Farrow Drive	Residential	1	B (67)	N/A	63	64
R-294	Farrow Drive	Residential	1	B (67)	N/A	62	63
R-295	Farrow Drive	Residential	1	B (67)	N/A	59	60
R-296	Altos Drive	Residential	1	B (67)	N/A	**67**	**68**
R-297	Altos Drive	Residential	1	B (67)	N/A	64	65
R-298	Altos Drive	Residential	1	B (67)	N/A	61	62
R-299	Altos Drive	Residential	1	B (67)	N/A	59	60
R-300/M-1[5]	Altos Drive	Residential	1	B (67)	63	63	**68**
R-301	Altos Drive	Residential	1	B (67)	N/A	60	65
R-302	Altos Drive	Residential	1	B (67)	N/A	58	63
R-303	Altos Drive	Residential	1	B (67)	N/A	57	62
R-304	Altos Drive	Residential	1	B (67)	N/A	56	61
R-305	Farrow Drive	Residential	1	B (67)	N/A	59	63
R-306	Farrow Drive	Residential	1	B (67)	N/A	58	62
R-307	Farrow Drive	Residential	1	B (67)	N/A	58	62
R-308	Farrow Drive	Residential	1	B (67)	N/A	59	63
R-309/M-4[5]	Vista Ridge Drive	Residential	1	B (67)	58	58	62
R-310/M-2[5]	Farrow Drive	Residential	1	B (67)	52	52	57
R-311/M-3[5]	Via Acorde	Residential	1	B (67)	58	58	62
R-312/M-5[5]	Sand Wedge Lane	Residential	4	B (67)	65	65	**69**

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008) and *Noise Study Report Addendum* (LSA Associates, Inc., June 2009).

1 Modeled existing noise level adjusted to the peak noise hour.

2 Receptor location/monitor location.

3 Numbers in **bold** represent noise levels that approach or exceed the Noise Abatement Criteria (NAC).

4 N/A: Not Applicable. Ambient noise monitoring was not conducted at this receptor location.

5 New additional monitoring locations analyzed in the *Noise Study Report Addendum*

dBA $L_{eq}(h)$ = A-weighted noise level

at all 312 receptor locations are shown in Table 2.15.C. As shown in Table 2.15.C, of the 312 modeled receptor locations, 63 receptors currently approach or exceed the NAC.

Exterior and interior noise level measurements were conducted at 11 locations where residences do not have outdoor active use areas or outdoor active use areas that are physically shielded, classrooms, and hotels located along the project corridor.

Simultaneous exterior and interior noise level measurements were conducted at these noise-sensitive land uses to determine the exterior to interior noise reduction. Table 2.15.D shows the results of the exterior and interior noise level measurement and the exterior to interior noise reduction for each location. Also, Table 2.15.D shows that the interior noise level measurements at all 11 locations are currently below the 52 dBA L_{eq} NAC under Activity Category E (52). The 11 locations where exterior and interior noise level measurements were conducted are shown in Figure 2.15.1.

Table 2.15.D Interior/Exterior Noise Monitoring Results

Receptor	Exterior Level (dBA L_{eq}[h])	Interior Level (dBA L_{eq} [h])	Exterior to Interior Noise Reduction (dBA)	Land Use Description
EI-1	62.0	39.4	22.6	29421 The Old Road. Tutor Time Childcare/Learning Center.
EI-2	66.3	41.1	25.2	27710 The Old Road. Hilton Garden Inn.
EI-3	72.5	39.9	32.6	27513 Wayne Mills Place. Holiday Inn Express.
EI-4	75.3	48.0	27.3	27413 Tourney Road. Best Western Inn.
EI-5	55.3	40.2	15.1	26455 Rockwell Canyon Road. Center for Early Childhood Education at the College of the Canyons.
EI-6	62.8	45.7	17.1	24700 McBean Parkway. College dorm room.
EI-7	54.0	--[1]	--	24512 Farrow Drive. Exterior area of residence.
EI-8	60.0	42.4	17.6	25223 Hazel Crest Lane. Residential.
EI-9	69.0	44.7	24.3	25201 The Old Road. La Quinta Inn & Suites.
EI-10	60.4	44.8	15.6	25022 N. Hawkbryn Avenue. Santa Clarita Preschool & Infant Center.
EI-11	68.6	45.2	23.4	23857 The Old Road. Church of the Nazarene.

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008).
[1] No access for interior noise measurement. An exterior to interior attenuation was assumed to be 20 dBA for a light-frame structure with closed ordinary sash windows.
dBA = A-weighted decibels
dBA L_{eq}(h) = A-weighted noise level

2.15.3 Environmental Consequences

2.15.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in temporary noise or vibration impacts.

Alternative 2: Reduced Median Alternative

Short-Term Noise Impacts

Two types of short-term noise impacts would occur during construction of Alternative 2. The first type would be from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels on access roads leading to the site. The pieces of heavy equipment for grading and construction activities would be moved on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. A high single-event noise exposure potential at a maximum level of 87 dBA L_{max} from trucks passing at 50 feet (ft) would occur. However, the projected construction traffic would be minimal when compared to existing traffic volumes on I-5, The Old Road and other affected streets, and its associated long-term noise level change would not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would not be substantial.

The second type of short-term noise impact is related to noise generated during excavation, grading, and roadway construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated and, therefore, the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 2.15.E lists typical construction equipment noise levels (L_{max}), based on a distance of 50 ft between the equipment and a noise receptor.

Table 2.15.E Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft)
Pile drivers, 12,000 to 18,000 ft-lb/blow	81–96	93
Rock drills	83–99	96
Jackhammers	75–85	82
Pneumatic tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul trucks	83–94	88
Cranes	79–86	82
Portable generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-end loaders	77–90	86
Hydraulic backhoe	81–90	86
Hydraulic excavators	81–90	86
Graders	79–89	86
Air compressors	76–89	86
Trucks	81–87	86

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008).
dBA = A-weighted decibels ft = feet ft-lb/blow = foot-pounds per blow

Typical noise levels at 50 ft from an active construction area range up to 91 dBA L_{max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

Construction of Alternative 2 is expected to require the use of earthmovers, bulldozers, water trucks, and pickup trucks. Noise associated with the use of construction equipment is estimated between 79 and 89 dBA L_{max} at a distance of 50 ft from the active construction area for the grading phase. As seen in Table 2.15.E, the maximum noise level generated by each scraper is assumed to be approximately 87 dBA L_{max} at 50 ft from the scraper in operation. Each bulldozer would also generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by

water trucks and pickup trucks is approximately 86 dBA L_{max} at 50 ft from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source. The worst-case composite noise level at the nearest noise-sensitive receptor during this phase of construction would be 91 dBA L_{max} (at a distance of 50 ft) from an active construction area).

In addition to the standard construction equipment, the project would require the use of pile drivers. As shown in Table 2.15.E, pile-driving generates noise levels of approximately 93 dBA L_{max} at 50 ft. If pile-driving is conducted concurrently with site preparation, the construction site could potentially generate noise levels of 95 dBA L_{max} at a distance of 50 ft.

The closest sensitive receptor locations are located 50 ft from the project construction areas. Therefore, these receptor locations may be subject to short-term noise reaching 95 dBA L_{max} generated by construction activities along the project alignment. With the abatement outlined below in Section 2.15.4, potential short-term noise impacts would not be adverse.

Short-Term Vibration Impacts

Short-term vibration impacts would be associated with construction activities along the proposed alignment. Construction-related vibration would not have the potential to cause damage to buildings located nearby. However, vibration levels generated by heavy tracked construction equipment, pile drivers, and jackhammers during construction would result in residential annoyance. Short-term vibration impacts from operation of heavy tracked construction equipment, pile drivers, and jackhammers would cease once construction is completed.

Construction-related vibration generated by construction equipment can result in varying degrees of ground vibration, depending on the equipment. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings situated on soil near the active construction area respond to these vibrations that range from no perception to low rumbling sounds with perceptible vibrations and slight damage at the highest vibration levels. Typically, construction-related vibrations do not reach vibration levels that would result in damage to nearby structures. However, old and fragile structures would require special consideration to avoid damage.

Table 2.15.F shows the typical levels of groundborne vibration. Table 2.15.F shows that a groundborne vibration level of 72 VdB for frequent events, 75 VdB for occasional events, and 80 VdB for infrequent events would result in community annoyance. Table 2.15.F shows that a vibration level of 100 VdBA would result in damage to structures. Although the impact criteria presented in Table 2.15.F are prepared for railroads, the groundborne vibration thresholds were used to evaluate short-term construction-related groundborne vibration.

Table 2.15.F Typical Levels of Groundborne Vibration

Response/Criteria	Velocity Level[1]	Typical Vibration Sources (50 ft from source)
Damage Threshold	100	Blasting from construction projects
Damage threshold, historic or fragile buildings	95	
		Bulldozers and other heavy tracked construction equipment
Difficulty with task such as reading a VDT screen	90	
	85	Commuter rail, upper range
	82	
Residential annoyance, infrequent events (e.g., freight trains)	80	Rapid transit, upper range
	75	Commuter rail, typical
Residential annoyance, frequent events (e.g., transit trains)	72	Bus or truck over bump
	70	Rapid transit, typical
Limit for vibration-sensitive equipment. Approximate threshold for human perception of vibration	65	
	62	Bus or truck, typical
	60	
	52	Typical background vibration
	50	

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008).
RMS Vibration Velocity Level in dB relative to 10^6 inches/second or VdB.
ft = feet

Alternative 2 may require the use of heavy tracked construction equipment, pile drivers, and jackhammers. As shown in Table 2.15.G, typical pile drivers and jackhammers generate approximately 104 and 79 VdB, respectively, when measured at 25 ft. The vibration velocity level normally decreases at a rate of 6 VdB per doubling of distance from the source. The closest existing residence located approximately 50 ft from potential heavy construction activity would be exposed to a groundborne vibration level of 98 VdB from pile drivers and 73 VdB from jackhammers. This level of groundborne vibration exceeds the threshold for residential annoyance of 72 VdB. Therefore, short-term construction-related vibration levels from pile drivers and jackhammers would result in residential annoyance at the

Table 2.15.G Vibration Source Levels for Construction Equipment (from measured data)

Equipment		PPV at 25 ft (in/sec)	Approximate L_v[1] at 25 ft
Pile Drivers (impact)	Upper Range	1.518	112
	Typical	0.644	104
Pile Drivers (sonic)	Upper Range	0.734	105
	Typical	0.170	93
Clam Shovel Drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008).
[1] RMS velocity in decibels (VdB) re 1 micro-inch/second.
ft = feet in/sec = inches per second PPV = peak particle velocity

closest existing residence. However, this groundborne vibration level would not result in damage to structures located nearby. With the abatement measures outlined below in Section 2.15.4, potential short-term vibration impacts would not be adverse.

Alternative 3: Full Median Alternative

Alternative 3 would result in similar temporary noise impacts as those discussed above for Alterantive 2. The worst-case composite noise level at the nearest noise-sensitive receptor during construction would be 91 dBA L_{max} (at a distance of 50 ft) from an active construction area). With the abatement measures outlined below in Section 2.15.4, potential short-term noise and vibration impacts would not be adverse.

Early Implementation Project (EIP)

Short-term construction-related noise and vibration impacts are associated with the first phase of constructing the project. Based on the *Noise Impact Analysis* (August 2008), typical noise levels at 50 ft from an active construction area range up to 91 dBA L_{max} during the noisiest construction phases. In addition, the first phase of constructing the project may require the use of heavy tracked construction equipment and jackhammers. As shown in Table 3.15.G, jackhammers would generate a vibration level of 79 VdB when measured at 25 ft. The closest sensitive receptor

locations are located 100 ft from the EIP construction boundary. These receptor locations may be subject to short-term noise reaching 84 dBA L_{max} and vibration levels reaching 67 VdB generated by construction activities along the project alignment. Table 3.15.F indicates that these ground-borne vibration levels would be perceptible and would not generate annoyance to residences or cause damage to nearby structures. With compliance with the Caltrans Standard Specifications, Section 7-1.01I, "Sound Control Requirements," and the measures, potential temporary construction noise and vibration impacts associated with the EIP are not considered adverse.

2.15.3.2 Permanent Impacts

All predicted noise levels for the Build and No Build Alternatives are based on traffic volumes obtained from the *I-5 PA&ED HOV & Truck Lane–SR-14 to Parker Road Traffic Study* (Austin-Foust Associates, Inc., October 2007). Future (2030) traffic noise was evaluated for the worst-case traffic condition. Traffic noise impacts result from one or more of the following occurrences: (1) an increase of 12 dBA or more over existing noise levels, or (2) predicted noise levels that approach or exceed the NAC. Traffic noise impacts for the Build and No Build Alternatives were based on these thresholds.

Alternative 1: No Build Alternative

Potential long-term noise impacts associated with operation of I-5 under the No Build scenario would be solely from traffic noise. Future No Build noise levels are shown in Table 2.15.H. Of the 312 receptors, 63 receptors under Alternative 1 would or would continue to "approach or exceed" the NAC under the future No Build 2030 conditions.

Alternative 2: Reduced Median Alternative

Long-Term Noise Impacts

Potential long-term noise impacts associated with Alternative 2 are solely from traffic noise. As shown in Table 2.15.H, of the 312 receptor locations modeled, 75 receptors under Alternative 2 would or would continue to "approach or exceed" the NAC under the worst-case traffic conditions. None of the receptor locations would experience a "substantial increase" of 12 dBA or more over their corresponding existing modeled noise levels.

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-1	Castaic Road	**70**[3]	**77**	**76**	6	**76**	6
R-2	Approved Residential	55	56	56	1	56	1
R-3	Approved Residential	57	58	58	1	58	1
R-4	Approved Residential	58	59	60	2	59	1
R-5	Approved Residential	64	65	65	1	65	1
R-6	Approved Residential	63	64	64	1	64	1
R-7	Approved Residential	55	56	56	1	56	1
R-8	Approved Residential	58	59	59	1	59	1
R-9	Approved Residential	58	59	59	1	59	1
R-10	Approved Residential	63	64	64	1	64	1
R-11	Approved Residential	63	64	64	1	64	1
R-12	Approved Residential	64	64	65	1	65	1
R-13	Approved Residential	**66**	**67**	**67**	1	**67**	1
R-14	The Old Road	**68**	**69**	**70**	2	**69**	1
R-15	Daisy Court	**70**	**73**	**73**	3	**73**	3
R-16	Daisy Court	**68**	**71**	**71**	3	**72**	4
R-17	Daisy Court	**67**	**71**	**71**	4	**71**	4
R-18	Iris Place	**67**	**70**	**70**	3	**71**	4
R-19	Primrose Lane	63	**66**	**66**	3	**66**	3
R-20	Iris Place	63	65	**66**	3	**66**	3
R-21	Iris Place	**66**	**69**	**69**	3	**69**	3
R-22	Primrose Lane	61	64	64	3	64	3
R-23	North Spring Meadow Court	**70**	**73**	**73**	3	**74**	4
R-24	Marigold Circle	**69**	**72**	**73**	4	**73**	4
R-25	Marigold Circle	**69**	**72**	**73**	4	**73**	4
R-26	Morning Glory Place	**68**	**70**	**71**	3	**71**	3
R-27	Morning Glory Place	63	65	**66**	3	**66**	3
R-28	Marigold Circle	64	**66**	**67**	3	**67**	3
R-29	Marigold Circle	62	65	65	3	65	3
R-30	Cedar Oak Lane	**66**	**69**	**70**	4	**70**	4
R-31	Cedar Oak Lane	**66**	**69**	**70**	4	**70**	4
R-32	Cedar Oak Lane	**66**	**69**	**69**	3	**70**	4
R-33	Cedar Oak Lane	62	65	65	3	65	3
R-34	Wedgewood Court	60	63	63	3	63	3
R-35	Wedgewood Court	**68**	**67**	**72**	4	**72**	4
R-36	Cedar Oak Lane	65	**68**	**69**	4	**69**	4
R-37	Cedar Oak Lane	**67**	**70**	**70**	3	**71**	4
R-38	Cedar Oak Lane	64	65	**67**	3	**67**	3
R-39	Cedar Oak Lane	**67**	**70**	**70**	3	**70**	3
R-40	The Old Road	63	**67**	**70**	7	**70**	7
R-41	Holmby Court	64	65	**66**	2	**66**	2
R-42	London Court	56	59	59	3	59	3
R-43	Desert Rose Drive	**67**	**69**	**70**	3	**70**	3
R-44	Desert Rose Drive	**74**	**76**	**76**	2	**76**	2
R-45	Saguaro Street	62	64	64	2	64	2
R-46	Desert Rose Drive	54	56	57	3	56	2
R-47	Desert Rose Drive	54	56	57	3	57	3

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-48	Saguaro Street	55	57	58	3	58	3
R-49	Saguaro Street	63	65	65	2	65	2
R-50	Saguaro Street	64	**67**	**67**	3	**67**	3
R-51	Saguaro Street	**68**	**70**	**71**	3	**70**	2
R-52	Saguaro Street	**68**	**71**	**71**	3	**71**	3
R-53	Saguaro Street	**70**	**74**	**74**	4	**74**	4
R-54	Saguaro Street	64	**68**	**68**	4	**68**	4
R-55	Saguaro Street	59	61	61	2	61	2
R-56	Saguaro Street	61	63	63	2	63	2
R-57	Saguaro Street	64	**67**	65	1	**67**	3
R-58	Saguaro Street	59	62	59	0	62	3
R-59	Saguaro Street	55	59	57	2	59	4
R-60	Firebrand Drive	59	61	62	3	62	3
R-61	Firebrand Drive	58	60	61	3	61	3
R-62	Sedona Way	54	57	57	3	57	3
R-63	Ashby Court	55	56	56	1	56	1
R-64	Salem Court	56	57	57	1	57	1
R-65	Salem Court	57	60	60	3	60	3
R-66	Hartford Avenue	59	60	61	2	61	2
R-67	Quincy Street	57	58	59	2	59	2
R-68	Fenway Court	57	59	59	2	59	2
R-69	Fenway Court	53	55	55	2	55	2
R-70	Buckskin Drive	55	56	57	2	57	2
R-71	Ashby Court	55	59	59	4	58	3
R-72	Salem Court	60	63	63	3	63	3
R-73	Quincy Street	58	60	60	2	60	2
R-74	Quincy Street	51	53	53	2	53	2
R-75	Fenway Court	48	50	50	2	50	2
R-76	Buckskin Drive	47	49	49	2	49	2
R-77	Ashby Court	53	57	57	4	56	3
R-78	Ashby Court	55	56	56	1	56	1
R-79	Salem Court	59	61	61	2	61	2
R-80	Quincy Street	58	60	60	2	60	2
R-81	The Old Road	60	62	62	2	63	3
R-82	The Old Road	65	64	65	0	65	0
R-83	Wayne Mills Place	55	53	54	-1	54	-1
R-84	Wayne Mills Place	**66**	64	65	-1	65	-1
R-85	Playa Serena Drive	**70**	**69**	**69**	-1	**69**	-1
R-86	Playa Serena Drive	**71**	**70**	**70**	-1	**70**	-1
R-87	Los Arqueros Drive	**70**	**69**	**69**	-1	**69**	-1
R-88	Playa Serena Drive	63	62	62	-1	62	-1
R-89	Playa Serena Drive	60	59	59	-1	59	-1
R-90	Baviera Way	**67**	65	65	-2	65	-2
R-91	Baviera Way	**70**	**66**	**67**	-3	**67**	-3
R-92	Baviera Way	**70**	**67**	**68**	-2	**68**	-2
R-93	Baviera Way	51	47	49	-2	48	-3
R-94	Baviera Way	51	47	48	-3	48	-3

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-95	Baviera Way	55	50	52	-3	50	-5
R-96	Sycamore Meadow Drive	**69**	**68**	**68**	-1	**68**	-1
R-97	Sycamore Meadow Drive	65	63	64	-1	64	-1
R-98	Eagle Lane	63	61	62	-1	62	-1
R-99	Sycamore Meadow Drive	55	52	53	-2	53	-2
R-100	Silver Aspen Way	**74**	**74**	**75**	1	**74**	0
R-101	Silver Aspen Way	**71**	**71**	**71**	0	**71**	0
R-102	Silver Aspen Way	**71**	**71**	**71**	0	**71**	0
R-103	Silver Aspen Way	41	40	41	0	41	0
R-104	Silver Aspen Way	64	63	64	0	64	0
R-105	Silver Aspen Way	65	62	63	-2	63	-2
R-106	Silver Aspen Way	63	57	57	-6	57	-6
R-107	Silver Aspen Way	62	56	56	-6	56	-6
R-108	Silver Aspen Way	**67**	55	56	-11	56	-11
R-109	Twin Oaks Place	64	63	63	-1	63	-1
R-110	The Old Road	61	57	57	-4	58	-3
R-111	Twin Oaks Place	59	58	59	0	59	0
R-112	Twin Oaks Place	61	60	61	0	61	0
R-113	Rockwell Canyon Road	60	57	58	-2	58	-2
R-114	The Old Road	55	56	57	2	57	2
R-115	Tournament Road	60	61	62	2	62	2
R-116	Tournament Road	64	65	**66**	2	**66**	2
R-117	Tournament Road	61	61	62	1	62	1
R-118	Sand Wedge Lane	**67**	**67**	**67**	0	**67**	0
R-119	Sand Wedge Lane	**67**	**67**	**67**	0	**67**	0
R-120	Masters Cup Way	**67**	**67**	**67**	0	**67**	0
R-121	Masters Cup Way	**67**	**67**	**67**	0	**67**	0
R-122	Sand Wedge Lane	64	64	64	0	64	0
R-123	Sand Wedge Lane	64	64	65	1	65	1
R-124	Masters Cup Way	63	62	63	0	63	0
R-125	Masters Cup Way	65	65	**66**	1	**66**	1
R-126	Vista Fairways Drive	56	56	56	0	56	0
R-127	Altos Drive	**68**	**67**	**68**	0	**70**	2
R-128	Altos Drive	58	58	60	2	61	3
R-129	Farrow Drive	**68**	**67**	**74**	6	**74**	6
R-130	Farrow Drive	62	62	65	3	65	3
R-131	Farrow Drive	59	58	61	2	61	2
R-132	Farrow Drive	60	61	62	2	63	3
R-133	Sagecrest Circle	64	60	60	-4	60	-4
R-134	Sagecrest Circle	62	60	60	-2	60	-2
R-135	Sagecrest Circle	59	57	57	-2	57	-2
R-136	Hazelcrest Lane	56	55	56	0	55	-1
R-137	Hazelcrest Lane	57	55	56	-1	56	-1
R-138	Hazelcrest Lane	58	57	57	-1	57	-1
R-139	Hazelcrest Lane	57	56	56	-1	56	-1
R-140	Laurelcrest Lane	**67**	**66**	**66**	-1	**66**	-1
R-141	Sagecrest Circle	50	48	49	-1	49	-1

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-142	Bracken Lane	59	57	58	-1	58	-1
R-143	Laurelcrest Lane	56	55	55	-1	55	-1
R-144	Laurelcrest Lane	58	57	57	-1	57	-1
R-145	Foxtail Court	**73**	**72**	**72**	-1	**72**	-1
R-146	Foxtail Court	**74**	**73**	**72**	-2	**73**	-1
R-147	Foxtail Court	**73**	**73**	**72**	-1	**72**	-1
R-148	Foxtail Court	**69**	**69**	**69**	0	**69**	0
R-149	Foxtail Court	**70**	**69**	**69**	-1	**69**	-1
R-150	Foxtail Court	65	64	64	-1	64	-1
R-151	Foxtail Court	61	61	61	0	61	0
R-152	Sargasso Court	**70**	**70**	**70**	0	**70**	0
R-153	Sargasso Court	**67**	**66**	**66**	-1	**66**	-1
R-154	Sargasso Court	65	64	64	-1	64	-1
R-155	Sargasso Court	**68**	**67**	**67**	-1	**67**	-1
R-156	Sargasso Court	62	61	61	-1	61	-1
R-157	Sargasso Court	60	60	59	-1	59	-1
R-158	Sargasso Court	60	60	60	0	60	0
R-159	Wintergreen Court	64	64	64	0	64	0
R-160	Wintergreen Court	64	64	64	0	64	0
R-161	Wintergreen Court	64	63	64	0	63	-1
R-162	Wintergreen Court	63	62	63	0	62	-1
R-163	Wintergreen Court	59	59	59	0	59	0
R-164	Wintergreen Court	55	56	56	1	56	1
R-165	Wintergreen Court	59	59	59	0	59	0
R-166	Wintergreen Court	53	53	53	0	53	0
R-167	Wintergreen Court	52	52	52	0	52	0
R-168	Wintergreen Court	50	51	51	1	51	1
R-169	Wintergreen Court	49	49	49	0	49	0
R-170	Wintergreen Court	51	50	51	0	51	0
R-171	Sagecrest Circle	64	63	64	0	64	0
R-172	Sagecrest Circle	62	62	62	0	62	0
R-173	Sagecrest Circle	62	62	62	0	63	1
R-174	Sagecrest Circle	61	61	61	0	62	1
R-175	Sagecrest Circle	59	60	60	1	60	1
R-176	Sagecrest Circle	54	54	55	1	55	1
R-177	Sagecrest Circle	53	53	53	0	54	1
R-178	La Glorita Circle	65	64	64	-1	64	-1
R-179	La Glorita Circle	60	58	59	-1	58	-2
R-180	La Glorita Circle	59	57	58	-1	57	-2
R-181	La Glorita Circle	58	55	56	-2	56	-2
R-182	Markel Drive	57	55	56	-1	56	-1
R-183	Markel Drive	56	53	54	-2	54	-2
R-184	Markel Drive	55	53	54	-1	54	-1
R-185	Markel Drive	54	52	53	-1	53	-1
R-186	Markel Drive	54	52	53	-1	52	-2
R-187	Denise Place	64	63	63	-1	63	-1
R-188	Lisa Kelton Place	64	62	63	-1	63	-1

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-189	Cheryl Kelton Place	**74**	**73**	**74**	0	**74**	0
R-190	Jennifer Place	**71**	**70**	**70**	-1	**70**	-1
R-191	Wabuska Street	**68**	**67**	**68**	0	**68**	0
R-192	Denise Place	61	60	60	-1	60	-1
R-193	Lisa Kelton Place	56	54	55	-1	55	-1
R-194	Cheryl Kelton Place	**66**	65	**66**	0	65	-1
R-195	Cheryl Kelton Place	62	61	61	-1	61	-1
R-196	Wabuska Street	62	61	61	-1	61	-1
R-197	Denise Place	60	58	59	-1	59	-1
R-198	Lisa Kelton Place	55	53	54	-1	54	-1
R-199	Cheryl Kelton Place	64	62	63	-1	63	-1
R-200	Cheryl Kelton Place	60	58	59	-1	59	-1
R-201	Wabuska Street	61	60	60	-1	60	-1
R-202	Hawkbryn Avenue	**66**	65	**66**	0	**66**	0
R-203	Hawkbryn Avenue	59	59	59	0	59	0
R-204	Hawkbryn Avenue	57	58	58	1	58	1
R-205	Hawkbryn Avenue	58	58	58	0	58	0
R-206	Hawkbryn Avenue	56	55	55	-1	55	-1
R-207	Hawkbryn Avenue	56	56	56	0	57	1
R-208	Hawkbryn Avenue	55	55	56	1	56	1
R-209	Hawkbryn Avenue	55	56	56	1	56	1
R-210	Hawkbryn Avenue	59	59	59	0	59	0
R-211	Hawkbryn Avenue	56	56	56	0	56	0
R-212	Hawkbryn Avenue	54	53	53	-1	54	0
R-213	Hawkbryn Avenue	54	54	54	0	54	0
R-214	Hawkbryn Avenue	58	58	58	0	58	0
R-215	Hawkbryn Avenue	58	58	58	0	58	0
R-216	Hawkbryn Avenue	56	56	56	0	56	0
R-217	Hawkbryn Avenue	55	54	55	0	55	0
R-218	Hawkbryn Avenue	59	59	58	-1	59	0
R-219	Hawkbryn Avenue	59	59	59	0	59	0
R-220	Hawkbryn Avenue	59	59	59	0	59	0
R-221	Hawkbryn Avenue	59	59	60	1	59	0
R-222	Planned Residential	**68**	**67**	**69**	1	**68**	0
R-223	Planned Residential	62	61	62	0	62	0
R-224	Planned Residential	64	63	64	0	64	0
R-225	Planned Residential	**66**	65	**66**	0	**67**	1
R-226	Planned Residential	**66**	65	**66**	0	**66**	0
R-227	Planned Residential	59	58	59	0	59	0
R-228	Planned Residential	57	56	57	0	57	0
R-229	Planned Residential	60	59	60	0	60	0
R-230	Fourl Road	64	64	64	0	65	1
R-231	Fourl Road	60	60	60	0	60	0
R-232	Fourl Road	65	65	65	0	65	0
R-233	Fourl Road	62	62	63	1	63	1
R-234	Fourl Road	60	60	60	0	61	1
R-235	Carland Drive	52	52	52	0	52	0

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-236	Carland Drive	53	53	54	1	54	1
R-237	Fambrough Street	59	59	59	0	59	0
R-238	Fourl Road	53	53	53	0	53	0
R-239	Fourl Road	53	53	53	0	53	0
R-240	Carland Drive	52	51	52	0	52	0
R-241	Carland Drive	51	51	52	1	52	1
R-242	Fambrough Street	54	54	54	0	55	1
R-243	Fambrough Street	57	57	57	0	57	0
R-244	Fourl Road	61	59	59	-2	60	-1
R-245	Fourl Road	57	55	55	-2	56	-1
R-246	Fourl Road	53	51	52	-1	53	0
R-247	Daisetta Drive	53	51	52	-1	52	-1
R-248	Daisetta Drive	47	46	47	0	47	0
R-249	Fourl Road	52	51	51	-1	51	-1
R-250	Fourl Road	48	47	47	-1	48	0
R-251	Daisetta Drive	48	47	47	-1	48	0
R-252	Adamsboro Drive	53	52	53	0	53	0
R-253	Valley Oak Court	61	60	60	-1	60	-1
R-254	Valley Oak Court	58	57	57	-1	57	-1
R-255	La Salle Canyon Road	60	61	62	2	62	2
R-256	La Salle Canyon Road	59	60	60	1	60	1
R-257	La Salle Canyon Road	55	56	55	0	55	0
R-258	La Salle Canyon Road	56	57	56	0	56	0
R-259	La Salle Canyon Road	48	49	48	0	48	0
R-260	La Salle Canyon Road	48	48	47	-1	47	-1
R-261	La Salle Canyon Road	48	48	47	-1	47	-1
R-262	La Salle Canyon Road	48	49	48	0	48	0
R-263	La Salle Canyon Road	48	48	47	-1	48	0
R-264	La Salle Canyon Road	47	48	47	0	48	1
R-265	La Salle Canyon Road	60	61	61	1	61	1
R-266	La Salle Canyon Road	37	38	39	2	39	2
R-267	La Salle Canyon Road	47	48	47	0	47	0
R-268	La Salle Canyon Road	39	40	40	1	41	2
R-269	La Salle Canyon Road	48	49	49	1	49	1
R-270	La Salle Canyon Road	42	44	44	2	44	2
R-271	La Salle Canyon Road	46	47	47	1	47	1
R-272	La Salle Canyon Road	49	50	49	0	50	1
R-273	The Old Road	65	66	65	0	**66**	1
R-274	The Old Road	**68**	**70**	**70**	2	**70**	2
R-275	The Old Road	64	64	60	-4	64	0
R-276	The Old Road	63	64	61	-2	64	1
R-277	The Old Road	63	64	62	-1	64	1
R-278	The Old Road	60	60	59	-1	60	0
R-279	The Old Road	63	64	62	-1	64	1
R-280	The Old Road	63	64	61	-2	64	1
R-281	The Old Road	59	60	58	-1	60	1
R-282	The Old Road	60	60	58	-2	60	0

Table 2.15.H Projected Traffic Noise Levels, dBA L_{eq}

Rec No.	Location	Existing Noise Level[1]	Future No Build[1]	Alternative 2 (Worst-case)[2]	Change from Existing Level	Alternative 3 (Worst-case)[2]	Change from Existing Level
R-283	The Old Road	60	60	59	-1	60	0
R-284	The Old Road	59	60	59	0	60	1
R-285	The Old Road	60	61	60	0	61	1
R-286	The Old Road	59	60	59	0	60	1
R-287	The Old Road	62	63	63	1	64	2
R-288	The Old Road	62	63	63	1	64	2
R-289	The Old Road	47	48	48	1	49	2
R-290	Coltrane Avenue	**72**	**73**	**72**	0	**73**	1
R-291	Coltrane Avenue	62	62	62	0	62	0
R-292	Farrow Drive	65	65	**69**	4	**69**	4
R-293	Farrow Drive	64	64	**67**	3	**67**	3
R-294	Farrow Drive	63	63	65	2	65	2
R-295	Farrow Drive	60	60	62	2	62	2
R-296	Altos Drive	**68**	**68**	**70**	2	**69**	1
R-297	Altos Drive	65	65	**67**	2	**67**	2
R-298	Altos Drive	62	62	64	2	64	2
R-299	Altos Drive	60	60	62	2	62	2
R-300	Altos Drive	**68**	**66**	**68**	0	**68**	0
R-301	Altos Drive	65	64	65	0	**66**	1
R-302	Altos Drive	63	62	64	1	65	2
R-303	Altos Drive	62	61	63	1	65	3
R-304	Altos Drive	61	60	62	1	63	2
R-305	Farrow Drive	63	61	63	0	63	0
R-306	Farrow Drive	62	60	62	0	63	1
R-307	Farrow Drive	62	62	63	1	64	2
R-308	Farrow Drive	63	62	64	1	65	2
R-309	Vista Ridge Drive	62	62	63	1	64	2
R-310	Farrow Drive	57	56	58	1	58	1
R-311	Via Acorde	62	61	62	0	62	0
R-312	Sand Wedge Lane	**69**	**69**	**69**	0	**69**	0

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008) and *Noise Study Report Addendum* (LSA Associates, Inc., June 2009).

[1] Modeled existing noise level adjusted to the peak noise hour.

[2] As the traffic along I-5 is the subject roadway, traffic along local streets was removed from the future traffic noise modeling (future No Build and Alternative 2 and 3 scenarios) to determine traffic noise impacts of the Build Alternatives.

[3] Numbers in **bold** represent noise levels that approach or exceed the NAC.

dBA $L_{eq}(h)$ = A-weighted noise level

The following receptor locations would be exposed or would continue to be exposed to noise levels that approach or exceed the NAC under Alternative 2:

R-1. This receptor location represents the existing Castaic County Sports Complex on the east side of I-5. Currently, there are no existing walls that protect the sports complex.

R-13. This receptor location represents a future planned residence along The Old Road on the west side of I-5. As a worst-case scenario, it is assumed that there would be no barriers constructed with the development of the future planned residences.

R-14. This receptor location represents an existing residence along The Old Road on the west side of I-5. Currently, there are no existing walls that protect this residence.

R-15 through R-21. These receptor locations represent existing residences along Daisy Court, Primrose Way, and Iris Place on the west side of I-5. Two existing 6 ft high walls currently exist along the residential property line to protect these residences.

R-23 through R-28, R-30 through R-32, and R-35. These receptor locations represent existing residences along Morning Glory Place, Marigold Circle, Cedar Oak Lane, Elkwood Lane, and North Spring Meadow Court on the west side of I-5. An existing 7.5 and 8 ft high wall along the residential property line currently exists to protect these residences.

R-36 through R-39. These receptor locations represent existing residences along Cedar Oak Lane on the west side of I-5. A 10.5 ft high wall along the residential property line currently exists to protect these residences.

R-40. This receptor location represents an existing residence along The Old Road on the west side of I-5. Currently, there are no existing walls that protect this residence.

R-41. This receptor location represents an existing residence along Holmby Court on the west side of I-5. Currently, there are no existing walls that protect this residence.

R-43 and R-44. These receptor locations represent existing residences along Desert Rose Drive on the west side of I-5. A 2 to 5 ft high wall along the residential property line currently exists to protect these residences.

R-50 through R-54 and R-57. These receptor locations represent existing residences along Saguaro Street and Apache Court on the west side of I-5. A 3.5 to 5.5 ft high wall along the residential property line currently exists to protect these residences.

R-85 through R-87. These receptor locations represent existing residences along Los Arqueros and Playa Serena Drive on the west side of I-5. Currently, there are no existing walls that protect this residence.

R-91 and R-92. These receptor locations represent existing residences along Baviera Way on the west side of I-5. Currently, there are no existing walls that protect these residences.

R-96. This receptor location represents an existing residence along Sycamore Meadow Drive on the west side of I-5. Currently, there are no existing walls that protect these residences.

R-100 through R-102. These receptor locations represent existing residences along Silver Aspen Way on the west side of I-5. Currently, there are no existing walls that protect these residences.

R-116. This receptor location represents an existing outdoor active use area associated with Cal Arts along Tournament Road on the east side of I-5. Currently, there are no existing walls that protect the outdoor active use area associated with Cal Arts.

R-118 and R-119. These receptor loctions represent existing residences along Sand Wedge Lane on the east side of I-5. Currently, there are no existing walls that protect these residences.

R-120, R-121, and R-125. These receptor loctions represent existing residences along Masters Cup Way on the east side of I-5. Currently, there are no existing walls that protect these residences.

R-127. This receptor location represents an existing residence along Altos Drive on the northeast corner of I-5 and Lyons Avenue. Currently, there are no existing walls that protects this residence.

R-129. This receptor location represents an existing residence along Farrow Drive on the northeast corner of I-5 and Lyons Avenue. A 6 ft high wall along the residential property line currently exists to protect this residence.

R-140. This receptor location represents an existing residence along Laurelcrest Circle on the southwest corner of I-5 and Lyons Avenue. Currently, there are no existing walls that protect these residences.

R-145 and R-146. These receptor locations represent existing residences along Foxtail Court on the west side of I-5. A 0–3 ft high wall along the residential property line currently exists to protect these residences.

R-147, R-148, and R-149. These receptor locations represent existing residences along Dogwood Court on the west side of I-5. Currently, there are no existing walls that protect these residences.

R-152, R-153, and R-155. These receptor locations represent existing residences along Sargasso Court on the west side of I-5. Currently, there are no existing walls that protect these residences.

R-189 through R-191, R-194, and R-202. These receptor locations represent existing residences along Cheryl Kelton Place and Hawkbryn Avenue on the east side of I-5. A 13 ft high wall along the edge of shoulder currently exists to protect these residences.

R-222. This receptor location represents an approved future multifamily residence along the west side of The Old Road and I-5. As a worst-case scenario, it is assumed that there would be no barriers constructed with the development of the future planned multifamily residence. No building permit for the approved residential project has been issued to date.

R-225 and R-226. These receptor locations represent approved future residences along the west side of The Old Road and I-5. As a worst-case scenario, it is assumed that there would be no barriers constructed with the development of the future planned residences.

R-274. These receptor locations represent an existing church playground and residence along The Old Road on the west side of I-5. Currently, there are no existing walls that protect the church playground and the residence.

R-290. This receptor location represents an existing residence along the west side of I-5. Currently, there are no existing walls that protect this residence.

R–292 and R-293. These receptor locations represent existing residences along Farrow Drive on the east side of I-5. Currently, there is an existing 6 ft wall along the southwest edge that protects these properties.

R–296, R–297, and R-300. These receptor locations represent existing residences along Altos Drive on the east side of I-5. Currently, there are no existing walls that protect these residences.

R-312. This receptor location represents existing residences along Sand Wedge Lane on the east side of I-5. Currently, there are no existing walls that protect these residences.

Potential long-term noise impacts would not be adverse because abatement measures outlined below in Section 2.15.4 were considered for all receptors that would approach or exceed the NAC.

Long-Term Interior Noise Impacts

Eleven (11) locations were evaluated for potential long-term interior noise impacts associated with Alternative 2. Interior noise impacts were evaluated for residences with no outdoor active use areas or outdoor active use areas that are physically shielded, classrooms, and hotels located along the project corridor. Figure 2.15.1 shows the 11 interior noise evaluation locations. Table 2.15.I shows the results of the predicted interior noise level under the future worst-case traffic conditions for Alternative 2. As shown in Table 2.15.I, the predicted future interior noise levels at all 11 locations would not approach or exceed the 52 dBA L_{eq} NAC under Activity

Table 2.15.I Predicted Future Interior Noise Levels

Receptor	Exterior to Interior Reduction	Alternative 2		Alternative 3	
		Exterior	Interior	Exterior	Interior
EI-1	23	66	43	66	43
EI-2	25	74	49	74	49
EI-3	33	73	40	73	40
EI-4	27	77	50	77	50
EI-5	15	51	36	51	36
EI-6	17	64	47	64	47
EI-7	20[1]	59	39	60	40
EI-8	18	60	42	60	42
EI-9	24	71	47	71	47
EI-10	16	61	45	61	45
EI-11	23	71	48	71	48

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008).

[1] The exterior to interior attenuation of 20 dBA was assumed for this residence because there was no access to conduct interior noise level measurements there.

Category E (52) for Alternative 2. Therefore, potential long-term interior noise impacts would not be considered adverse.

Long-Term Vibration Impacts

The roadway surface in the project vicinity would be smooth enough that groundborne vibration from freeway traffic would not exceed the impact criteria. Therefore, potential long-term vibration impacts would not be considered adverse.

Alternative 3: Full Median Alternative

Long-Term Noise Impacts

Potential long-term noise impacts associated with project operations are solely from traffic noise. As shown in Table 2.15.H, of the 312 receptor locations modeled, 77 receptors under Alternative 3 would or would continue to "approach or exceed" the NAC under the future 2030 conditions or the worst-case traffic conditions. No receptor locations would experience a "substantial increase" of 12 dBA or more over their corresponding existing modeled noise levels.

The same receptor locations as described above for Alternative 2 would be exposed or would continue to be exposed to noise levels that approach or exceed the NAC under Alternative 3, with the exception of R-57, R-194, R-273, and R-301. R-194 would not be exposed to noise levels that approach or exceed the NAC under Alternative 3. R-57, R-273, and R-301 would be exposed or would continue to be exposed to noise levels that approach or exceed the NAC under Alternative 3. The following is a description of R-57, R-273, and R-301:

R-57. This receptor location represents an existing residence along Saguaro Street on the west side of I-5. A 3.5 to 5.5 ft high wall along the residential property line currently exists to protect this residence.

R-273. This receptor location represents an existing residence along The Old Road on the west side of I-5. Currently, there are no existing walls that protect the church playground and the residence.

R-301. This receptor location represents an existing residence along Altos Drive on the east side of I-5. Currently, there are no existing walls that protect this residence.

Long-Term Interior Noise Impacts

Table 2.15.I shows the results of the predicted interior noise level under the future worst-case traffic conditions for Alternative 3. As shown in Table 2.15.I, the predicted future interior noise levels at all 11 locations would remain below the 52 dBA L_{eq} NAC under Activity Category E (52) for Alternative 3. Therefore, potential long-term interior noise impacts would not be considered adverse.

Long-Term Vibration Impacts

Alternative 3 would result in the same vibration impacts as those described above for Alternative 2. As discussed above, potential long-term vibration impacts would not be considered adverse.

Early Implementation Project (EIP)

Long-Term Noise Impacts

Potential traffic noise impacts during the EIP (from SR-14 to Pico/Lyons) were evaluated for the Build Alternatives as part of the *Noise Impact Analysis* (August 2008). Based on the existing peak traffic noise levels shown in Table 3.15.H, of the 159 modeled receptors located in Segment 1, 19 receptors would approach or exceed the NAC. These receptors would continue to approach or exceed the NAC under Alternatives 2 and 3, except for R-194 under Alternative 3. In addition, Receptor R-273 under Alternative 3 would approach or exceed the NAC due to an increase in traffic volumes from future growth.

Potential long-term noise impacts would not be adverse because abatement measures outlined below in Section 2.15.4 were considered for all receptors that would approach or exceed the NAC.

Long-Term Vibration Impacts

Because rubber tires and suspension systems of on-road vehicles provide vibration isolation, it is unusual for on-road vehicles to cause ground-borne noise or vibration problems. Ground-borne vibrations are mostly associated with passenger vehicles and trucks traveling on poor roadway conditions, such as potholes, bumps, expansion joints, or other discontinuities in the road surface. Passenger vehicles and trucks would cause effects such as rattling of windows, and the source is almost always airborne noise. Similar to the Build Alternatives, the EIP would use new asphalt pavement, and there will be no potholes, bumps, expansion joints, or other discontinuities in the road surface that would generate ground-borne vibration or noise impacts from vehicular traffic traveling on I-5.

2.15.4 Avoidance, Minimization and/or Mitigation Measures

This section describes recommended actions that avoid, minimize, or abate the adverse project noise impacts identified for Alternatives 2 and 3.

If the traffic noise level at a sensitive receptor location is predicted to "approach or exceed" the NAC, or if the predicted traffic noise level is 12 dBA or more higher than the existing noise level at the analyzed sensitive receptor location, noise abatement measures must be considered. Sound barriers were analyzed for all receptor locations that would be exposed to or would continue to be exposed to traffic noise levels that approach or exceed the NAC. At each location, six sound barrier heights were analyzed: 6, 8, 10, 12, 14, and 16 ft. For sound barriers that would be located within 15 ft of the nearest travel lane, a barrier height of 16 ft was not analyzed.

2.15.4.1 Sound Barriers Analyzed

Alternative 2

The sound barriers that were analyzed to protect the sensitive receptor locations exposed to traffic noise levels approaching or exceeding the NAC for Alternative 2 are shown in Figure 2.15.1.

Predicted noise reduction resulting from the analyzed sound barriers is shown in Tables 2.15.J, 2.15.K, 2.15.N, 2.15.O, and 2.15.P (in Appendix M). Specifically, the results of the barrier analysis along the residential property line are shown in Table 2.15.J (in Appendix M), and the results of the barrier analysis within the right of way are shown in Table 2.15.K (in Appendix M). Tables 2.15.N, 2.15.O, and 2.15.P shows the additional barrier modeling for SB Nos. 2-5, 2-9, 3-11a, and 3-11b.

Alternative 3

The sound barriers that were analyzed to protect the sensitive receptor locations exposed to traffic noise levels approaching or exceeding the NAC for Alternative 3 are shown in Figure 2.15.1.

Predicted noise reduction resulting from the analyzed sound barriers are shown in Tables 2.15.L, 2.15.M, 2.15.Q, 2.15.R, and 2.15.S (in Appendix M). Specifically, the results of the barrier analysis along the residential property line are shown in Table 2.15.L (in Appendix M) and the results of the barrier analysis within the right of way are shown in Table 2.15.M (in Appendix M). Tables 2.15.Q, 2.15.R, and 2.15.S, shows the additional barrier modeling for SB Nos. 2-5, 2-9, 3-11a, and 3-11b.

Feasibility

A minimum noise reduction of 5 dBA must be achieved at the impacted receivers in order for the proposed noise abatement measure to be considered feasible. The feasibility criterion is not necessarily a noise abatement design goal. Greater noise reductions are encouraged if they can be reasonably achieved. The following elements may restrict feasibility:

- Topography
- Access requirements for driveways, ramps, etc.
- Location of local streets in relation to the project
- Other noise sources in the area
- Safety considerations

Alternative 2

Table 2.15.T shows the feasible sound barriers for Alternatives 2, as well as their heights and approximate lengths, and the number of benefited residences.

Of the 33 sound barriers evaluated, 26 sound barriers under Alternative 2 were capable of reducing noise levels by 5 dBA, as required to be considered feasible.Sound Barrier Nos. 1-1, 1-5, 1-8, 1-11, 2-7, 2-8, and 3-10 were determined to be not feasible because the barriers would not reduce noise levels by 5 dBA or more, and they are therefore not shown in Table 2.15.T.

Alternative 3

Table 2.15.U shows the feasible sound barriers for Alternative 3, as well as their heights, approximate lengths, and number of benefited residences.

Of the 33 sound barriers evaluated, 26 sound barriers under Alternative 3 were capable of reducing noise levels by 5 dBA, as required to be considered feasible. Sound Barrier Nos. 1-1, 1-5, 1-8, 1-11, 2-7, 2-8, and 3-10 were determined to be not feasible because the barriers would not reduce noise levels by 5 dBA or more, and they are therefore not shown in Table 2.15.U.

Table 2.15.T Summary of Abatement Information for Alternative 2

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Sound Barrier Location	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
1-2	6	315	Residential Property Line	4	$40,000	$160,000	$129,746	Yes
	8	315		4	$42,000	$168,000	$156,055	Yes
	10	315		4	$42,000	$168,000	$182,364	No[2]
	12	315		4	$44,000	$176,000	$208,673	No
	14	315		4	$44,000	$176,000	$234,982	No
	16	315		4	$46,000	$184,000	$261,290	No
1-3	6	587	Residential Property Line	4	$42,000	$168,000	$230,875	No
	8	587		4	$44,000	$176,000	$279,901	No
	10	587		4	$44,000	$176,000	$328,927	No
	12	587		4	$44,000	$176,000	$377,953	No
	14	587		4	$46,000	$184,000	$426,980	No
	16	587		4	$46,000	$184,000	$476,006	No
1-4	8	395	Residential Property Line	1	$42,000	$42,000	$198,622	No
	10	395		1	$44,000	$44,000	$231,612	No
	12	395		1	$44,000	$44,000	$264,602	No
	14	395		1	$44,000	$44,000	$297,593	No
	16	395		1	$44,000	$44,000	$330,583	No
1-6[4]	6	335	Residential Property Line	3	$40,000	$120,000	$129,718	No[2]
	8	335		3	$40,000	$120,000	$157,697	No
	10	335		3	$40,000	$120,000	$185,676	No
	12	335		3	$42,000	$126,000	$213,655	No
	14	335		3	$42,000	$126,000	$241,634	No
	16	335		3	$42,000	$126,000	$269,614	No
1-7	8	631	Residential Property Line	4	$38,000	$152,000	$305,352	No
	10	631		4	$38,000	$152,000	$358,054	No
	12	631		4	$38000	$152,000	$410,755	No
	14	631		4	$38,000	$152,000	$463,456	No
	16	631		4	$38,000	$160,000	$516,157	No
1-9	6	234	Residential Property Line	1	$52,000	$52,000	$100,703	No
	8	234		1	$54,000	$54,000	$120,247	No
	10	234		1	$54,000	$54,000	$139,790	No

Table 2.15.T Summary of Abatement Information for Alternative 2

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Sound Barrier Location	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
1-9	12	234	Residential Property Line	1	$54,000	$54,000	$159,334	No
	14	234		1	$54,000	$54,000	$178,878	No
	16	234		1	$54,000	$54,000	$198,421	No
1-10	10	5,922	Right of Way	3	$48,000	$144,000	$3,240,518	No
	12	5,922		3	$50,000	$150,000	$3,666,902	No
	14	5,922		3	$50,000	$150,000	$4,093,286	No
2-1	6	525	Residential Property Line	7	$40,000	$280,000	$219,444	Yes
	8	525		7	$42,000	$294,000	$263,292	Yes
	10	525		7	$44,000	$308,000	$307,140	Yes
	12	525		7	$44,000	$308,000	$350,988	No
	14	525		7	$46,000	$322,000	$394,836	No
	16	525		7	$46,000	$322,000	$438,684	No
2-2	6	626	Residential Property Line	8	$38,000	$304,000	$277,259	Yes
	8	626		8	$40,000	$320,000	$329,542	No[2]
	10	626		8	$40,000	$320,000	$381,826	No
	12	626		8	$40,000	$320,000	$434,109	No
	14	626		8	$42,000	$336,000	$486,393	No
	16	626		8	$42,000	$336,000	$538,676	No
2-3	6	389	Residential Property Line	6	$38,000	$228,000	$164,680	Yes
	8	389		6	$40,000	$240,000	$197,169	Yes
	10	389		6	$40,000	$240,000	$229,658	Yes
	12	389		6	$42,000	$252,000	$262,148	No[2]
	14	389		10	$42,000	$420,000	$294,637	Yes
	16	389		10	$42,000	$420,000	$327,126	Yes
2-4	6	729	Residential Property Line	29	$44,000	$1,276,000	$309,390	Yes
	8	729		29	$46,000	$1,334,000	$370,276	Yes
	10	729		29	$46,000	$1,334,000	$431,162	Yes
	12	729		29	$48,000	$1,392,000	$492,048	Yes
	14	729		29	$48,000	$1,392,000	$552,935	Yes
	16	729		29	$48,000	$1,392,000	$613,821	Yes

Table 2.15.T Summary of Abatement Information for Alternative 2

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Sound Barrier Location	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
2-5	10	1,540	Edge of shoulder	3	$48,000	$144,000	$676,378	No
	12	1,540		7	$48,000	$336,000	$787,248	No
	14	1,540		20	$50,000	$1,000,000	$896,280	Yes
	16	1,540		25	$50,000	$1,250,000	$1,009,008	Yes
2-6	6	282	Residential Property Line	3	$40,000	$120,000	$114,314	Yes
	8	282		3	$40,000	$120,000	$137,867	No
	10	282		3	$42,000	$126,000	$161,419	No
	12	282		3	$42,000	$126,000	$184,972	No
	14	282		3	$42,000	$126,000	$208,524	No
	16	282		3	$44,000	$132,000	$232,077	No
2-9	12	1,061	Right of Way	3	$38,000	$114,000	$542,383	No
	14	1,061		3	$40,000	$120,000	$618,775	No
	14	1,308		4	$40,000	$160,000	$761,256	No
	16	1,308		5	$42,000	$210,000	$857,002	No
3-1	6	1,842	Edge of Shoulder	5	$56,000	$280,000	$742,694	No
	8	1,842		5	$56,000	$280,000	$875,318	No
	10	1,842		5	$58,000	$290,000	$1,007,942	No
	12	1,842		5	$58,000	$290,000	$1,140,566	No
	14	1,842		5	$60,000	$300,000	$1,273,190	No
3-2	6	143	Residential Property Line	1	$40,000	$40,000	$64,474	No
	8	143		1	$40,000	$40,000	$76,417	No
	10	143		1	$40,000	$40,000	$88,361	No
	12	143		1	$40,000	$40,000	$100,304	No
	14	143		1	$40,000	$40,000	$112,248	No
	16	143		1	$40,000	$40,000	$124,191	No
3-3	6	118	Residential Property Line	1	$52,000	$52,000	$51,910	No
	8	118		1	$52,000	$52,000	$61,765	No
	10	118		1	$52,000	$52,000	$71,621	No
	12	118		1	$54,000	$54,000	$81,478	No
	14	118		1	$54,000	$54,000	$91,332	No
	16	118		1	$54,000	$54,000	$101,187	No

Table 2.15.T Summary of Abatement Information for Alternative 2

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Sound Barrier Location	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
3-4	8	969	Residential Property Line	3	$44,000	$132,000	$494,376	No
	10	969		12	$46,000	$552,000	$575,306	No[2]
	12	969		12	$46,000	$552,000	$656,237	No
	14	969		12	$48,000	$576,000	$737,168	No
	16	969		12	$48,000	$576,000	$818,099	No
3-5	14	1,129	Residential Property Line	22	$44,000	$968,000	$897,191	Yes
	16	1,129		25	$44,000	$1,100,000	$991,485	Yes
3-6	16	233	Residential Property Line	2	$42,000	$84,000	$201,245	No
3-7	6	350	Residential Property Line	5	$42,000	$210,000	$142,296	Yes
	8	350		5	$42,000	$210,000	$171,528	Yes
	10	350		5	$42,000	$210,000	$200,760	Yes
	12	350		5	$42,000	$210,000	$229,992	No[2]
	14	350		5	$42,000	$210,000	$259,224	No
	16	350		5	$42,000	$210,000	$288,456	No
3-8	6	1,142	Residential Property Line	9	$44,000	$396,000	$477,876	No
	8	1,142		9	$44,000	$396,000	$573,255	No
	10	1,142		14	$46,000	$644,000	$668,635	No[2]
	12	1,142		14	$46,000	$644,000	$764,015	No
	14	1,142		14	$46,000	$644,000	$859,395	No
	16	1,142		14	$48,000	$672,000	$954,775	No
3-9	8	2,189	Residential Property Line	18	$42,000	$756,000	$1,120,113	No
	10	2,189		18	$44,000	$792,000	$1,302,938	No
	12	2,189		25	$44,000	$1,100,000	$1,485,764	No
	14	2,189		32	$46,000	$1,472,000	$1,668,589	No
	16	2,189		32	$46,000	$1,472,000	$1,851,414	No
3-11[3]	12	5,615	Right of Way	8	$44,000	$352,000	$3,476,808	No
	14	5,615		29	$44,000	$1,276,000	$3,881,088	No

Table 2.15.T Summary of Abatement Information for Alternative 2

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Sound Barrier Location	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
3-11a	12	2,431	Right of Way	7	$44,000	$308,000	$1,505.275	No
	14	2,431		25	$44,000	$1,100,000	$1,680,249	No
	16	2,431		35	$44,000	$1,540,000	$1,855,339	No
	12	1,273		7	$44,000	$308,000	$788,242	No
	14	1,273		21	$44,000	$924,000	$879,867	Yes
	16	1,273		30	$44,000	$1,320,000	$971,554	Yes
3-11b	14	1,048	Right of Way	7	$42,000	$294,000	$724,352	No
	16	1,048		7	$44,000	$308,000	$799,834	No

Source: *Noise Abatement Decision Report* (LSA Associates, Inc., December 2008) and *Noise Study Report Addendum* (LSA Associates, Inc., June 2009).

[1] Number of residences that are attenuated by 5 dBA or more by the modeled barrier.

[2] Sound barrier height may be considered reasonable because the cost is within 10 percent of the reasonable allowance.

[3] Feasible sound barrier location for Receptor R-40 and an alternative sound barrier location for SB Nos. 3-4, 3-5, and 3-6.

[4] The reasonableness of Sound Barrier No. 1-6 is pending on the status of the approved future residential development.

dBA = A-weighted decibels

ft = feet

Table 2.15.U Summary of Abatement Information for Alternative 3

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
1-2	6	315	Residential Property Line	4	$42,000	$168,000	$129,746	Yes
	8	315		4	$42,000	$168,000	$158,055	Yes
	10	315		4	$44,000	$176,000	$182,364	No[2]
	12	315		4	$44,000	$176,000	$208,673	No
	14	315		4	$46,000	$184,000	$234,982	No
	16	315		4	$46,000	$184,000	$261,290	No
1-3	6	587	Residential Property Line	2	$42,000	$84,000	$230,875	No
	8	587		4	$44,000	$176,000	$279,901	No
	10	587		4	$44,000	$176,000	$328,927	No
	12	587		4	$44,000	$176,000	$377,953	No
	14	587		4	$46,000	$184,000	$426,980	No
	16	587		4	$46,000	$184,000	$476,006	No
1-4	8	395	Residential Property Line	1	$40,000	$40,000	$198,622	No
	10	395		1	$42,000	$42,000	$231,612	No
	12	395		1	$42,000	$42,000	$264,602	No
	14	395		3	$42,000	$126,000	$297,593	No
	16	395		3	$42,000	$126,000	$330,583	No
1-6[4]	6	335	Residential Property Line	3	$40,000	$120,000	$129,718	No[2]
	8	335		3	$40,000	$120,000	$157,697	No
	10	335		3	$40,000	$120,000	$185,676	No
	12	335		3	$42,000	$126,000	$213,655	No
	14	335		3	$42,000	$126,000	$241,634	No
	16	335		3	$42,000	$126,000	$269,614	No
1-7	6	631	Residential Property Line	2	$38,000	$76,000	$252,651	No
	8	631		2	$38,000	$76,000	$305,352	No
	10	631		4	$40,000	$160,000	$358,054	No
	12	631		4	$40,000	$160,000	$410,755	No
	14	631		4	$40,000	$160,000	$463,456	No
	16	631		4	$40,000	$160,000	$516,157	No

Table 2.15.U Summary of Abatement Information for Alternative 3

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
1-9	6	234	Residential Property Line	1	$54,000	$54,000	$100,703	No
	8	234		1	$54,000	$54,000	$120,247	No
	10	234		1	$54,000	$54,000	$139,790	No
	12	234		1	$54,000	$54,000	$159,334	No
	14	234		1	$54,000	$54,000	$178,878	No
	16	234		1	$54,000	$54,000	$198,421	No
1-10	8	5,922	Right of way	3	$48,000	$144,000	$2,814,134	No
	10	5,922		3	$48,000	$144,000	$3,240,518	No
	12	5,922		3	$50,000	$150,000	$3,666,902	No
	14	5,922		7	$50,000	$350,000	$4,093,286	No
2-1	6	525	Residential Property Line	7	$40,000	$280,000	$219,444	Yes
	8	525		7	$42,000	$294,000	$263,292	Yes
	10	525		7	$44,000	$308,000	$307,140	Yes
	12	525		7	$44,000	$308,000	$350,988	No
	14	525		7	$46,000	$322,000	$394,836	No
	16	525		7	$46,000	$322,000	$438,684	No
2-2	6	626	Residential Property Line	8	$38,000	$304,000	$277,259	Yes
	8	626		8	$40,000	$320,000	$329,542	No[2]
	10	626		8	$40,000	$320,000	$381,826	No
	12	626		8	$40,000	$320,000	$434,109	No[2]
	14	626		8	$42,000	$336,000	$486,393	No
	16	626		8	$42,000	$336,000	$538,676	No
2-3	6	389	Residential Property Line	6	$38,000	$228,000	$164,680	Yes
	8	389		6	$40,000	$240,000	$197,769	Yes
	10	389		6	$40,000	$240,000	$229,658	Yes
	12	389		6	$42,000	$252,000	$262,148	No[2]
	14	389		10	$42,000	$420,000	$294,637	Yes
	16	389		16	$42,000	$672,000	$327,126	Yes

Table 2.15.U Summary of Abatement Information for Alternative 3

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
2-4	6	729	Residential Property Line	29	$42,000	$1,218,000	$309,390	Yes
	8	729		29	$44,000	$1,276,000	$370,276	Yes
	10	729		29	$46,000	$1,334,000	$431,162	Yes
	12	729		29	$46,000	$1,334,000	$492,048	Yes
	14	729		29	$46,000	$1,334,000	$552,935	Yes
	16	729		29	$46,000	$1,334,000	$613,821	Yes
2-5	10	1,537	Edge of Shoulder	3	$48,000	$144,000	$675,050	No
	12	1,537		7	$48,000	$336,000	$785,714	No
	14	1,537		20	$50,000	$1,000,000	$894,534	Yes
	16	1,537		25	$50,000	$1,250,000	$1,007,042	Yes
2-6	6	282	Residential Property Line	3	$40,000	$120,000	$114,314	Yes
	8	282		3	$40,000	$120,000	$137,887	No
	10	282		3	$42,000	$126,000	$161,419	No
	12	282		3	$42,000	$126,000	$184,972	No
	14	282		3	$42,000	$126,000	$208,524	No
	16	282		3	$42,000	$126,000	$232,077	No
2-9	12	1,308	Edge of shoulder	1	$40,000	$40,000	$668,650	No
	14	1,308		4	$42,000	$168,000	$761,256	No
	16	1,308		5	$42,000	$210,000	$857,002	No
3-1	6	1,843	Edge of Shoulder	5	$56,000	$280,000	$543,758	No
	8	1,843		5	$56,000	$280,000	$676,382	No
	10	1,843		5	$58,000	$290,000	$809,006	No
	12	1,843		5	$58,000	$290,000	$941,630	No
	14	1,843		5	$60,000	$300,000	$1,074,254	No
3-2	6	143	Residential Property Line	1	$40,000	$40,000	$64,474	No
	8	143		1	$40,000	$40,000	$76,417	No
	10	143		1	$40,000	$40,000	$88,361	No
	12	143		1	$40,000	$40,000	$100,304	No
	14	143		1	$40,000	$40,000	$112,248	No
	16	143		1	$40,000	$40,000	$124,191	No

Table 2.15.U Summary of Abatement Information for Alternative 3

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
3-3	8	118	Residential Property Line	1	$50,000	$50,000	$61,765	No
	10	118		1	$50,000	$50,000	$71,621	No
	12	118		1	$52,000	$52,000	$81,476	No
	14	118		1	$52,000	$52,000	$91,332	No
	16	118		1	$52,000	$52,000	$101,187	No
3-4	8	969	Residential Property Line	3	$44,000	$132,000	$494,376	No
	10	969		12	$44,000	$528,000	$575,306	No[2]
	12	969		12	$46,000	$552,000	$656,237	No
	14	969		12	$46,000	$552,000	$737,168	No
	16	969		12	$48,000	$576,000	$818,099	No
3-5	12	1,129	Residential Property Line	3	$42,000	$126,000	$802,896	No
	14	1,129		17	$44,000	$748,000	$897,191	No
	16	1,129		25	$44,000	$1,100,000	$991,485	Yes
3-6	16	233	Residential Property Line	2	$44,000	$88,000	$201,245	No
3-7	6	350	Residential Property Line	5	$40,000	$200,000	$142,296	Yes
	8	350		5	$40,000	$200,000	$171,528	Yes
	10	350		5	$40,000	$200,000	$200,760	No[2]
	12	350		5	$40,000	$200,000	$229,992	No
	14	350		5	$40,000	$200,000	$259,224	No
	16	350		5	$40,000	$200,000	$288,456	No
3-8	6	1,142	Residential Property Line	9	$44,000	$396,000	$477,876	No
	8	1,142		9	$44,000	$396,000	$573,255	No
	10	1,142		9	$46,000	$414,000	$668,635	No
	12	1,142		14	$46,000	$644,000	$764,015	No
	14	1,142		14	$46,000	$644,000	$859,395	No
	16	1,142		14	$48,000	$672,000	$954,775	No

Table 2.15.U Summary of Abatement Information for Alternative 3

Sound Barrier No.	Height (ft)	Approximate Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimate Sound Barrier Construction Cost	Reasonable?
3-9	8	2,189	Residential Property Line	11	$44,000	$484,000	$1,120,113	No
	10	2,189		18	$44,000	$792,000	$1,302,938	No
	12	2,189		25	$46,000	$1,150,000	$1,485,764	No
	14	2,189		40	$46,000	$1,840,000	$1,668,589	Yes
	16	2,189		40	$48,000	$1,920,000	$1,851,414	Yes
3-11[3]	12	5,615	Right of Way	13	$44,000	$572,000	$3,476,808	No
	14	5,615		26	$44,000	$1,144,000	$3,881,088	No
3-11a	12	2,700	Right of Way	13	$44,000	$572,000	$1,671,840	No
	14	2,700		22	$44,000	4968,000	$1,866,175	No
	16	2,700		37	$46,000	$1,702,000	2,060,640	No
	12	1,584		12	$42,000	$504,000	$980,813	No
	14	1,584		18	$44,000	$792,000	$1,094,823	No
	16	1,584		30	$44,000	$1,320,000	$1,208,909	Yes
3-11b	14	944	Right of Way	7	$42,000	$294,000	$904,058	No
	16	944		7	$44,000	$308,000	$998,266	No

Source: *Noise Abatement Decision Report* (LSA Associates, Inc., December 2008) and *Noise Study Report Addendum* (LSA Associates, Inc., June 2009).

[1] Number of residences that are attenuated by 5 dBA or more by the modeled barrier.

[2] Sound barrier height may be considered reasonable because the cost is within 10 percent of the reasonable allowance.

[3] Feasible sound barrier location for Receptor R-40 and an alternative sound barrier location for SB Nos. 3-4, 3-5, and 3-6.

[4] The reasonableness of Sound Barrier No. 1-6 is pending on the status of the approved future residential development.

dBA = A-weighted decibels

ft = feet

Reasonableness

The overall reasonableness of noise abatement is determined by considering a multitude of factors, including, but not necessarily limited to, the following:

- Cost of the abatement
- Absolute noise levels
- Change in noise levels
- Noise abatement benefits
- Date of development along the highway
- Lifecycle of abatement measures
- Environmental impact of abatement construction
- Views (opinions) of impacted residents
- Input from the public and local agencies
- Social, economic, environmental, legal, and technological factors

A preliminary reasonableness determination of providing noise abatement for exteriors of residential areas in Activity Category B (which includes residential areas) begins with a $36,000 base allowance[1] per benefited residence. The $36,000 base allowance is adjusted using the following four factors to determine the total reasonable allowance per residence:

- Absolute noise level
- Design-year increase over existing noise levels
- Achievable noise reduction
- New highway construction or pre-1978 residence

Tables 2.15.T and 2.15.U show the sound barrier height and approximate length, noise attenuation range, number of benefited residences, reasonable allowance per residence, total reasonable allowance, the estimated sound barrier construction cost, and whether the sound barriers are reasonable for Alternatives 2 and 3, respectively.

Factors not relating to acoustics that must be considered for sound barriers include: safety, maintenance, security, and utility relocations. Additional factors to consider include opinions of affected residents and input from the public and public agencies. Social, economic, legal, and technological factors also must be taken into consideration.

[1] Source: Caltrans *Traffic Noise Analysis Protocol*, August 2006.

Recommended Sound Barriers

The *Noise Abatement Recommendation* (NAR) evaluate noise abatement measures in the form of sound barriers when traffic noise impacts are identified. Noise abatement will only be considered if constructing the abatement is feasible and reasonable . The feasibility of a sound barrier is determined if the barrier would provide a minimum of future 5 dBA noise reduction for abatement. A cost-benefit analysis is conducted to determine whether a sound barrier is reasonable. A barrier is determined to be reasonable when the estimated sound barrier's construction costs is within the total reasonable allowance per residence. The proposed sound barrier must meet both criteria.

As a result of the feasibility and reasonable analysis, the NAR recommended 13 barriers for inclusion in the Build Alternatives. Recommended sound barrier heights for Alternatives 2 and 3 are as follows:

- SB No. 1-2, 10 ft
- SB No. 1-6, 6 ft
- SB No. 2-1, 10 ft
- SB No. 2-2, 8 ft
- SB No. 2-3, 12 ft for Alternative 2 and 14 or 16 ft for Alternative 3
- SB No. 2-4, 12 ft
- SB No. 2-5, 16 ft
- SB No. 2-6, 6 ft
- SB No. 3-3, 6 ft
- SB No. 3-7, 12 ft for Alternative 2 and 10 ft for Alternative 3
- SB No. 3-8, 10 ft for Alternative 2 only
- SB No. 3-9, 16 ft for Alternative 3 only
- SB No. 3-11a, 16 ft

The preliminary noise abatement decision presented in this document is based on preliminary project alignments and profiles, which may be subject to change. If pertinent parameters change substantially during the final project design, the preliminary noise abatement decision may be changed or eliminated from the final project design. A final decision to construct noise abatement will be made upon completion of the project design and public input.

For proposed barrier locations outside of Caltrans right of way, all (100 percent) of the affected property owners must be supportive of the proposed barrier, the location,

and the material to be used for construction. Additionally, a permanent easement must be secured for all (100 percent) of the affected properties to construct and maintain the barrier. During the final project design, soundwall survey letters will be sent to all the affected property owners to determine and document whether or not they want the proposed sound barriers.

Early Implementation Project (EIP)

As part of the NAR, noise abatement measures were evaluated for receptors that would or would continue to approach or exceed the NAC. Of the 7 sound barriers evaluated in Segment 1, SB No. 1-2, located along the residential property line, is determined to be both feasible and reasonable, and is recommended to be built as part of the project. SB No. 1-6 is located at an approved future residential development with a vesting tentative tract map, and noise abatement must be considered. The remaining 5 sound barriers were determined to be either not feasible or reasonable. Therefore, it is recommended that SB No. 1-2 be constructed during the EIP because modeled receptors (Receptors R-145 and R-146) shielded by SB No. 1-2 would approach or exceed the NAC under existing traffic conditions. Construction of SB No.1-6 would be evaluated during final design, and would be dependent on the status of the residential development.

The following abatement measure would be used to minimize adverse operational noise and vibration impacts:

N-1 Prior to construction completion, sound walls that are determined to be reasonable and feasible will be constructed, where possible.

The following abatement measures would be used to minimize adverse construction noise and vibration impacts:

N-2 The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 7-1.01I, "Sound Control Requirements," and Caltrans Standard provisions, Section S5-300. These provisions state:

> "Sound control shall conform to the provisions in Section 7-1.01I, Sound Control Requirements, of the Standard Specifications and these special provisions. The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not

exceed 86 A-weighted decibel (dBA) at a distance of 50 feet (ft). This requirement in no way relieves the contractor from responsibility for complying with local ordinances regulating noise level. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixer or transient equipment that may or may not be owned by the contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel. Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional will be allowed therefor."

N-3 During all project excavation and on-site grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.

N-4 During all project construction, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.

N-5 During all project construction, the construction contractor shall, to the extent feasible, locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site.

N-6 The construction contractor shall use alternative methodologies and/or apply noise abatement measures to reduce noise impacts if construction noise levels would exceed the City's noise standard when construction is outside of the State's right of way.

N-7 Prior to project construction, the project contractor shall develop and execute a community information program notifying neighbors of planned construction schedules and periods of maximum activity. The notice shall provide a construction schedule, required noise conditions applied to the project, and the name and telephone number of the

Construction Project Manager who can address questions and problems that may arise during construction.

N-8 If nighttime construction is required, the construction contractors shall use pile driving alternatives such as vibratory pile driving, predrilling, or cast-in-drill-hole (CIDH) to reduce noise and vibration levels. In addition, the contractor shall follow State and federal guidelines and polices to determine the appropriate available measures that can be used to reduce the construction noise and vibration impacts.

N-9 During all project construction, the project contractor shall use alternative pile driving methods such as vibratory pile driving, predrilling, or cast-in-drill-hole (CIDH) wherever possible.

2.15.5 Noise Abatement Summary

Noise abatement discussed above in Section 2.15.4 for Alternatives 2 and 3 are summarized below in Tables 2.15.V and 2.15.W.

Recommended sound barriers for Alternatives 2 and 3 are as follows:

- SB No. 1-2, 10 ft
- SB No. 1-6, 6 ft
- SB No. 2-1, 10 ft
- SB No. 2-2, 8 ft
- SB No. 2-3, 12 ft for Alternative 2 and 14 or 16 ft for Alternative 3
- SB No. 2-4, 12 ft
- SB No. 2-5, 16 ft
- SB No. 2-6, 6 ft
- SB No. 3-3, 6 ft
- SB No. 3-7, 12 ft for Alternative 2 and 10 ft for Alternative 3
- SB No. 3-8, 10 ft for Alternative 2 only
- SB No. 3-9, 16 ft for Alternative 3 only
- SB No. 3-11a, 16 ft

Table 2.15.V Summary of Feasible Sound Barriers for Alternative 2

Feasible[1] Sound Barrier No.	Critical Receptor[2]	Existing Noise Level	Future No Build Noise Level	Alternative 2 Noise Levels	Height (ft)	Noise Level Reduction by the Critical Receptor	Reasonable?
1-2	R-146	74	73	72	6	5	Yes
					8	7	Yes
					10	8	No[3]
					12	10	No
					14	11	No
					16	12	No
1-3	R-147	73	73	72	6	8	No
					8	9	No
					10	11	No
					12	11	No
					14	13	No
					16	13	No
1-4	R-152	70	70	70	8	5	No
					10	6	No
					12	6	No
					14	7	No
					16	7	No
1-6[4]	R-222	68	67	69	6	6	No[3]
					8	7	No
					10	8	No
					12	9	No
					14	10	No
					16	11	No
1-7	R-225	66	65	66	8	5	No
					10	5	No
					12	5	No
					14	5	No
					16	6	No
1-9	R-290	72	73	72	6	8	No
					8	9	No
					10	9	No
					12	9	No
					14	10	No
					16	10	No
1-10	R-222	68	67	69	10	5	No
					12	6	No
					14	7	No
2-1	R-86	71	70	70	6	5	Yes
					8	8	Yes
					10	10	Yes
					12	11	No
					14	12	No
					16	12	No
2-2	R-92	70	67	68	6	5	Yes
					8	6	No[3]
					10	7	No
					12	8	No
					14	9	No
					16	9	No

Table 2.15.V Summary of Feasible Sound Barriers for Alternative 2

Feasible[1] Sound Barrier No.	Critical Receptor[2]	Existing Noise Level	Future No Build Noise Level	Alternative 2 Noise Levels	Height (ft)	Noise Level Reduction by the Critical Receptor	Reasonable?
2-3	R-96	69	68	68	6	5	Yes
					8	7	Yes
					10	8	Yes
					12	9	No[3]
					14	9	Yes
					16	10	Yes
2-4	R-100	74	74	75	6	7	Yes
					8	11	Yes
					10	14	Yes
					12	15	Yes
					14	16	Yes
					16	16	Yes
2-5	R-118	67	67	67	10	5	No
					12	5	No
					14	6	Yes
					16	6	Yes
2-6	R-127	68	67	69	6	7	Yes
					8	8	No
					11	10	No
					12	11	No
					14	11	No
					16	12	No
2-9	R-127	68	67	69	12	5	No
					14	6	No
2-9 (1,308 ft)	R-296	68	68	70	14	5	No
					16	7	No
3-1	R-1	70	77	76	6	7	No
					8	8	No
					10	10	No
					12	11	No
					14	12	No
3-2	R-13	66	67	67	6	6	No
					8	7	No
					10	8	No
					12	8	No
					14	8	No
					16	8	No
3-3	R-14	68	69	70	6	7	No
					8	7	No
					10	8	No
					12	10	No
					14	10	No
					16	11	No
3-4	R-15	70	73	73	8	6	No
					10	9	No[3]
					12	11	No
					14	12	No
					16	12	No
3-5	R-24	69	72	73	14	6	Yes
					16	7	Yes
3-6	R-37	67	70	70	16	5	No

Table 2.15.V Summary of Feasible Sound Barriers for Alternative 2

Feasible[1] Sound Barrier No.	Critical Receptor[2]	Existing Noise Level	Future No Build Noise Level	Alternative 2 Noise Levels	Height (ft)	Noise Level Reduction by the Critical Receptor	Reasonable?
3-7	R-41	64	65	66	6	7	Yes
					8	8	Yes
					10	8	Yes
					12	8	No[3]
					14	8	No
					16	8	No
3-8	R-44	74	76	76	6	6	No
					8	8	No
					10	10	No[3]
					12	11	No
					14	11	No
					16	12	No
3-9	R-52	68	71	71	8	6	No
					10	7	No
					12	9	No
					14	10	No
					16	10	No
3-11[5]	R-17	67	71	71	12	6	No
					14	7	No
3-11a (2,431 ft)	R-17	67	71	71	12	6	No
					14	7	No
					16	7	No
3-11a (1,273 ft)	R-17	67	71	71	12	6	No
					14	7	Yes
					16	7	Yes
3-11b (1,048 ft)	R-53	70	74	74	14	5	No
					16	6	No

Source: LSA Associates, Inc., December 2008. and *Noise Study Report Addendum* (LSA Associates, Inc., June 2009).

[1] Sound Barriers have been determined to be feasible because the barrier can reduce noise levels by 5 dBA or more.

[2] Critical Receptor is the representative receptor used to calculate reasonable allowances.

[3] Sound barrier height may be considered reasonable because the cost is within 10 percent of the reasonable allowance.

[4] The reasonableness of Sound Barrier No. 1-6 is pending on the status of the approved future residential development.

[5] Feasible sound barrier location for Receptor R-40 and an alternative sound barrier location for SB Nos. 3-4, 3-5, and 3-6.

dBA = A-weighted decibels

ft = feet

Table 2.15.W Summary of Feasible Sound Barriers for Alternative 3

Feasible[1] Sound Barrier No.	Critical Receptor[2]	Existing Noise Level	Future No Build Noise Level	Alternative 3 Noise Level	Height (ft)	Noise Level Reduction by the Critical Receptor	Reasonable?
1-2	R-146	74	73	73	6	6	Yes
					8	8	Yes
					10	9	No[3]
					12	11	No
					14	12	No
					16	13	No
1-3	R-147	73	73	72	6	8	No
					8	9	No
					10	11	No
					12	12	No
					14	13	No
					16	13	No
1-4	R-152	70	70	70	10	6	No
					12	6	No
					14	7	No
					16	7	No
1-6[4]	R-222	68	67	68	6	5	No[3]
					8	6	No
					10	7	No
					12	8	No
					14	9	No
					16	10	No
1-7	R-225	66	65	67	6	5	No
					8	5	No
					10	6	No
					12	6	No
					14	6	No
					16	7	No
1-9	R-290	72	73	73	6	9	No
					8	10	No
					10	10	No
					12	10	No
					14	11	No
					16	11	No
1-10	R-222	68	67	68	8	5	No
					10	5	No
					12	6	No
					14	8	No
2-1	R-86	71	70	70	6	5	Yes
					8	8	Yes
					10	10	Yes
					12	11	No
					14	12	No
					16	12	No

Table 2.15.W Summary of Feasible Sound Barriers for Alternative 3

Feasible[1] Sound Barrier No.	Critical Receptor[2]	Existing Noise Level	Future No Build Noise Level	Alternative 3 Noise Level	Height (ft)	Noise Level Reduction by the Critical Receptor	Reasonable?
2-2	R-92	70	67	68	6	5	Yes
					8	7	No[3]
					10	7	No
					12	8	No[3]
					14	9	No
					16	9	No
2-3	R-96	69	68	68	6	5	Yes
					8	7	Yes
					10	8	Yes
					12	9	No[3]
					14	9	Yes
					16	10	Yes
2-4	R-100	74	74	74	6	7	Yes
					8	10	Yes
					10	13	Yes
					12	14	Yes
					14	15	Yes
					16	15	Yes
2-5	R-118	67	67	67	10	5	No
					12	5	No
					14	6	Yes
					16	6	Yes
2-6	R-127	68	67	68	6	6	Yes
					8	7	No
					10	9	No
					12	10	No
					14	11	No
					16	10	No
2-9 (1,308 ft)	R-127	68	67	70	12	5	No
					14	7	No
					16	7	No
3-1	R-1	70	77	76	6	7	No
					8	8	No
					10	10	No
					12	11	No
					14	12	No
3-2	R-13	66	67	67	6	6	No
					8	7	No
					10	7	No
					12	8	No
					14	8	No
					16	8	No
3-3	R-14	68	69	69	8	6	No
					10	7	No
					12	9	No
					14	9	No
					16	10	No

Table 2.15.W Summary of Feasible Sound Barriers for Alternative 3

Feasible[1] Sound Barrier No.	Critical Receptor[2]	Existing Noise Level	Future No Build Noise Level	Alternative 3 Noise Level	Height (ft)	Noise Level Reduction by the Critical Receptor	Reasonable?
3-4	R-15	70	73	73	8	6	No
					10	8	No[3]
					12	10	No
					14	11	No
					16	12	No
3-5	R-23	70	73	74	12	5	No
					14	6	No
					16	7	Yes
3-6	R-37	67	70	71	16	6	No
3-7	R-41	64	65	66	6	7	Yes
					8	8	Yes
					10	8	No[3]
					12	8	No
					14	8	No
					16	8	No
3-8	R-44	74	76	76	6	6	No
					8	8	No
					10	10	No
					12	11	No
					14	11	No
					16	12	No
3-9	R-52	68	71	76	8	6	No
					10	8	No
					12	10	No
					14	11	Yes
					16	12	Yes
3-11[5]	R-18	67	70	71	12	6	No
					14	8	No
3-11a (2,700 ft)	R-18	67	71	71	12	6	No
					14	8	No
					16	9	No
3-11a (1,584 ft)	R-18	67	71	71	12	6	No
					14	8	No
					16	9	Yes
3-11b (944 ft)	R-53	70	74	74	14	5	No
					16	6	No

Source: LSA Associates, Inc., December 2008 and *Noise Study Report Addendum* (LSA Associates, Inc., June 2009).

[1] Sound Barriers have been determined to be feasible because the barrier can reduce noise levels by 5 dBA or more.

[2] Critical Receptor is the representative receptor used to calculate reasonable allowances.

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dBA = A-weighted decibels

ft = feet

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SB #3-1
SB #3-10
PASEO DEL MAR
PASEO DEL MAR
PASEO DEL MAR

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 300 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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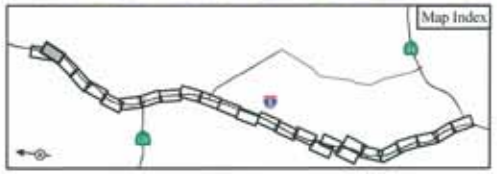

FIGURE 2.15.1
Sheet 2 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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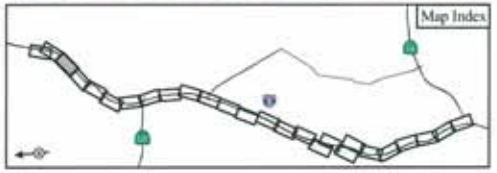

FIGURE 2.15.1
Sheet 3 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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FIGURE 2.15.1
Sheet 4 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

SB #3-11a
SB #3-11
SB #3-11
SB #3-11b
EW #6 - 7 feet
EW #7 - 3.5 - 5.5 feet
EW #8 - 5.5 feet
SB #3-9
SAGEBRUSH DR
SAGEBRUSH CT
PINEMONT DR
SAGE CT
SAGE DR
SAGE WAY
SUNSET WAY
SUNSET DR
SUNSET CT
SUNSET PL
SUNSET TER
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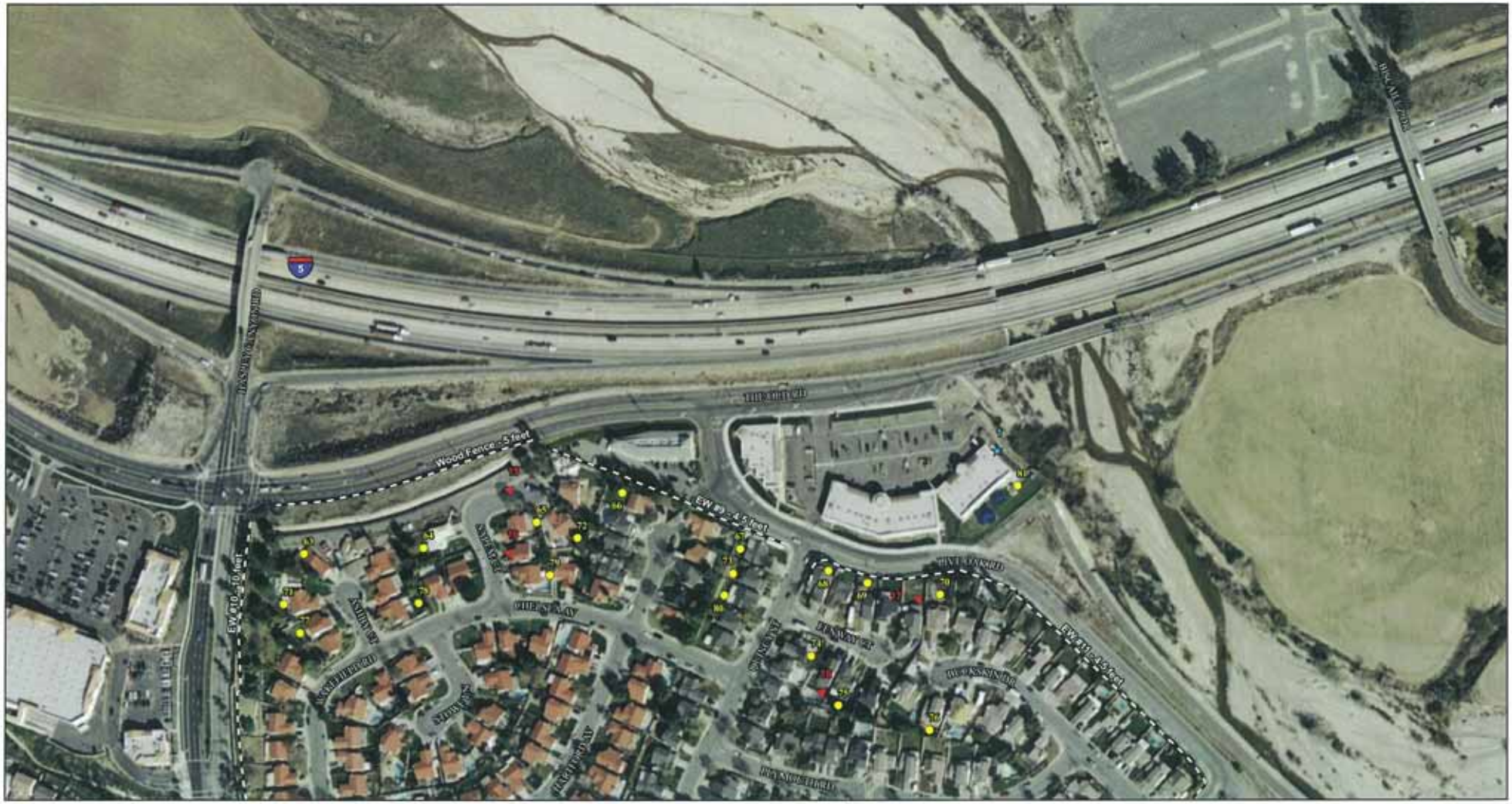

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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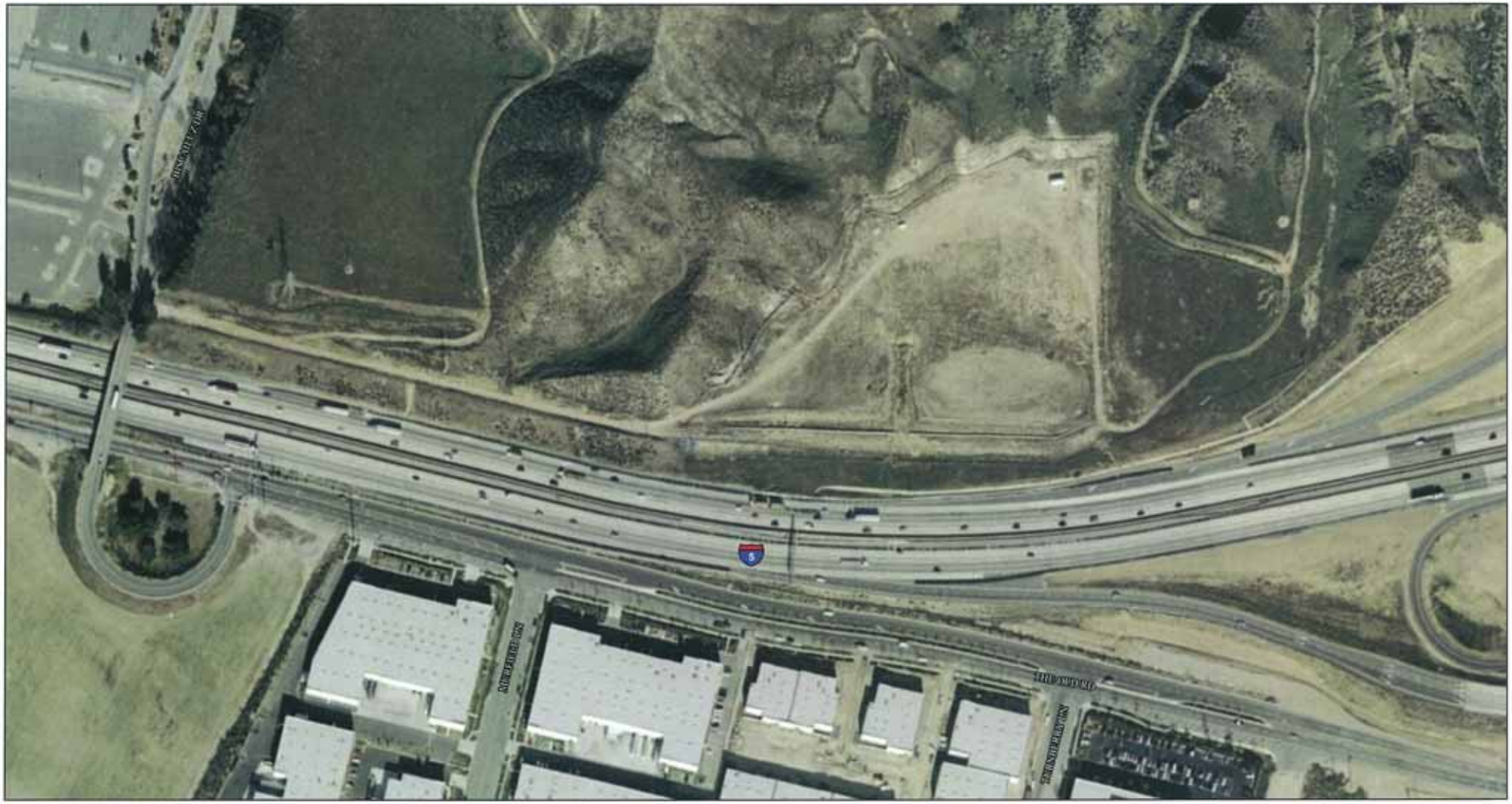
FIGURE 2.15.1
Sheet 6 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0



LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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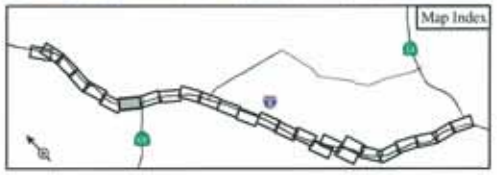

FIGURE 2.15.1
Sheet 7 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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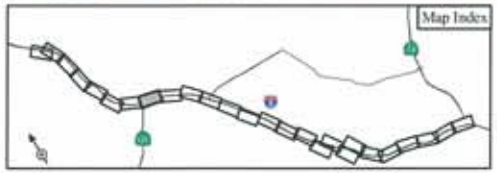
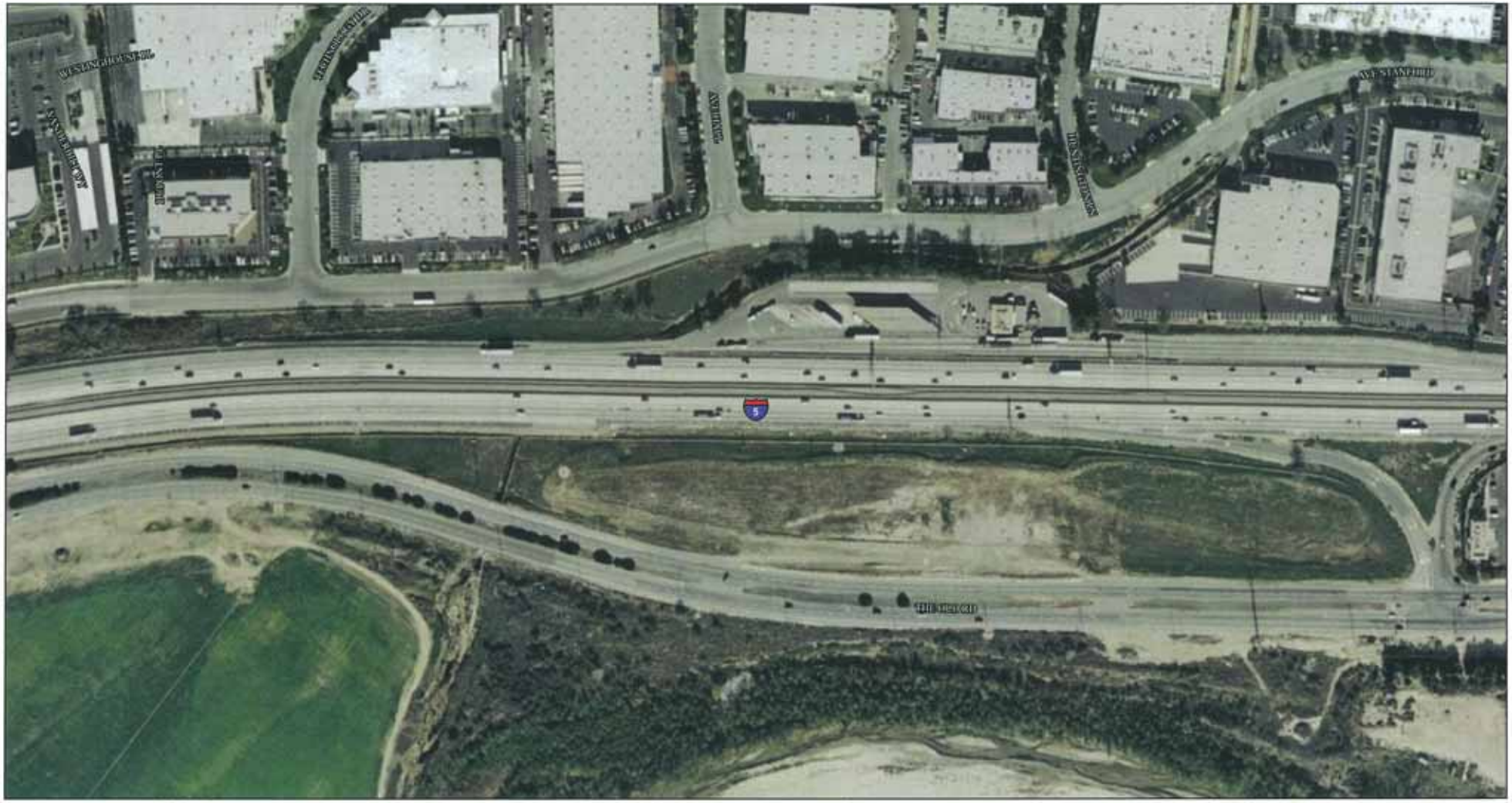


FIGURE 2.15.1
Sheet 8 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0



LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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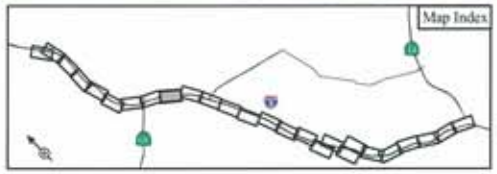

FIGURE 2.15.1
Sheet 9 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2352E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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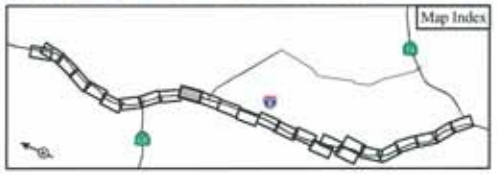
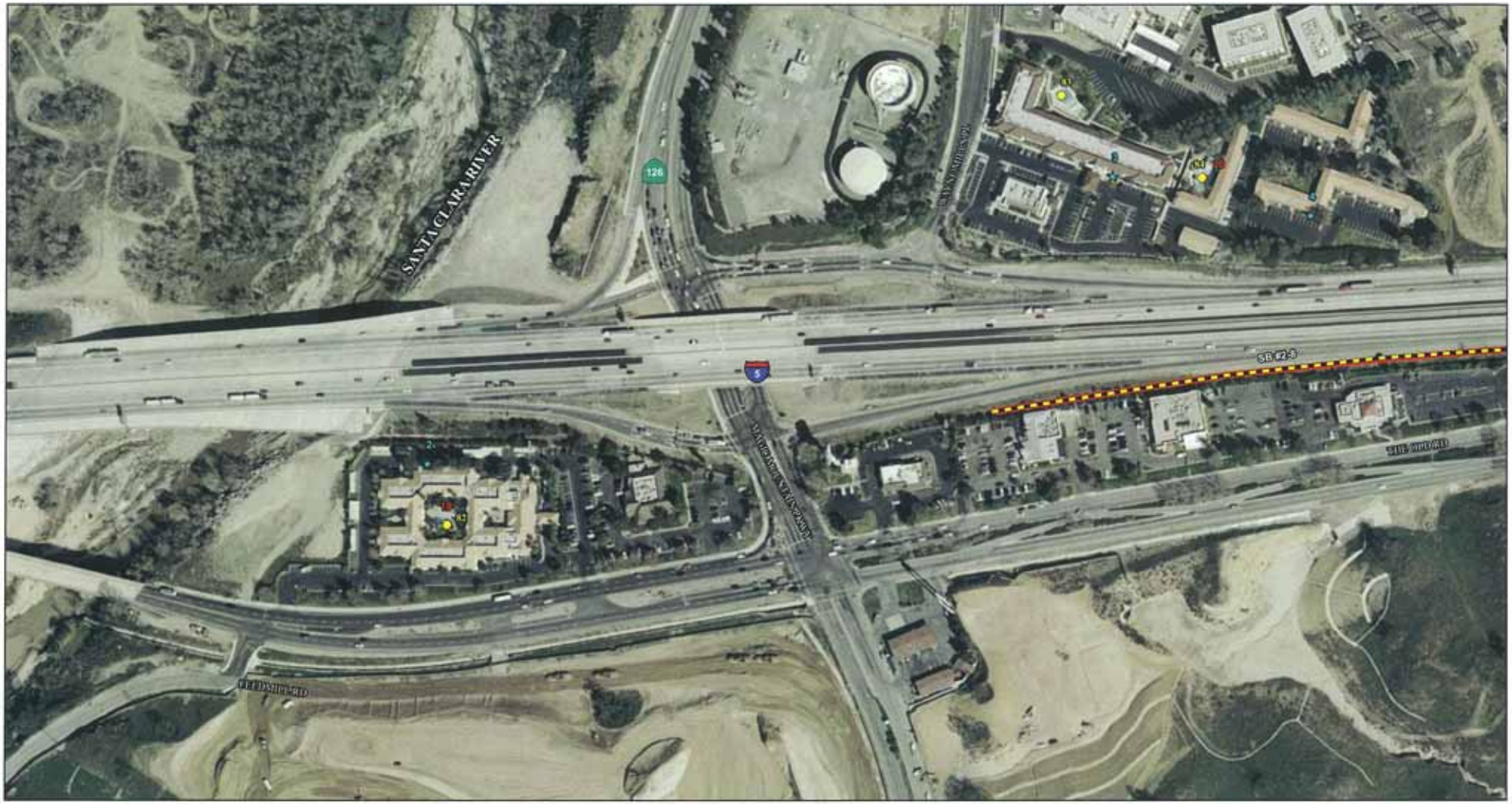


FIGURE 2.15.1
Sheet 10 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0



LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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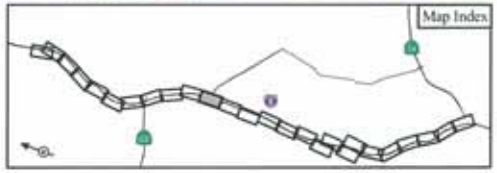


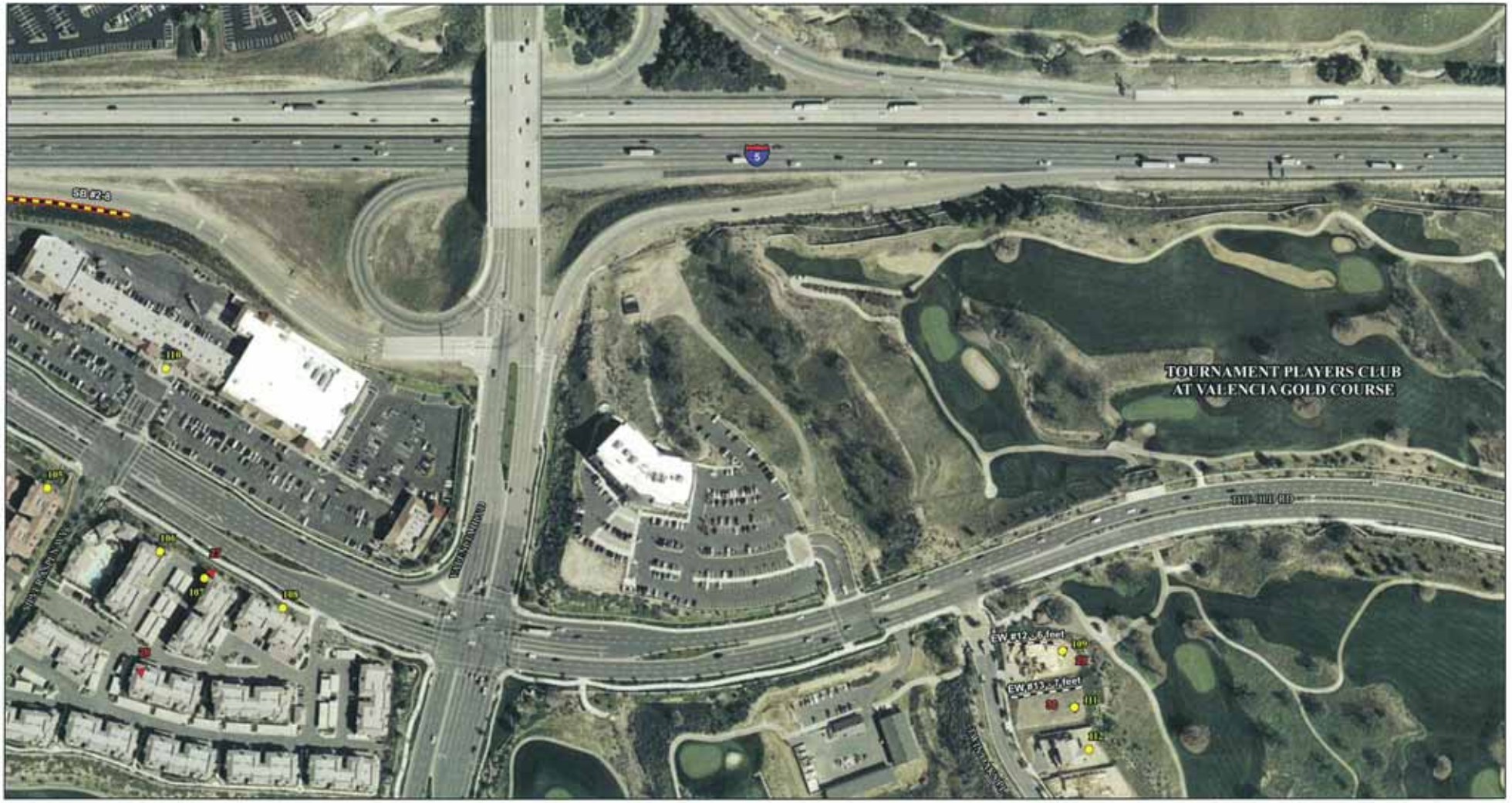
FIGURE 2.15.1
Sheet 11 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

VALENCIA COUNTRY CLUB
VALENCIA COUNTRY CLUB
SB #2-1
SB #2-2
SB #2-3
SB #2-4
SB #2-5
SB #2-6
SB #2-7
SB #2-8
SB #2-9
SB #2-10
SB #2-11
SB #2-12
SB #2-13
SB #2-14
SB #2-15
SB #2-16
SB #2-17
SB #2-18
SB #2-19
SB #2-20
SB



LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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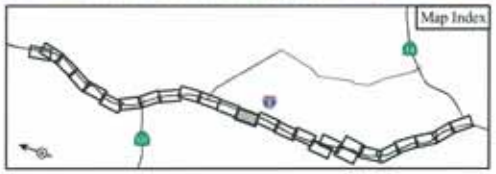

FIGURE 2.15.1
Sheet 13 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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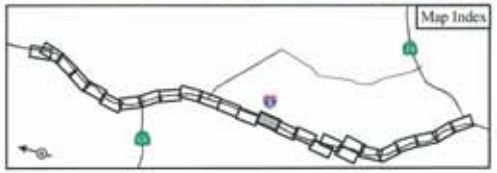

FIGURE 2.15.1
Sheet 14 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R50.0
EA #2332E0

CALIFORNIA INSTITUTE OF THE ARTS
VALENCIA MARKETPLACE
SAN FERNANDO ROAD
SB #2.5
SB #2.5
SB #2.5

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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FIGURE 2.15.1
Sheet 16 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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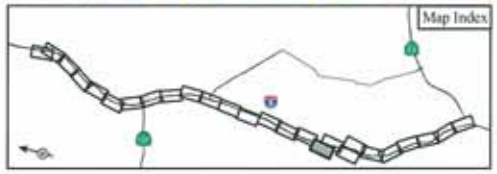
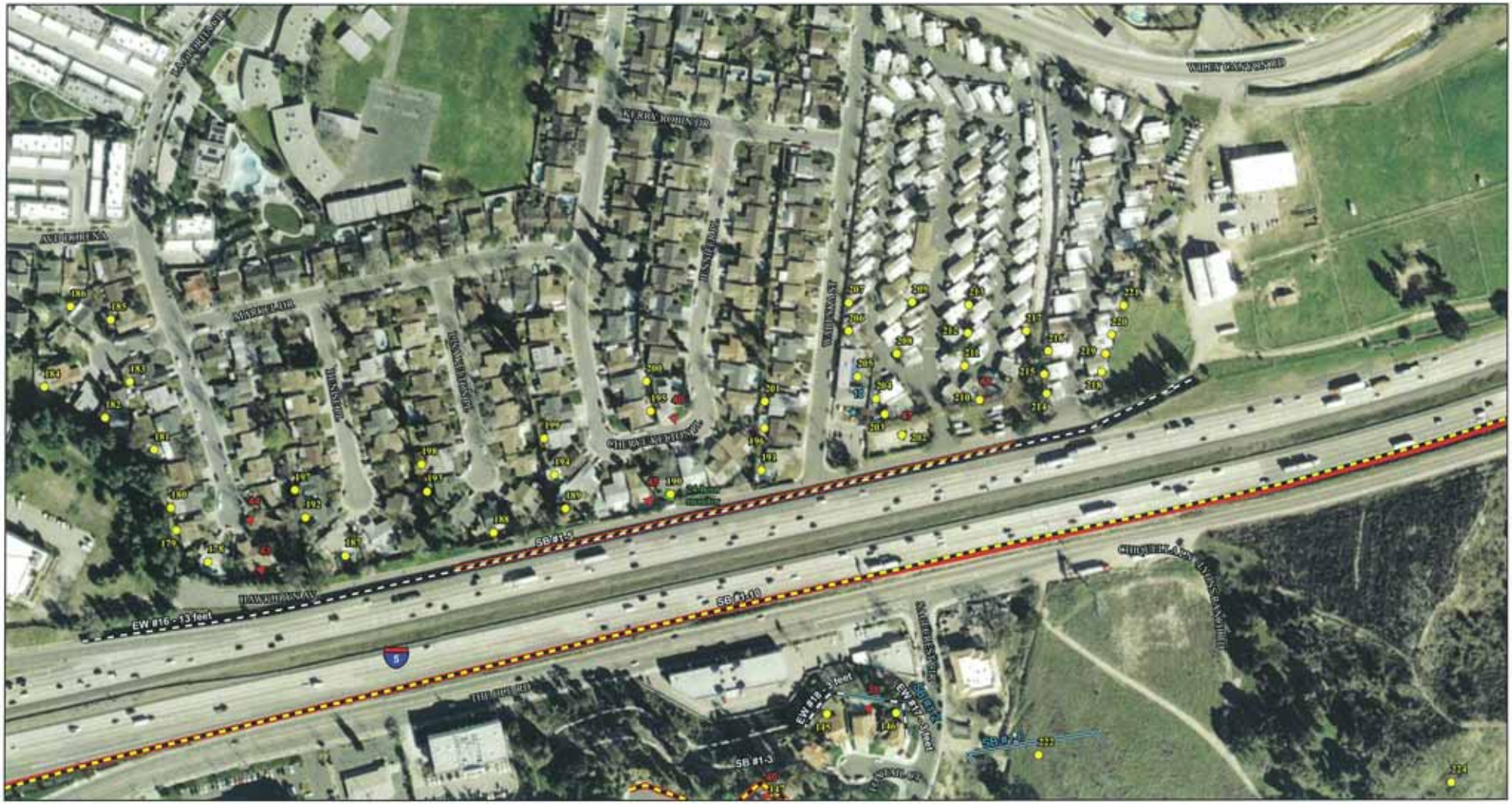


FIGURE 2.15.1
Sheet 17 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0


SB #1-5
SB #1-10
SB #1-3
EW #16 - 13 feet
EW #15 - 9 feet
EW #17 - 9 feet
SB #1-4
SB #1-2
SB #1-1
EW #18 - 9 feet
EW #19 - 9 feet
EW #20 - 9 feet
EW #21 - 9 feet
EW #22 - 9 feet
EW #23 - 9 feet
EW #24 - 9 feet
EW #25 - 9 feet
EW

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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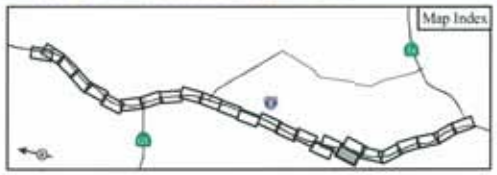

FIGURE 2.15.1
Sheet 19 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2312E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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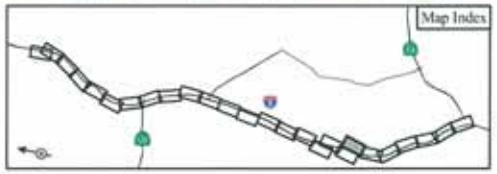

FIGURE 2.15.1
Sheet 20 of 28

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

I:\SIB0601\GIS\Rec_SoundWall_Loc_2.15.1_PartDeux.mxd (9/1/2009)

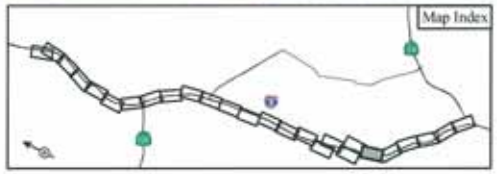

FIGURE 2.15.1
Sheet 21 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

I:\SIB0601\GIS\Rec_SoundWall_Loc_2.15.1_PartDeux.mxd (9/1/2009)

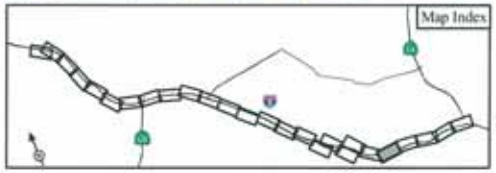

FIGURE 2.15.1
Sheet 22 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

I:\SIB0601\GIS\Rec_SoundWall_Loc_2.15.1_PartDeux.mxd (9/1/2009)

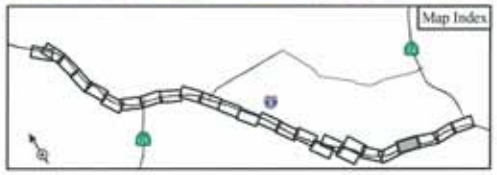

FIGURE 2.15.1
Sheet 23 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

SB 91-1
SB 91-1
SB 91-1

LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOURCE: Bing (2008); Psomas (08/2007)

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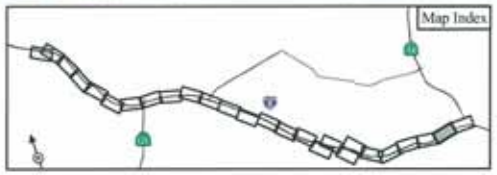
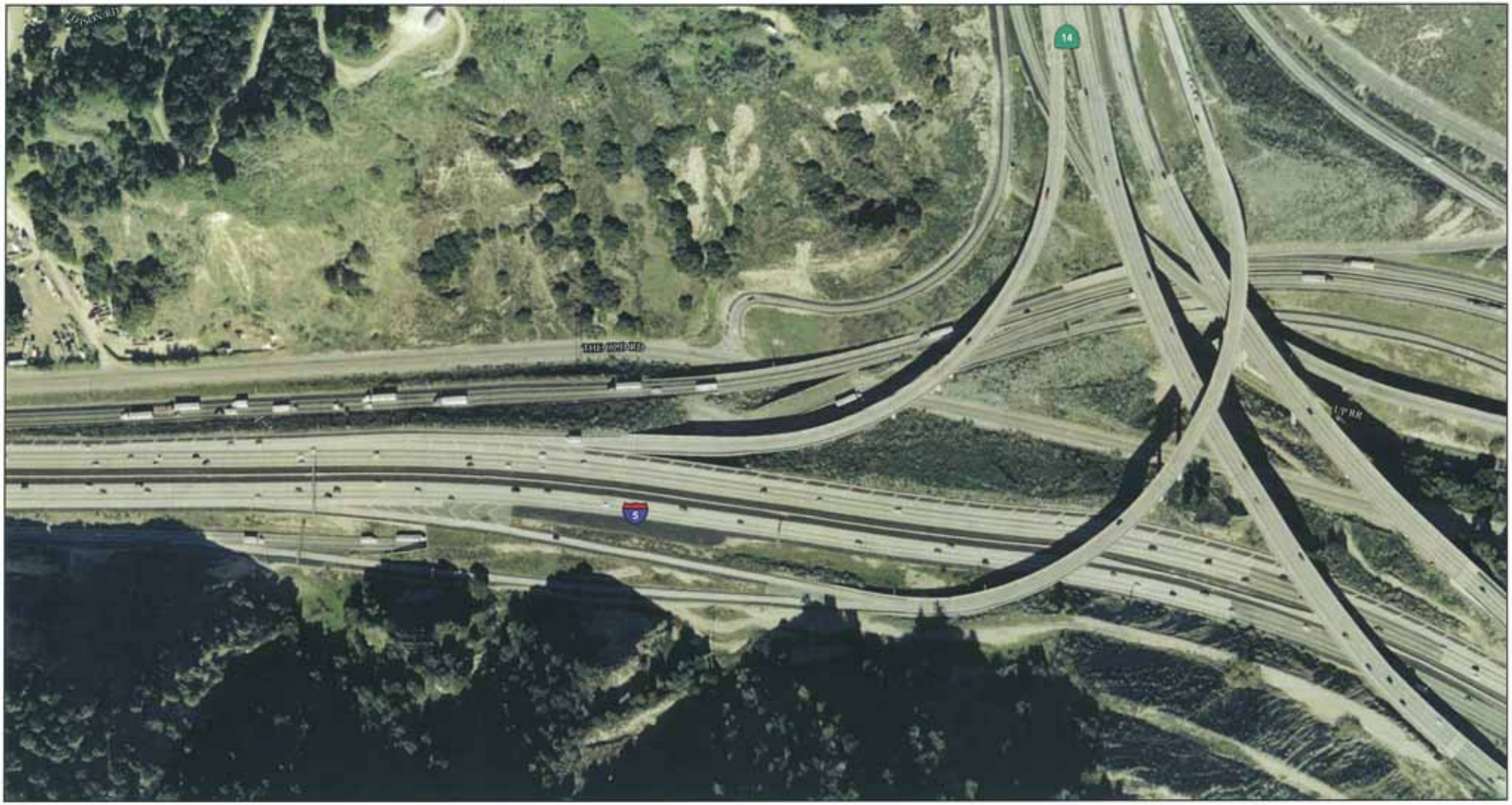


FIGURE 2.15.1
Sheet 25 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0



LEGEND

- Receptor Locations
- Monitoring Locations
- Additional Monitoring Locations
- Interior/Exterior Monitoring Locations
- 24-hour Monitoring Locations
- Existing Wall
- Alternative 2 Sound Barriers
- Alternative 3 Sound Barriers
- Recommended Sound Barrier for Alternatives 2 and 3
- Recommended Sound Barrier for Alternative 2 Only
- Recommended Sound Barrier for Alternative 3 Only

0 100 200 Feet

SOU/RCE: Bing (2008); Psomas (08/2007)

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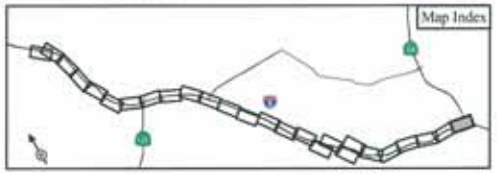

FIGURE 2.15.1
Sheet 26 of 26

I-5 HOV/Truck Lanes Project

Monitor, Receptor, and Sound Barrier Locations

07-LA-5 PM R45.4/R59.0
EA #2332E0

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2.16 Energy

2.16.1 Regulatory Setting

The CEQA Guidelines, Appendix F, Energy Conservation, state that EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

NEPA (42 USC Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

2.16.2 Affected Environment

Energy consumption associated with vehicular movement is almost entirely confined to the consumption of fossil fuel (gasoline and diesel). Transportation-related activities account for approximately half of all the petroleum products consumed in California (Department of Energy, Petroleum Profile, 2000). According to the Southern California Association of Governments' (SCAG) 2008 Regional Transportation Plan, in the six-county SCAG region, over 23 million gallons of oil are consumed daily and the vehicle fuel consumption has increased 20 percent over the last 10 years.

The consumption of nonrenewable resources remains high even though State and federal policies, such as the California Low-Emission Vehicle Program and the Federal Energy Policy Act of 1992, are increasing the use of alternative-fuel and low-emission vehicles. Conservation of such energy resources is an important need.

2.16.3 Environmental Consequences

2.16.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to Interstate 5 (I-5) and therefore would not result in temporary energy-related impacts.

Alternative 2: Reduced Median Alternative

Construction of Alternative 2 would entail a one-time energy expenditure to manufacture building materials, prepare the surface, and construct the roadway and

facilities. This expenditure would be balanced by the improved system efficiency over the design life of the I-5 High-Occupancy Vehicle (HOV)/Truck Lanes project (project).

While renewable natural resources such as lumber would be used in the construction of the project, there would not be an increase in the rate of consumption in the region. Nonrenewable resources such as fossil fuels would be used during construction and also used by motorists following construction of the project. However, this use would not cause a substantial depletion in the supplies of these resources and is not considered adverse.

Alternative 3: Full Median Alternative

Alternative 3 would result in similar energy-related impacts as those discussed above for Alternative 2.

Early Implementation Project (EIP)

The EIP would result in similar energy-related impacts as those discussed above for Alternative 2.

2.16.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in permanent energy-related impacts. However, it would not result in potential energy savings that could be achieved by relieving congestion and other transportation efficiencies.

Alternative 2: Reduced Median Alternative

When balancing energy used during operation against energy saved by relieving congestion and other transportation efficiencies, Alternative 2 would not have substantial energy impacts.

Alternative 3: Full Median Alternative

When balancing energy used during operation against energy saved by relieving congestion and other transportation efficiencies, Alternative 3 would not have substantial energy impacts.

Early Implementation Project (EIP)

Similar to the Build Alternatives, the EIP would not have substantial energy impacts.

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

None required.

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Biological Environment

2.17 Natural Communities

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to natural communities is based on the *Natural Environment Study* (NES) (LSA Associates, Inc., December 2008).

2.17.1 Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species Section 2.21. Wetlands and other waters are also discussed below in Section 2.18.

2.17.2 Affected Environment

2.17.2.1 Biological Study Area

The study area that is assessed for biological resources is referred to as the "Biological Study Area" (BSA). The BSA is approximately 13 linear miles (mi) of the I-5 corridor in length, reaching from approximately the State Route 14 (SR-14) interchange (southern limit) to Parker Road/Ridge Route Road (northern limit) in the city of Santa Clarita and in unincorporated areas of Los Angeles County, California. The BSA encompasses approximately 1,350 acres (ac). The BSA includes areas of potential direct and indirect impact, but also extends beyond the area of potential direct and indirect impact where necessary to identify sensitive biological resources within and immediately adjacent to the project area.

Habitats are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of sensitive plants or animals occurring on site. These communities occur with varied abundance on site. Each sensitive habitat identified within the

project boundaries is described in more detail below and is shown in Figure 2.17.1. Three general natural community groups of special concern were identified within the BSA: Oak, Riparian, and Coastal Sage Scrub.

2.17.2.2 Plant Communities

The plant communities within the BSA consist of a mosaic of several habitat types. A total of 13 plant communities, or variations, were identified within the BSA. All plant communities within the BSA are discussed below. The plant communities in the BSA are shown on Figure 2.17.1.

Oak Woodland

This plant community is dominated by coast live oak *(Quercus agrifolia)* and valley oak *(Quercus lobata)*. Other plant species within this plant community include canyon live oak *(Quercus chrysolepis),* Southern California black walnut *(Juglans californica* var. *californica),* laurel sumac *(Malosma laurina),* gazania *(Gazania linearis),* wild cucumber *(Marah macrocarpus),* California coffeeberry *(Rhamnus californica* ssp. *californica),* granny's hairnet *(Pterostegia drymarioides),* poison oak *(Toxicodendron diversilobum),* slender wild oat *(Avena barbata),* long-beaked filaree *(Erodium botrys),* cheatgrass *(Bromus tectorum),* and foxtail chess.

Oak Savannah

According to the Oak Woodland Conservation Act of 2001, "oak woodland" habitat is defined to be any oak stand with greater than 10 percent canopy cover. Within the project area, habitats where oaks still play an important role, but do not meet the 10 percent canopy cover criteria, have been classified as oak savannah. Within the project area, this plant community is similar to that described above for oak woodland habitat but is instead dominated by nonnative grasses and forbs. Oak trees are irregularly scattered throughout the habitat. Historically, these areas were probably a mosaic of native habitats, including denser stands of oaks and perhaps native grasses, but intense grazing has changed the landscape over time.

Southern Coast Live Oak Riparian Forest

Similar to the oak woodland community, oak riparian forest is dominated by coast live oak, but is associated with ephemeral drainages. The understory of this plant community is similar to that listed for oak woodland; however, riparian species, such as those described for the southern cottonwood–willow riparian forest, can also be found.

Alluvial Wash

This habitat type is predominantly associated with portions of Castaic Creek that have little to no vegetation due to aggradation (accumulation) and degradation (erosion) of sediments.

Southern Cottonwood–Willow Riparian Forest

Riparian habitats are considered high-quality wildlife habitats because they provide protective cover, water, and food for a variety of species. Many animal species are riparian obligates (i.e., dependent on riparian and aquatic resources). These obligates and large mammals require access to water and use bands of riparian habitat as wildlife corridors. This habitat type is dominated by arroyo willow *(Salix lasiolepis),* black willow *(Salix gooddingii),* and western cottonwood *(Populus fremontii* ssp. *fremontii)*. Understory species include mulefat *(Baccharis salicifolia),* mugwort *(Artemisia douglasiana),* common cocklebur *(Xanthium strumarium),* white/water-cress *(Rorippa nasturtium-aquaticum),* yellow sweetclover *(Melilotus indica),* white sweetclover *(Melilotus alba),* and tamarisk (*Tamarix* sp.).

Cottonwood Forest

There is a small stand of western cottonwood associated with a concrete-lined drainage ditch along the border of the BSA on the southbound side of I-5, south of the Calgrove Boulevard off-ramp.

Mulefat Scrub

The dominant plant species within this habitat type is mulefat. There are few other associated species in this plant community since mulefat grows in dense thickets and precludes other plant species from colonizing. Although mulefat can establish in an upland setting, it is often associated with an established riparian community. Mulefat islands have habitat value because many wildlife species use the dense foliage for camouflage. Several mulefat islands are located within the BSA, both in upland settings and associated with other riparian communities.

Willow Riparian Scrub

One small patch of willow riparian scrub is located along Calgrove Boulevard on the northbound side of I-5, south of the Calgrove Boulevard off-ramp. This patch is dominated by arroyo willow and black willow that have remained small and scrubby. The understory for this plant community is similar to the southern cottonwood–willow riparian forest community listed above.

Another small patch is located on the northbound side of I-5, just north of the California Highway Patrol (CHP) Vehicle Inspection Facility (VIF), and appears to be associated with a roadside drainage ditch that parallels I-5. It is dominated by narrow-leaved willow *(Salix exigua).* Similar to mulefat scrub, this patch grows in dense thickets, precluding other plant species from colonizing in substantial numbers.

Freshwater Marsh

This plant community occurs predominantly along roadside drainage ditches along I-5 south of the Parker Road off-ramp. It is dominated by a mixture of native and nonnative herbaceous cover, ruderal forbs, and annual grasses. Plant species within this plant community include bulrush (*Scirpus* sp.), giant wild-rye *(Leymus condensatus),* smilo grass *(Piptatherum miliacea),* rabbitfoot grass *(Polypogon monspeliensis),* and broad-leaved cat-tail *(Typha latifolia).*

Venturan Coastal Sage Scrub

Venturan coastal sage scrub occurs throughout much of the BSA, and much of it within the BSA is highly disturbed. Other areas are sparse due to rocky cut slopes preventing dense growth. Species within this plant community include coastal deerweed *(Lotus scoparius* var. *scoparius),* white sage *(Salvia apiana),* black sage *(Salvia mellifera),* California buckwheat *(Eriogonum fasciculatum),* our Lord's candle *(Yucca whipplei),* California encelia *(Encelia californica),* brittlebush *(Encelia farinose),* and California poppy *(Eschscholzia californica).*

Chaparral

The chaparral plant community primarily occurs in the southern portion of the project area. Chaparral is often interspersed with the Venturan coastal sage scrub plant community and is typically a transitional habitat to higher-elevation plant communities in mountain ranges. Species within this plant community include laurel sumac, California coffeeberry, lemonade berry *(Rhus integrifolia),* sugar bush *(Rhus ovata),* California sagebrush *(Artemesia californica),* California scrub oak *(Quercus berberidifolia),* white sage, California buckwheat, purple sage *(Salvia leucophylla),* chaparral bush mallow *(Malacothamnus fasciculatus),* chamise *(Adenostoma fasciculatum),* and our Lord's candle.

Cleared/Bare Ground

This habitat consists of areas with highly compacted soils and little to no vegetation, including cleared or graded areas or dirt access roads and trails.

Developed/Ornamental Vegetation

This "habitat" consists of developed areas such as existing paved roads, ornamental vegetation, and commercial and residential properties.

Ruderal Vegetation

This plant community consists predominantly of ruderal and unmaintained or escaped ornamental vegetation. Plants within this habitat type include Peruvian pepper tree *(Schinus molle),* oleander *(Nerium oleander),* tocalote *(Centaurea melitensis),* bull thistle *(Cirsium vulgare),* telegraph weed *(Heterotheca grandiflora),* perennial sow-thistle *(Sonchus arvensis),* black mustard *(Brassica nigra),* shortpod mustard *(Hirschfeldia incana),* Bermuda grass *(Cynodon dactylon),* common wild oat *(Avena fatua),* and foxtail chess *(Bromus madritensis* ssp. *rubens).*

2.17.2.3 Natural Communities of Special Concern

Three general natural community groups of special concern were identified within the BSA: Oak, Riparian, and Coastal Sage Scrub. Table 2.17.A gives the total area occupied by natural communities of special concern and other plant communities identified within the BSA boundary.

Oak Trees

A detailed Oak Tree Survey was conducted in accordance with the County and City of Los Angeles Oak Tree Ordinances (Los Angeles County Code Chapter 22.56, Part 16) and City of Santa Clarita requirements.

Both the City and County recognize oak trees for their historical, aesthetic, and ecological qualities, and seek to preserve and propagate this unique, threatened plant community, especially those trees that may be classified as heritage oaks. Heritage oaks are oak trees with a diameter at breast height (dbh) greater than 36 in.

Both the City and County Oak Tree Ordinances require an oak tree permit for any impacts to oak trees within their jurisdictions that meet certain requirements (e.g., size, age). Impacts include, but are not limited to, cutting, destroying, removing, relocating, inflicting damage, or encroaching into the protected zone of any oak tree. The protected zone is defined as the area within the canopy of an oak tree extending to a point at least 5 ft outside of the dripline or 25 ft from the trunks of a tree. Because of this, only those oak trees within 50 ft of the impact limits were surveyed. Within this altered study area, there were approximately 329 oak trees consisting of two species, coast live oak and valley oak. All of these trees were inventoried, evaluated,

Table 2.17.A Natural Communities within the BSA

Vegetation Community	Total Within BSA (ac)
OAK COMMUNITIES	
Oak Woodland	34.85
Oak Savannah	30.30
Southern Coast Live Oak Riparian Forest	3.71
Total Oak Communities	**68.86**
RIPARIAN COMMUNITIES	
Alluvial Wash	16.41
Southern Cottonwood–Willow Riparian Forest	3.37
Cottonwood Forest	0.17
Southern Coast Live Oak Riparian Forest	3.71
Mulefat Scrub	1.65
Willow Riparian Scrub	2.73
Freshwater Marsh	1.84
Total Riparian Communities	**29.88**
COASTAL SAGE SCRUB COMMUNITIES	
Venturan Coastal Sage Scrub	228.17
Total Coastal Sage Scrub Communities	**228.17**
OTHER COMMUNITIES	
Chaparral	19.17
Cleared/Bare Ground	80.63
Developed/Ornamental Vegetation	586.03
Ruderal Vegetation	298.40
Total Other Communities	**984.23**

Source: *Natural Environment Study* (LSA Associates, Inc., December 2008).
ac = acres
BSA = Biological Study Area

and mapped. Where trees were inaccessible for direct evaluation, tree data was estimated.

2.17.2.4 Wildlife Corridors

A wildlife corridor assessment was undertaken in September 2008. The purpose of the assessment was to determine whether the proposed project would have any impacts on wildlife movement between the Santa Susana and San Gabriel Mountains.

Wildlife movement across I-5 in the project area has been substantially constrained for many years by both natural and man-made barriers such as topography, lack of suitable vegetative cover, existing roadways, storm water conveyance structures, and fencing. Additionally, commercial and residential development, local roadways, and associated man-made features have further impacted wildlife movement.

There are two areas within the project alignment that provide opportunities for wildlife to cross from one side of I-5 to the other. These are at the San Fernando Pass and Santa Clara River. Outside of the San Fernando Pass and Santa Clara River corridor, urban development associated with the City of Santa Clarita precludes most of the remaining project area from being considered as a viable wildlife corridor. Potential wildlife corridors are discussed in more detail below.

Castaic Creek was not considered a viable wildlife corridor for use by larger mammals due to its lack of suitable vegetative cover and extensive agricultural uses immediately adjacent to this drainage system.

San Fernando Pass

Within the proposed project limits, the San Fernando Pass is the only area where nearly contiguous undeveloped land occurs on opposite sides of I-5. This area, located at the south end of the project alignment, extends approximately 4 mi, from just south of the I-5/SR-14 interchange to south of Calgrove Boulevard. The habitat in this area is dominated by oak woodland and annual grassland interspersed with coastal sage scrub and chaparral. Within the San Fernando Pass area, Gavin Canyon underpass, Weldon Canyon Road overpass, and two culverts were identified as potential wildlife crossings and are discussed below.

Gavin Canyon

The four-lane bridge underpass for The Old Road at Gavin Canyon is a potential wildlife crossing at Gavin Canyon that currently has natural habitats on both sides of I-5, and connects to Santa Monica Mountain Conservancy open space to the west. A trailer park located on the east side of I-5 south of The Old Road may impede wildlife access to the underpass due to associated traffic, lighting, and other human activities. Utility of this undercrossing as a functional wildlife linkage is also compromised, but not precluded, due to steep topography, fencing, existing vehicle traffic speeds and volume on The Old Road, and future potential development along the east side of I-5 associated with the planned Los Lomas development project. Traffic volumes on The Old Road at Gavin Canyon are anticipated to increase as development in the area increases.

Weldon Canyon

The Weldon Canyon Road overpass over I-5 lies approximately 0.6 mi southeast of the four-lane bridged underpass for The Old Road at Gavin Canyon. It is a two-lane bridge connecting to properties located on Coltrane Avenue. Development on Coltrane Avenue is limited and, as described in the South Coast Missing Linkages Project, this structure serves a minimal amount of local traffic. However, wildlife movement across the Weldon Canyon Road Bridge is also compromised by vehicle traffic speeds and volume on The Old Road, fencing, and steep topography in the immediate area. Furthermore, the bridge is designed for vehicle traffic, and only the most mobile and adaptable species are likely to use it at this time. It should also be noted that the planned Los Lomas development project, as currently proposed, would also occupy the east side of I-5 in the area of the Weldon Canyon Road Bridge.

Culvert Crossings

The vast majority of the man-made drainage structures in the project area do not provide an adequate means for wildlife to traverse I-5 due to either their size, lack of connectivity to suitable habitat, or design (steep, often vertical walls). However, there are two culvert crossings that traverse I-5 in the San Fernando Pass area of the project that, based on their size and location, may provide limited wildlife crossing opportunities for small- to medium-sized animals. The first culvert is a 375-foot (ft) long, 36-inch corrugated metal pipe located approximately 800 ft west of the Weldon Canyon Road Bridge. The second culvert is a 280 ft long, 48-inch reinforced concrete pipe located approximately 1,800 ft east of The Old Road undercrossing at Gavin Canyon. These two medium-sized culverts appear to be accessible from both sides of I-5 and are in areas with suitable habitat for use by small- to medium-sized animals.

Santa Clara River

The Santa Clara River is somewhat restricted as a wildlife corridor within the study area due to surrounding development and future proposed development in the vicinity of the Santa Clara River to the west of I-5. While the Santa Clara River is surrounded by extensive development on the east side of I-5, much of the corridor remains vegetated mostly with riparian habitat, thereby potentially providing needed cover for wildlife movement through this linkage. Impediments to wildlife movement along the Santa Clara River corridor at I-5 include a reduction of vegetated cover, trash dumping, and vehicle travel on unauthorized roads. Caltrans and the California Department of Fish and Game are currently addressing some of these obstacles to wildlife movement along the Santa Clara River corridor in the vicinity of I-5 through limiting illegal motor vehicle access in this area.

2.17.3 Environmental Consequences

2.17.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse temporary impacts to natural communities in the study area.

Alternative 2: Reduced Median Alternative

Table 2.17.B summarizes the temporary impacts of Alternative 2 to natural communities within the BSA. Temporary impacts to Natural Communities of Special Concern are discussed below. Other Natural Communities (Chaparral, Cleared/Bare Ground, Developed/Ornamental Vegetation, and Ruderal Vegetation) are not considered sensitive; therefore, impacts to these habitats are not discussed.

Oak Communities

As indicated in Table 2.17.B, Alternative 2 would result in 4.96 ac of temporary impacts to oak habitat. The majority of temporary impacts would be to Oak Savannah communities (4.05 ac). Alternative 2 is not expected to result in temporary impacts to southern riparian oak forest. Temporary impacts to oak habitats would occur predominantly in the central and southern portions of the project. Table 2.17.C summarizes the temporary impacts of Alternative 2 to oak trees. Alternative 2 would result in temporary impacts to 73 oak trees (14 heritage oaks and 59 other oak trees). Temporary impacts to oak trees would be limited to trimming and pruning. All other impacts are considered permanent. With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to oak trees and oak woodland habitat would not be adverse.

Riparian/Riverine Communities

The greatest temporary impacts of Alternative 2 to riparian/riverine habitats would be in the vicinity of the Santa Clara River and Castaic Creek. However, there are small patches of riparian/riverine habitat scattered along the entire project alignment that would be affected. Temporary impacts would only occur during construction to allow for construction and equipment staging. Alternative 2 would require equipment access through the Santa Clara River and Castaic Creek beds, resulting in temporary impacts to riparian/riverine communities.

Table 2.17.B Temporary Impacts to Natural Communities within the BSA

Vegetation Community	Alternative 2 (ac)	Alternative 3 (ac)
OAK COMMUNITIES		
Oak Woodland	0.91	0.99
Oak Savannah	4.05	4.02
Southern Coast Live Oak Riparian Forest	0.00	0.00
Total Oak Communities	**4.96**	**5.01**
RIPARIAN COMMUNITIES		
Alluvial Wash	0.54	0.47
Southern Cottonwood–Willow Riparian Forest	0.61	0.65
Cottonwood Forest	0.00	0.00
Southern Coast Live Oak Riparian Forest	0.00	0.00
Mulefat Scrub	0.24	0.23
Willow Riparian Scrub	0.58	0.64
Freshwater Marsh	0.68	0.44
Total Riparian Communities	**2.65**	**2.43**
COASTAL SAGE SCRUB COMMUNITIES		
Venturan Coastal Sage Scrub	23.49	26.38
Total Coastal Sage Scrub Communities	**23.49**	**26.38**
OTHER COMMUNITIES		
Chaparral	1.55	1.80
Cleared/Bare Ground	14.59	13.03
Developed/Ornamental Vegetation	88.56	79.80
Ruderal Vegetation	72.66	72.74
Total Other Communities	**177.36**	**167.37**

Source: *Natural Environment Study* (LSA Associates, Inc., December 2008).
ac = acres
BSA = Biological Study Area

Table 2.17.C Temporary Impacts to Oak Trees

	Alternative 2	Alternative 3
Heritage Oaks	14	27
All Other Oaks	59	53
Total Oaks	**73**	**80**

Source: *Natural Environment Study* (LSA Associates, Inc., December 2008).

At Castaic Creek, temporary impacts would occur due to bridge widening and installation of riprap. At the Santa Clara River, temporary impacts would be limited to installation of riprap. Alternative 2 would result in 2.65 ac of temporary impacts to

riparian/riverine communities through disturbance and/or removal of existing vegetation.

In addition to direct temporary impacts, Alternative 2 would result in indirect temporary impacts through the degradation of riparian/riverine habitats. Temporary indirect impacts to riparian/riverine habitat include construction-related impacts such as dust, potential fuel spills from construction equipment, possible night lighting during construction, and activities of equipment or personnel outside designated construction areas, as well as operational impacts such as impacts to adjacent habitats caused by storm water runoff, traffic, and litter.

With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to riparian/riverine communities would not be adverse.

Venturan Coastal Sage Scrub

Construction activities would result in 23.49 ac of temporary impacts to Venturan coastal sage scrub. Temporary impacts to Venturan coastal sage scrub would occur throughout the entire project area; however, there would be more impacts in the southern portion of the project area. Indirect temporary impacts occur through degradation of Venturan coastal sage scrub habitat. Therefore, indirect impacts to Venturan coastal sage scrub habitat are the same as those described for the riparian/riverine natural community above. With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to Venturan coastal sage scrub would not be adverse.

Wildlife Corridors

Temporary impacts to wildlife corridors could occur during construction due to the increased presence of equipment, structures, and construction personnel. During construction, installation of pilings and large pieces of equipment required for work at the Santa Ana River Bridge, Gavin Canyon underpass, and Weldon Canyon Road overpass could potentially act as barriers to wildlife movement and restrict wildlife use of the corridors in the construction areas. No improvement would be made to the two culverts that were identified as potential wildlife corridors. As wildlife movement primarily occurs at night, and construction activities at the potential wildlife corridors would primarily occur during the day, temporary impacts to wildlife crossings would not be adverse.

Alternative 3: Full Median Alternative

Table 2.17.B summarizes the temporary impacts of Alternative 3 to natural communities within the BSA.

Oak Communities

Alternative 3 would result in similar temporary impacts to oak habitat as those discussed above for Alternative 2. However, as indicated in Table 2.17.B, Alternative 3 would result in 5.01 ac of temporary impacts to oak habitat, which is more than Alternative 2. The majority of the temporary impacts would be to Oak Savannah communities (4.02 ac). Alternative 3 is not expected to result in temporary impacts to southern riparian oak forest. Table 2.17.C summarizes the temporary impacts of Alternative 3 to oak trees. Alternative 3 would result in temporary impacts to 80 oak trees (27 heritage oaks and 53 other oak trees), which is also more than Alternative 2. Temporary impacts to oak trees would be limited to trimming and pruning. All other impacts are considered permanent. With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to oak trees and oak woodland habitat would not be adverse.

Riparian/Riverine Communities

Alternative 3 would result in similar temporary impacts to riparian/riverine habitat as those discussed above for Alternative 2. However, as indicated in Table 2.17.B, Alternative 3 would result in 2.43 ac of temporary impacts to riparian/riverine communities, which is less than Alternative 2.

With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to riparian/riverine communities would not be adverse.

Venturan Coastal Sage Scrub

Alternative 3 would result in similar temporary impacts to Venturan coastal sage scrub as those discussed above for Alternative 2. However, as indicated in Table 2.17.B, Alternative 2 would result in 26.38 ac of temporary impacts to Venturan coastal sage scrub, which is more than Alternative 2. With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to Venturan coastal sage scrub would not be adverse.

Wildlife Corridors

Temporary impacts to wildlife corridors would be the same as those discussed above under Alternative 2. As wildlife movement primarily occurs at night, and construction

activities at the potential wildlife corridors would primarily occur during the day, temporary impacts to wildlife crossings would not be adverse.

Early Implementation Project (EIP)

Natural Communities

According to the habitat mapping conducted for the NES, Venturan coastal sage scrub habitat would be affected by the reconstruction of an existing retaining wall along the southbound lanes of I-5 north of the Weldon Canyon overcrossing. The reconstruction of the retaining wall would temporarily impact 0.04 ac of Venturan coastal sage scrub habitat. All of the Venturan coastal sage scrub temporary impacts during construction of the EIP are within the temporary impacted acreage of the Build Alternatives. With the avoidance and/or minimization measures discussed in Section 2.17.4, potential temporary impacts to Venturan coastal sage scrub would not be adverse.

No oak trees were identified within the impact limits identified for the EIP.

Wildlife Corridors

Temporary impacts to wildlife corridors could occur during EIP construction due to the increased presence of equipment, structures, and construction personnel. Specifically for the EIP, construction, installation of pilings, and large pieces of equipment required for work at the Gavin Canyon underpass and Weldon Canyon Road overpass could potentially act as barriers to wildlife movement and restrict wildlife use of the corridors in the construction areas. As wildlife movement primarily occurs at night, and construction activities at the potential wildlife corridors would primarily occur during the day, EIP temporary impacts to wildlife crossings would not be adverse.

2.17.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse permanent impacts to natural communities in the study area.

Alternative 2: Reduced Median Alternative

Table 2.17.D summarizes the permanent impacts of Alternative 2 to natural communities within the BSA. Permanent impacts to Natural Communities of Special Concern are discussed below. Other Natural Communities (Chaparral, Cleared/Bare

Table 2.17.D Permanent Impacts to Natural Communities within the BSA

Vegetation Community	Alternative 2 (ac)	Alternative 3 (ac)
OAK COMMUNITIES		
Oak Woodland	1.29	1.46
Oak Savannah	1.98	3.52
Southern Coast Live Oak Riparian Forest	0.00	0.00
Total Oak Communities	**3.27**	**4.98**
RIPARIAN COMMUNITIES		
Alluvial Wash	0.12	0.13
Southern Cottonwood–Willow Riparian Forest	0.17	0.12
Cottonwood Forest	0.00	0.00
Southern Coast Live Oak Riparian Forest	0.00	0.00
Mulefat Scrub	0.03	0.04
Willow Riparian Scrub	0.30	0.27
Freshwater Marsh	0.98	1.36
Total Riparian Communities	**1.60**	**1.92**
COASTAL SAGE SCRUB COMMUNITIES		
Venturan Coastal Sage Scrub	18.51	22.25
Total Coastal Sage Scrub Communities	**18.51**	**22.25**
OTHER COMMUNITIES		
Chaparral	3.33	3.68
Cleared/Bare Ground	4.20	6.61
Developed/Ornamental Vegetation	190.03	208.41
Ruderal Vegetation	41.55	48.12
Total Other Communities	**239.11**	**266.82**

Source: *Natural Environment Study* (LSA Associates, Inc., December 2008).
ac = acres
BSA = Biological Study Area

Ground, Developed/Ornamental Vegetation, and Ruderal Vegetation) are not considered sensitive; therefore impacts to these habitats are not included in this discussion..

Oak Communities

As indicated in Table 2.17.D Alternative 2 would result in 3.27 ac of permanent impacts to oak woodland habitat. Alternative 2 is not expected to result in permanent impacts to southern riparian oak forest. Permanent impacts to oak habitats would occur predominantly in the central and southern portions of the project and may include complete removal, heavy encroachment, or extensive branch removal. Table 2.17.E summarizes the permanent impacts of Alternative 2 to oak trees. Alternative 2 would result in permanent impacts to 109 oak trees (20 heritage oaks and 89 other oak trees).

Table 2.17.E Permanent Impacts to Oak Trees

	Alternative 2	Alternative 3
Heritage Oaks	20	12
All Other Oaks	89	108
Total Oaks	**109**	**120**

Source: *Natural Environment Study* (LSA Associates, Inc., December 2008).

Because the development of mature large trees requires 60–80 years, the direct removal of this habitat type would result in unavoidable long-term loss of habitat. With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4, permanent impacts to oak trees and oak habitat would not be adverse.

Riparian/Riverine Communities

Alternative 2 would result in 1.60 ac of direct impacts to riparian/riverine habitats through disturbing and/or removing existing vegetation. The major impact to riparian/riverine habitats would be to a drainage ditch in the vicinity of Castaic Creek resulting from construction in the northern portion of the project. This drainage ditch appears to be perennial and conveys stormwater and nuisance flows directly into Castaic Creek. At the Santa Clara River, permanent impacts would be limited to installation of riprap.

In addition to direct permanent impacts, Alternative 2 would result in indirect permanent impacts through the degradation of riparian/riverine habitats. Construction may result in indirect impacts to riparian/riverine habitats permanently through enhancing the germination and proliferation of nonnative invasive plant species. Invasive plant species are those that out compete native plants, and they are of particular concern.

With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4, permanent impacts to riparian/riverine habitat would not be adverse.

Venturan Coastal Sage Scrub

Alternative 2 would result in 18.51 ac of direct impacts to Venturan Coastal Sage Scrub habitat through disturbing and/or removing existing vegetation. Permanent impacts to Venturan coastal sage scrub would occur throughout the entire project area; however, there would be more impacts in the southern portion of the project area. Indirect permanent impacts occur through degradation of Venturan coastal sage scrub habitat. Therefore, indirect impacts to Venturan coastal sage scrub habitat are

the same as those described for the riparian/riverine natural community above. With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4, permanent impacts to Venturan coastal sage scrub habitat would not be adverse.

Wildlife Corridors

Additional structures or pilings at potential wildlife corridors have the potential to obstruct wildlife movement. Alternative 2 would place additional bridge supports at the Gavin Canyon undercrossing. However, the additional bridge pilings proposed at this location would be spaced wide enough to not obstruct wildlife movement. Because the limited wildlife movement at the Weldon Canyon Road Bridge occurs over the structure, replacement of the bridge would not obstruct wildlife movement. Because there would be no permanent obstruction to wildlife movement, project impacts to wildlife corridors would be minimal and not considered adverse.

No improvement would be made to the two culverts that were identified as potential wildlife corridors. Alternative 2 would not place additional bridge supports in the Santa Ana River. Therefore, there would be no permanent impacts to wildlife corridors at these locations.

Alternative 3: Full Median Alternative

Table 2.17.C summarizes the permanent impacts of Alternative 3 to natural communities of special concern.

Oak Communities

Alternative 3 would result in similar permanent impacts to oak habitat as those discussed above for Alternative 2. However, as indicated in Table 2.17.C, Alternative 3 would result in 4.98 ac of permanent impacts to oak habitat, which is more than Alternative 2. Table 2.17.E summarizes the permanent impacts of Alternative 3 to oak trees. Alterative 3 would result in permanent impacts to 12 heritage oaks and 108 other oak trees, which is more than Alternative 2. Because the development of mature large trees requires 60–80 years, the direct removal of this habitat type would result in unavoidable long-term loss of habitat. With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4, permanent impacts to oak trees and oak habitat would not be adverse.

Riparian/Riverine Communities

Alternative 3 would result in similar permanent impacts to riparian/riverine habitat as those discussed above for Alternative 2. However, at the Santa Clara River, permanent impacts would result from widening of the bridge and installation of

riprap. As indicated in Table 2.17.C, Alternative 3 would result in 1.92 ac of direct impacts to riparian/riverine habitats, which is more than Alternative 2.

With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4, permanent impacts to riparian/riverine habitat would not be adverse.

Venturan Coastal Sage Scrub

Alternative 3 would result in similar permanent impacts to Venturan coastal sage scrub as those discussed above for Alternative 2. However, as indicated in Table 2.17.C, Alternative 3 would result in 22.25 ac of direct impacts to Venturan Coastal Sage Scrub habitat, which is more than Alternative 2. With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4, permanent impacts to Venturan coastal sage scrub habitat would not be adverse.

Wildlife Corridors

Additional structures or pilings at potential wildlife corridors have the potential to obstruct wildlife movement. Alternative 3 would place additional bridge supports at the Gavin Canyon undercrossing and at the Santa Clara River Bridge. However, the additional bridge pilings proposed at these locations would be spaced wide enough to not obstruct wildlife movement. Because the limited wildlife movement at the Weldon Canyon Road Bridge occurs over the structure, replacement of the bridge would not obstruct wildlife movement. Because there would be no permanent obstruction to wildlife movement, project impacts to wildlife corridors would be minimal and not considered adverse.

No improvement would be made to the two culverts that were identified as potential wildlife corridors. Therefore, there would be no permanent impacts to wildlife corridors at these locations.

Early Implementation Project (EIP)

Natural Communities

Construction activities during the EIP would impact Venturan coastal sage scrub habitat by the reconstruction of an existing retaining wall along the southbound lanes of I-5 north of the Weldon Canyon overcrossing. The reconstruction of the retaining wall would permanently impact approximately 0.83 ac of Venturan coastal sage scrub habitat. All of the Venturan coastal sage scrub permanent impacts during construction of the EIP are within the permanent impacted acreage of the Build Alternatives. With the avoidance, minimization, and/or mitigation measures discussed in Section 2.17.4,

permanent impacts to Venturan coastal sage scrub habitat are not expected to be adverse.

No oak trees were identified within the impact limits identified for the EIP.

Wildlife Corridors

Additional structures or pilings at potential wildlife corridors have the potential to obstruct wildlife movement. The EIP would place additional bridge supports at the Gavin Canyon undercrossing. However, the additional bridge pilings proposed at this location would be spaced wide enough to not obstruct wildlife movement. Because the limited wildlife movement at the Weldon Canyon Road Bridge occurs over the structure, replacement of the bridge would not obstruct wildlife movement. Because there would be no permanent obstruction to wildlife movement, the EIP impacts to wildlife corridors would be minimal and not considered adverse.

2.17.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be incorporated to avoid, minimize, and/or mitigate adverse impacts of the Build Alternatives and EIP to natural communities:

NC-1 Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any oak tree, oak habitat, riparian and riverine communities, Venturan coastal sage scrub, adjacent to the project footprint and designated as Environmentally Sensitive Areas (ESAs) to be preserved. The protected zone of each oak tree will extend 25 feet (ft) outside of the dripline of the tree. No grading or fill activity of any type will be permitted within the ESAs. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment shall be operated in a manner so as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, shall be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where trees and vegetation are immediately adjacent to planned grading activities.

NC-2 A biologist shall monitor construction for the duration of the project to ensure that vegetation removal, best management practices (BMPs),

Environmentally Sensitive Areas (ESAs), and all avoidance and minimization measures are properly constructed and followed.

NC-3 Per California Department of Transportation (Caltrans) policy, impacts to any oak trees (excluding California scrub oaks) with trunk sizes above 8 inches (in) diameter at breast height (dbh) will be replaced at a mitigation-to-impact ratio of 3:1, if possible. Heritage oaks (oaks with dbh greater than 36 in) will be replaced at a mitigation-to-impact ratio of 10:1, if possible.

NC-4 Impacts to oak trees outside of the existing Caltrans right-of-way, the County of Los Angeles Oak Tree Protection Ordinances and the City of Santa Clarita Municipal Code require conditions that are deemed necessary to ensure that oak trees are protected. These conditions may involve, but are not limited to, replacement of oak trees and an oak tree protection plan within the project area to protect replacement oaks and those oak trees not impacted by the proposed project.

NC-5 All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated nonsensitive upland habitat areas. The designated upland areas will be located in such a manner as to prevent the runoff from any spills from entering waters of the United States.

NC-6 Prior to beginning construction, a Habitat Mitigation and Monitoring Plan (HMMP) will be developed in coordination with the United States Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and United States Fish and Wildlife Service (USFWS) to ensure no net loss of riparian habitat value or acreage will result. The HMMP will comply with all terms and conditions set forth in the permits and opinions issued by the resource agencies and will include the following provisions:

- Permanent impacts to native habitat and riparian habitat will be replaced on or off site at a minimum 2:1 ratio with in-kind habitat. Temporary impacts to native vegetation will be replaced at a minimum of 1:1 ratio, with in-kind habitat restored in place within the project area. If off-site restoration is conducted, it will be done within the same watershed as the proposed project.

- The HMMP will identify a success criterion of at least 80 percent cover of native habitat and native riparian vegetation or composition structure similar to existing adjacent high-quality riparian vegetation.
- Further criteria specified in the HMMP will include an establishment period for the replacement habitat, regular trash removal, and regular maintenance and monitoring activities to ensure the success of the mitigation plan. After construction, annual summary reports of biological monitoring will be provided to ACOE, CDFG, and USFWS documenting the monitoring effort. The duration of the monitoring and reporting will be established by resource agency permit conditions.
- The HMMP will identify a success criterion for restored habitat of native Venturan coastal sage scrub vegetation of a composition structure similar to existing adjacent high-quality Venturan coastal sage scrub.

Environmental Study Limits
Western Arroyo Toad
Coastal California Gnatcatcher
Least Bells Viero

Alluvial Wash
Chaparral
Cleared/Bare Ground
Cottonwood Forest
Developed/Ornamental

Freshwater Marsh
Mulefat Scrub
Southern Coast Live Oak Riparian Forest
Southern Cottonwood-Willow Riparian Forest
Oak Savannah

Oak Woodland
Ruderal
Venturian Coastal Sage Scrub
Willow Riparian Scrub

0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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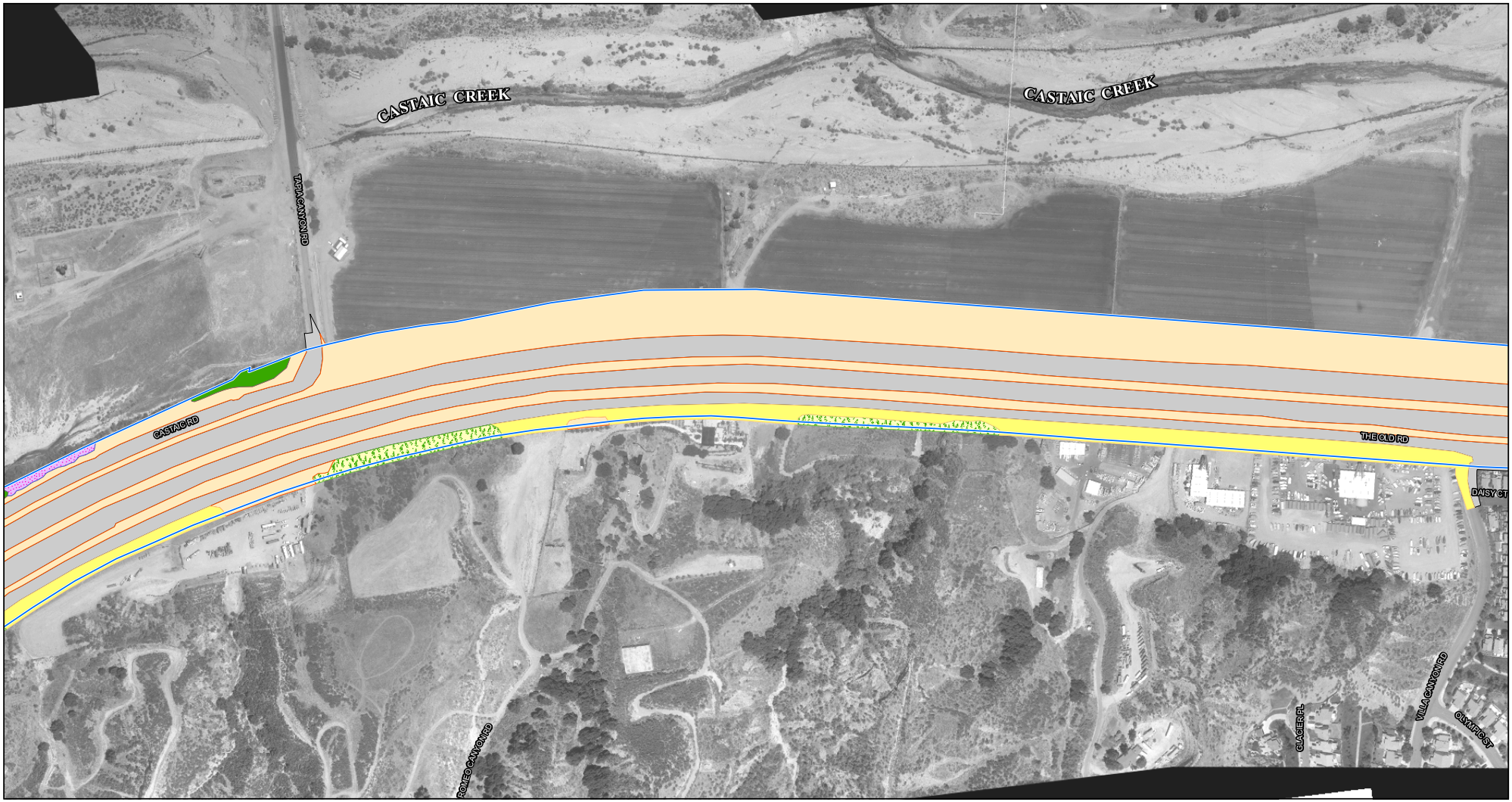
I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



Environmental Study Limits
Western Arroyo Toad
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Oak Savannah
Oak Woodland
Ruderal
Venturian Coastal Sage Scrub
Willow Riparian Scrub

0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
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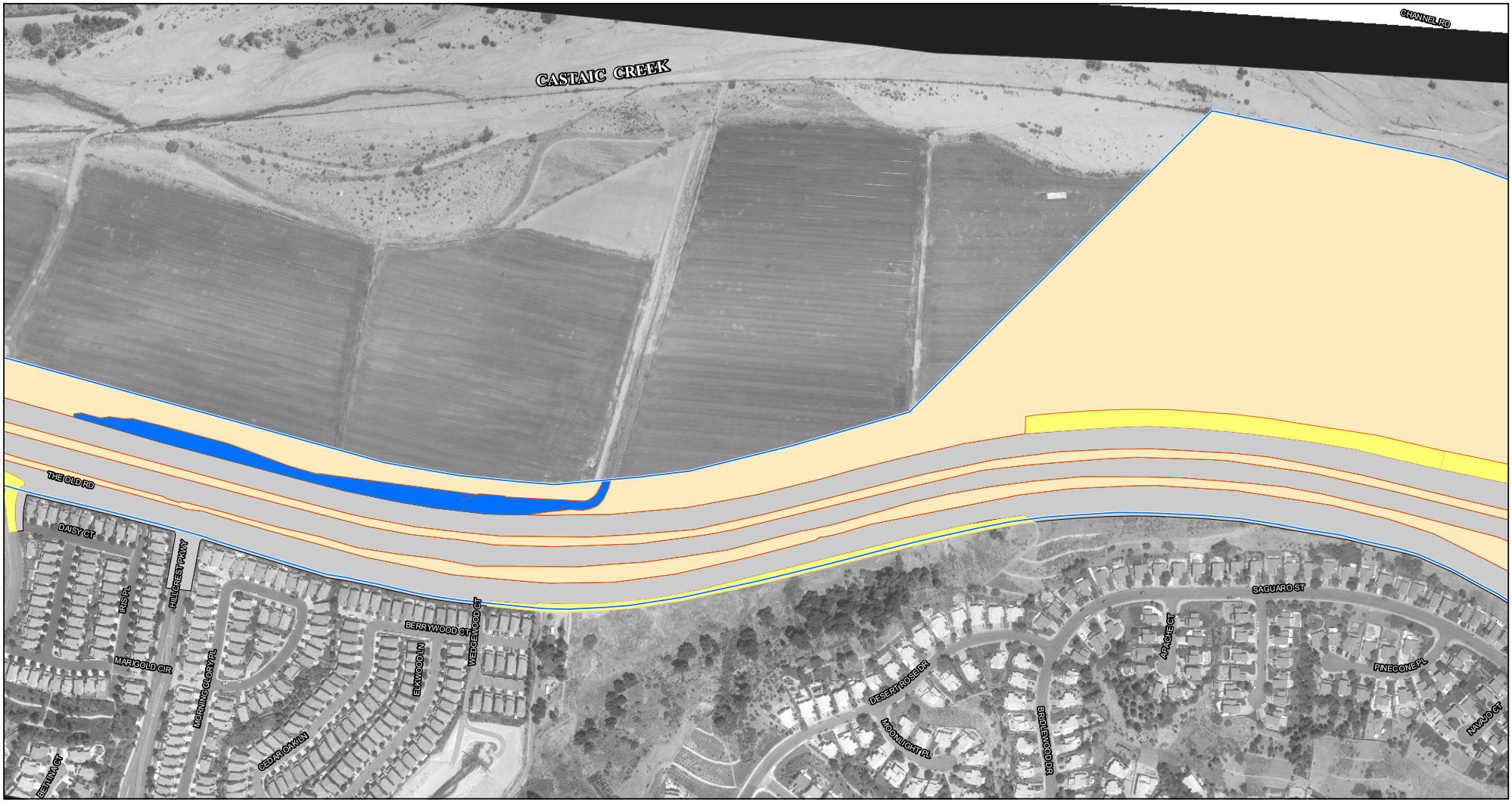

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FIGURE 2.17.1
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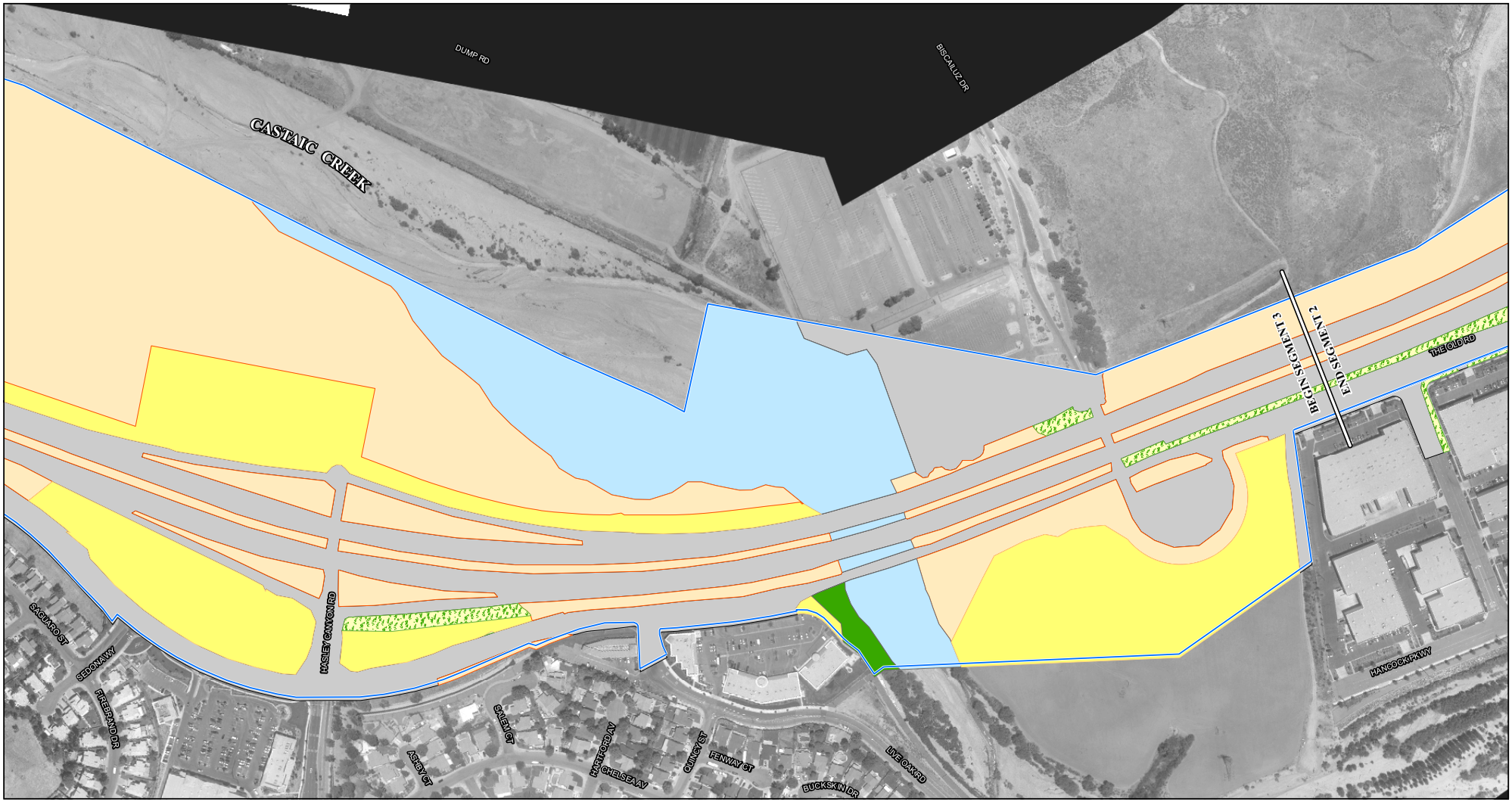

Environmental Study Limits
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SOURCE: Psomas (2006).

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FIGURE 2.17.1
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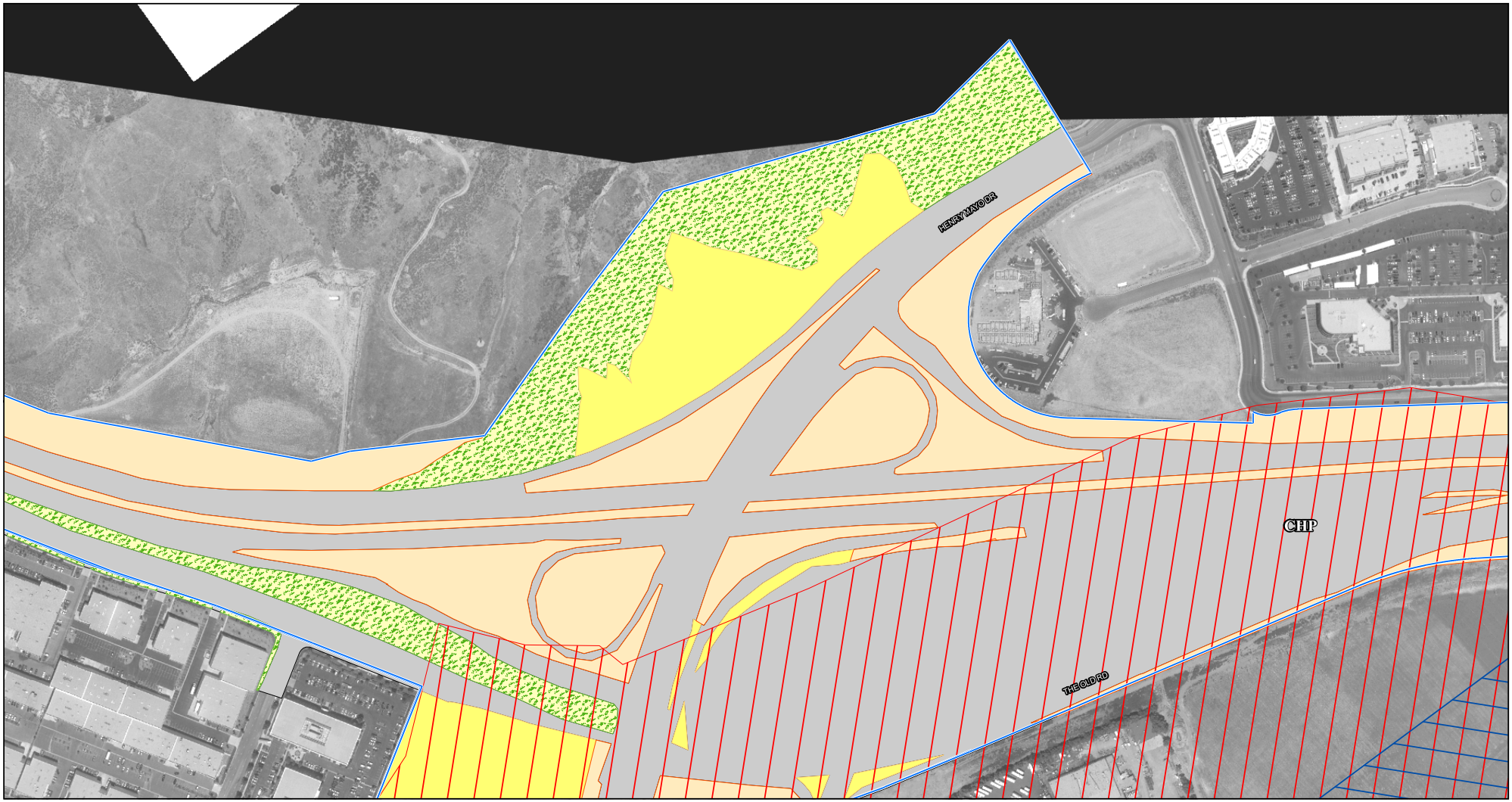

Environmental Study Limits
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Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
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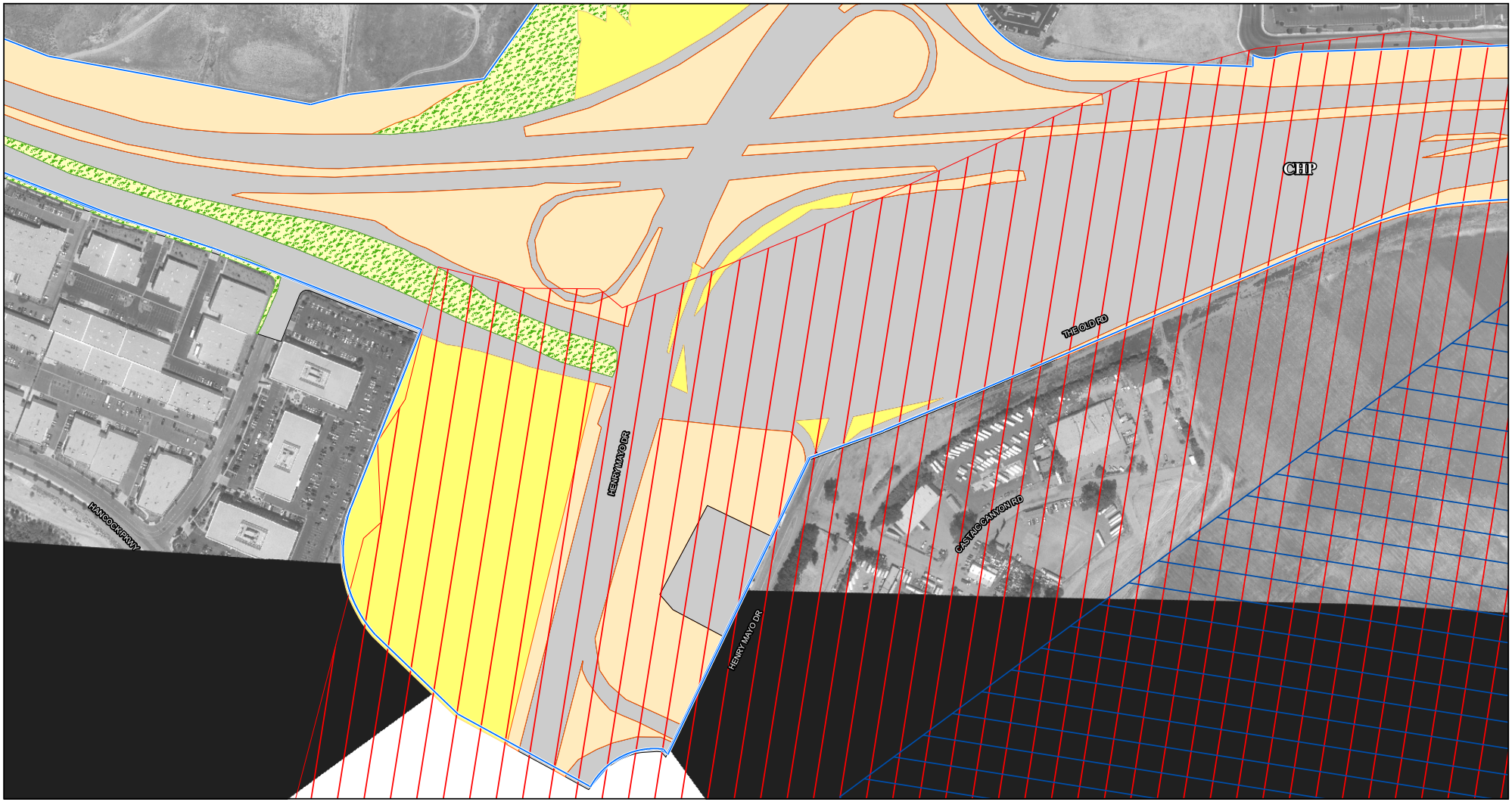

Environmental Study Limits
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Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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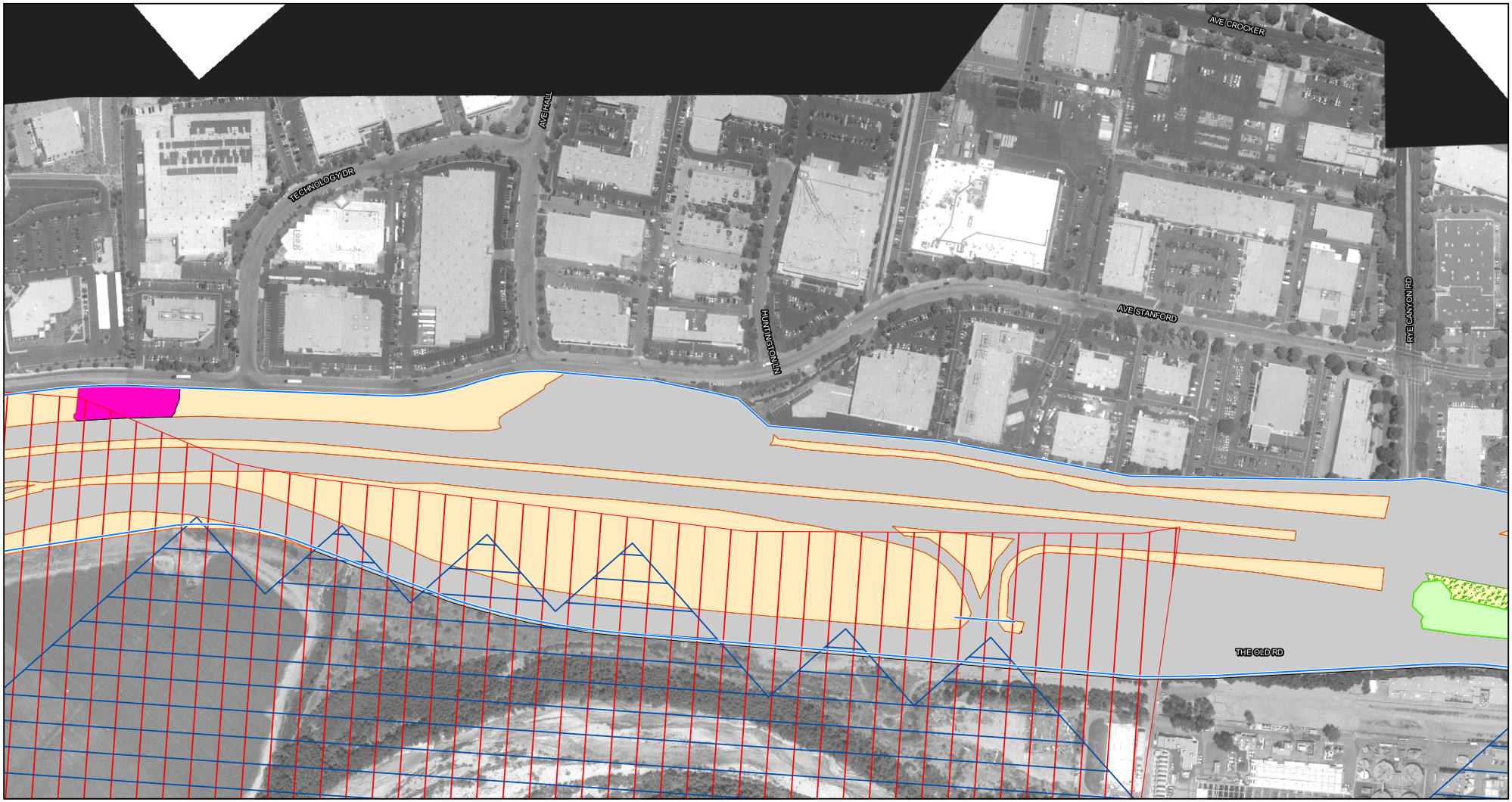

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Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
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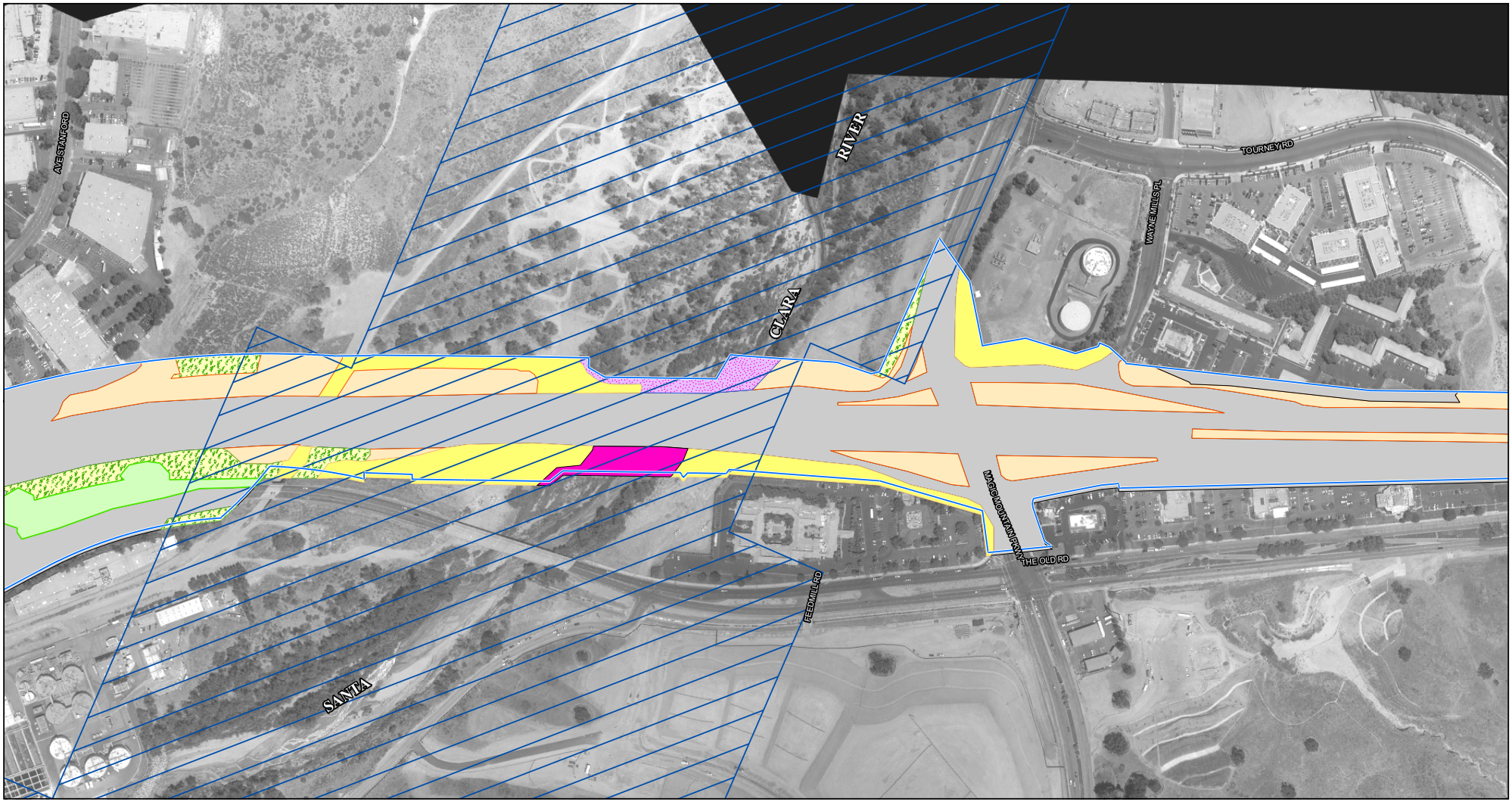

Environmental Study Limits
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Venturian Coastal Sage Scrub
Willow Riparian Scrub

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Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
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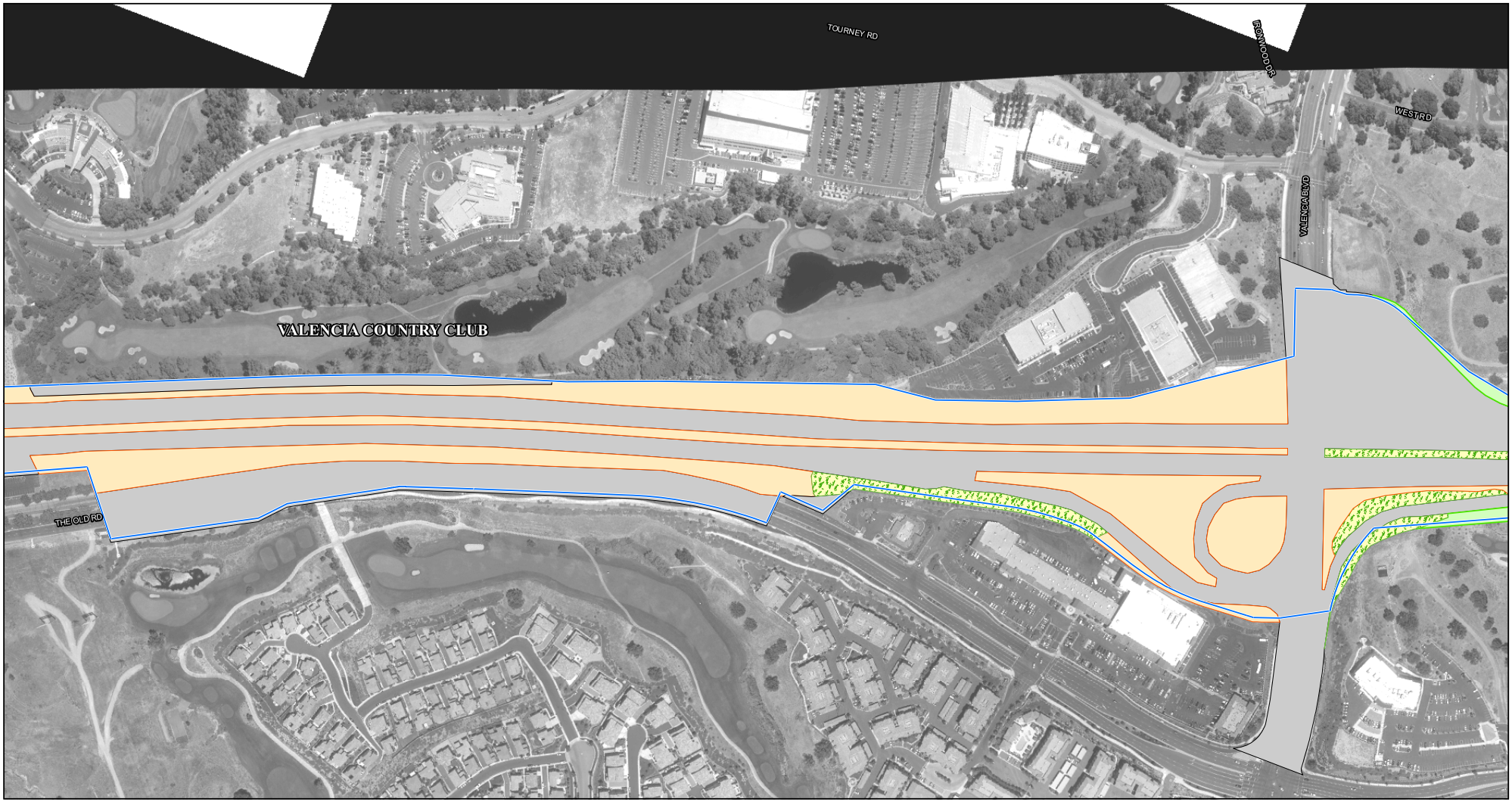

- Environmental Study Limits
- Western Arroyo Toad
- Coastal California Gnatcatcher
- Least Bells Viero
- Alluvial Wash
- Chaparral
- Cleared/Bare Ground
- Cottonwood Forest
- Developed/Ornamental
- Freshwater Marsh
- Mulefat Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood-Willow Riparian Forest
- Oak Savannah
- Oak Woodland
- Ruderal
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- Willow Riparian Scrub

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Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
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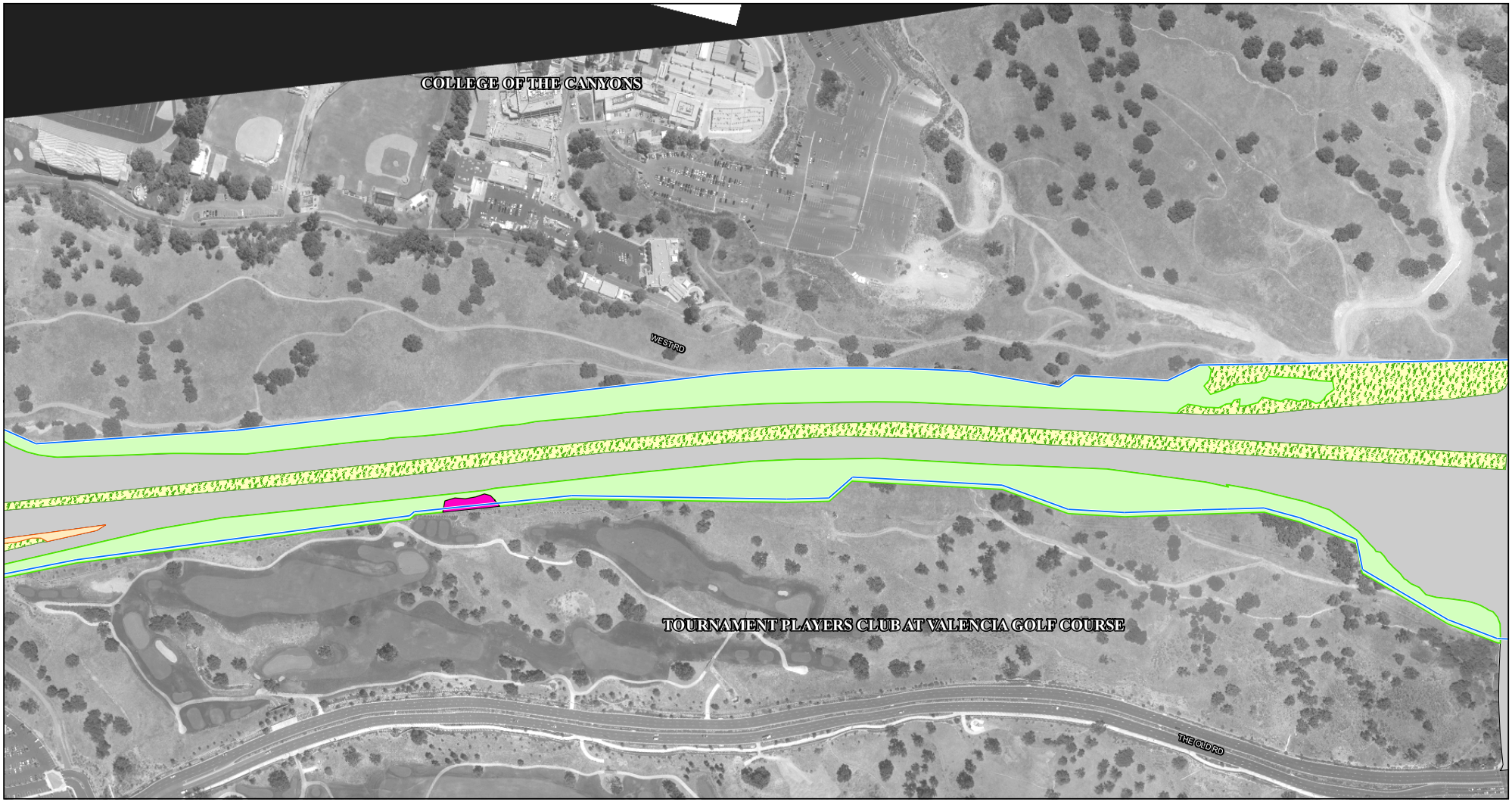

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0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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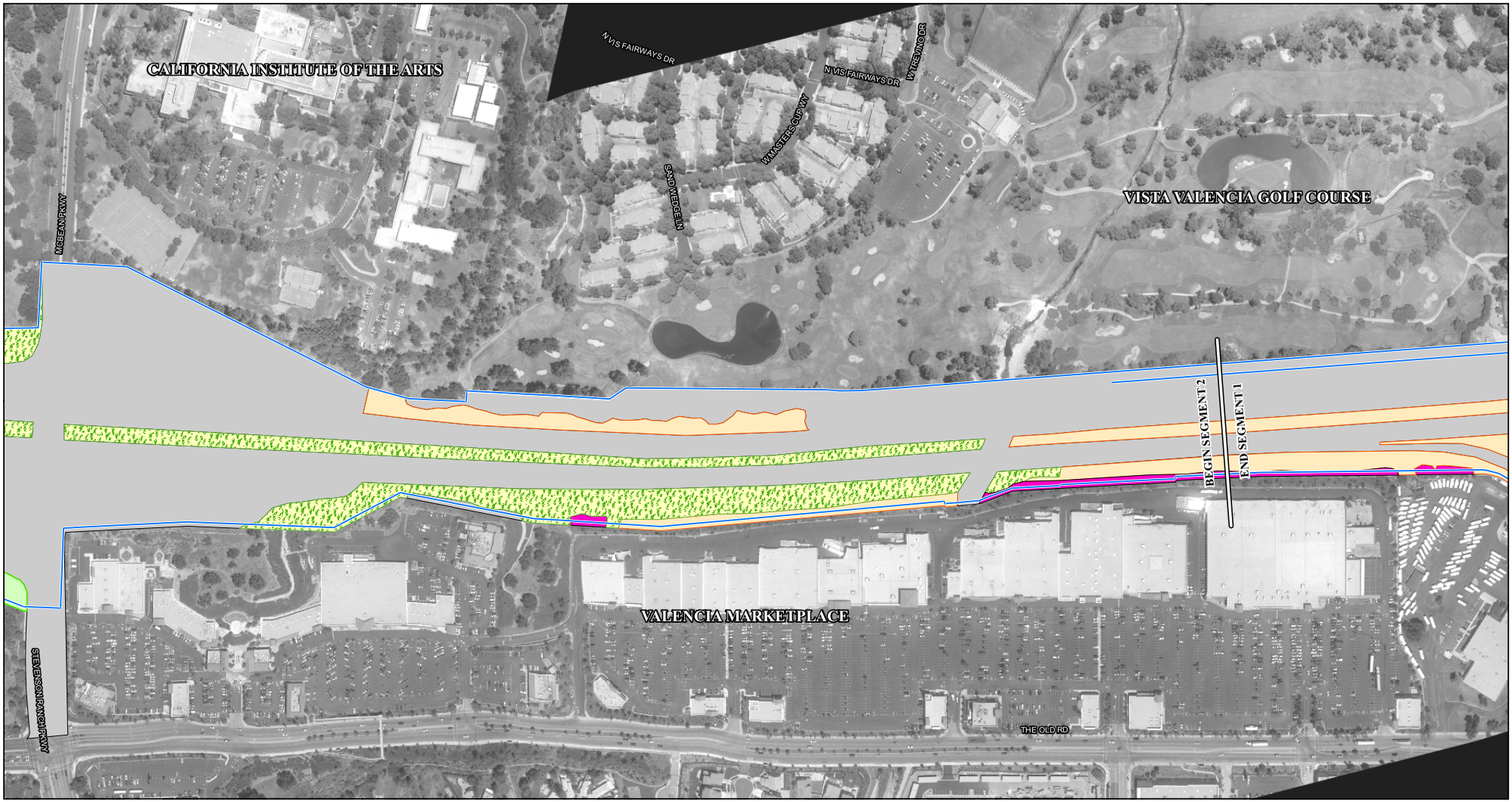
FIGURE 2.17.1
Sheet 10 of 18

I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0

Environmental Study Limits
Western Arroyo Toad
Coastal California Gnatcatcher
Least Bells Viero
Alluvial Wash
Chaparral
Cleared/Bare Ground
Cottonwood Forest
Developed/Ornamental
Freshwater Marsh
Mulefat Scrub
Southern Coast Live Oak Riparian Forest
Southern Cottonwood-Willow Riparian Forest
Oak Savannah
Oak Woodland
Ruderal
Venturian Coastal Sage Scrub
Willow Riparian Scrub

0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
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Environmental Study Limits
Western Arroyo Toad
Coastal California Gnatcatcher
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0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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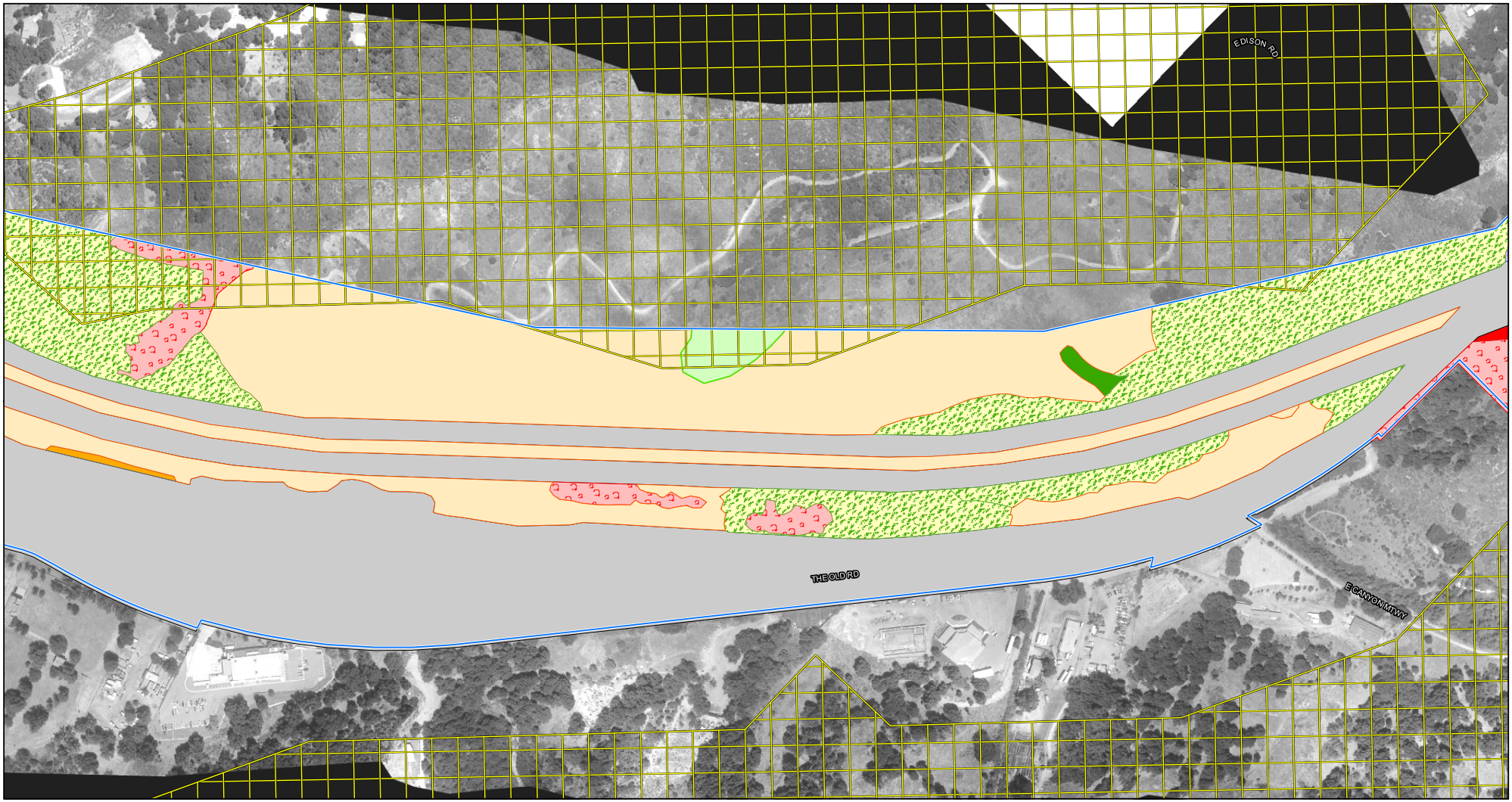
FIGURE 2.17.1
Sheet 13 of 18

I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



Environmental Study Limits
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0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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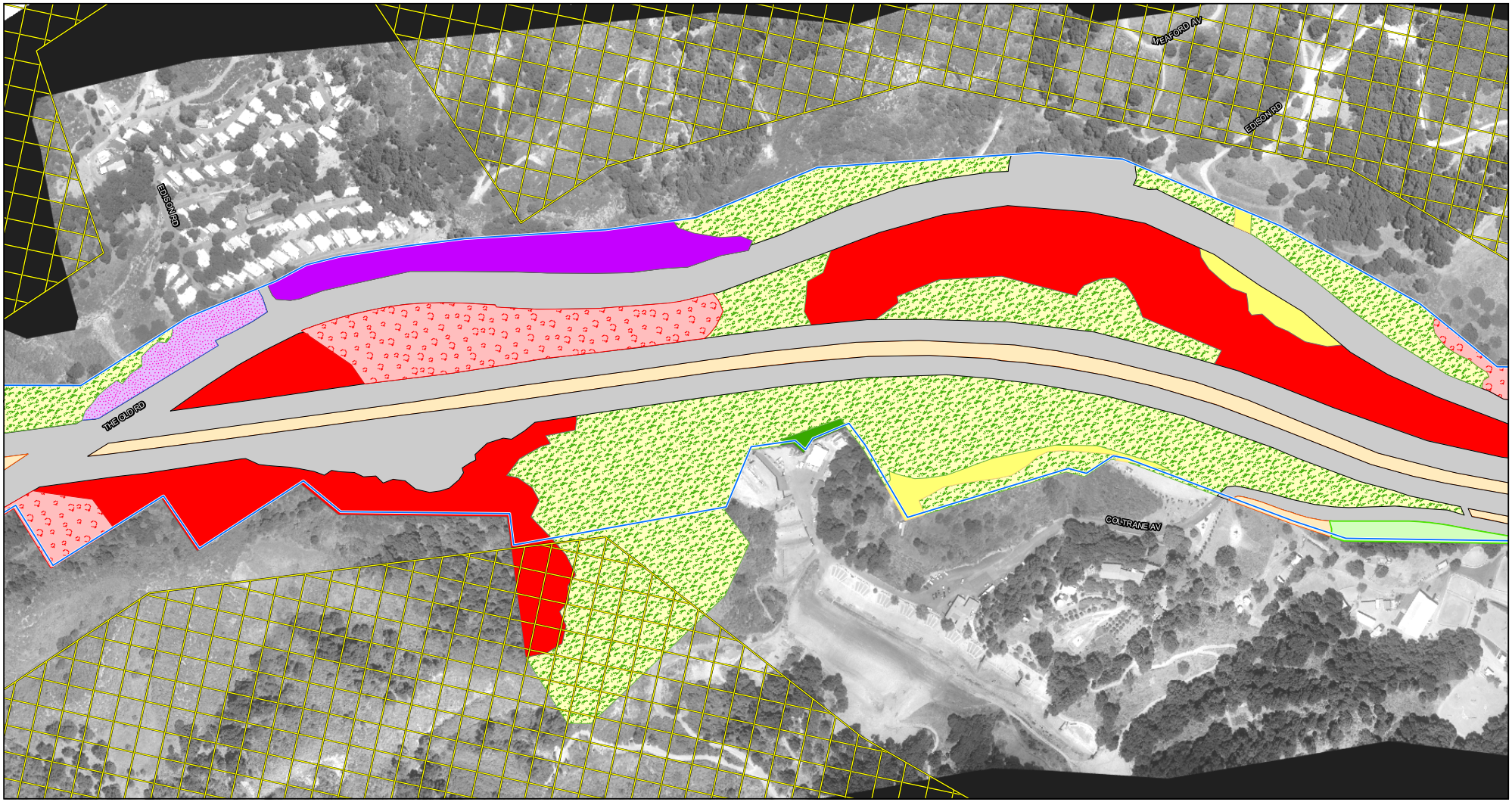
FIGURE 2.17.1
Sheet 14 of 18

I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



Environmental Study Limits
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Map Index

SOURCE: Psomas (2006).

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FIGURE 2.17.1
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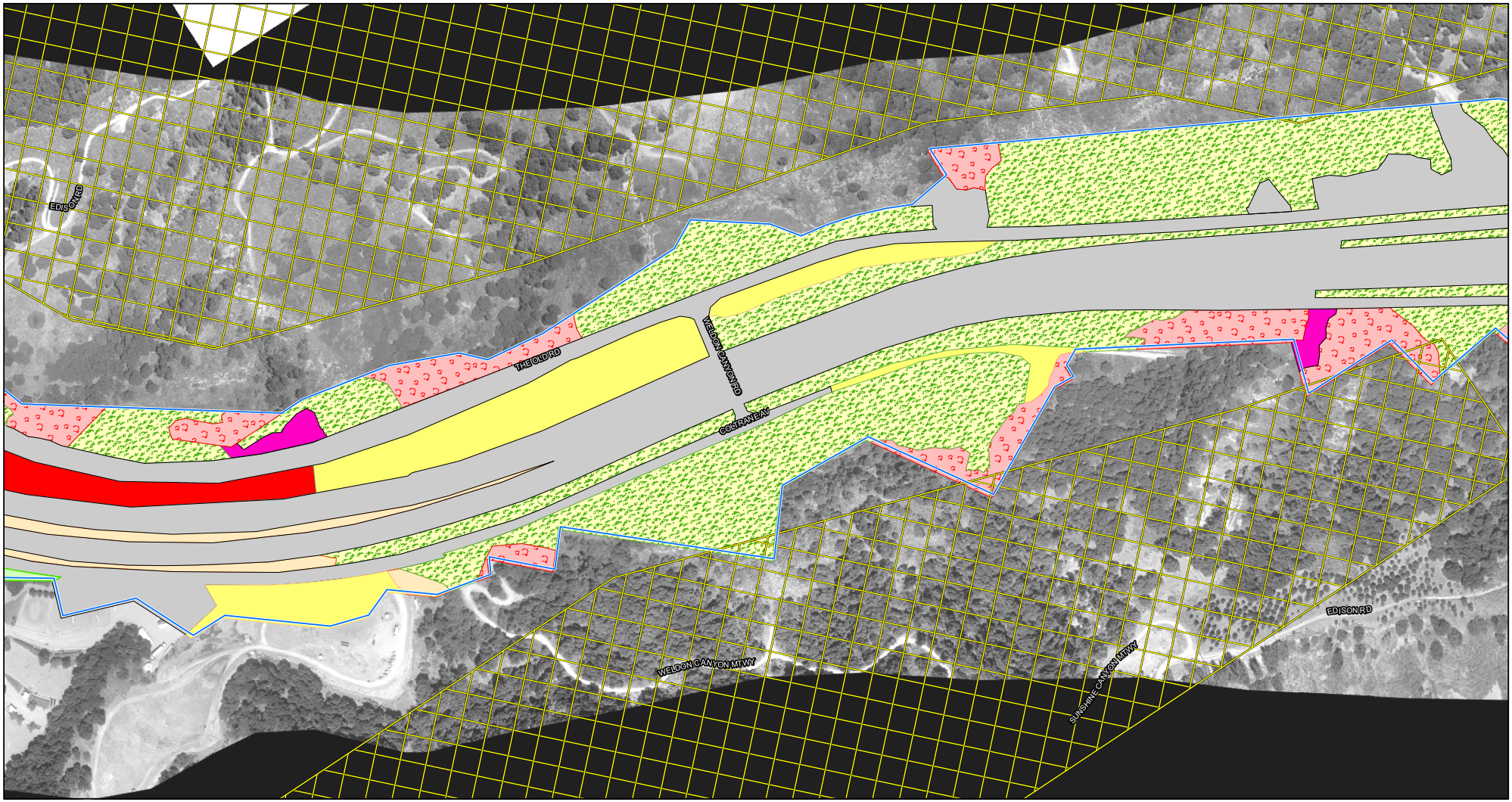
I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



Environmental Study Limits
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0 150 300 Feet

Map Index

SOURCE: Psomas (2006).

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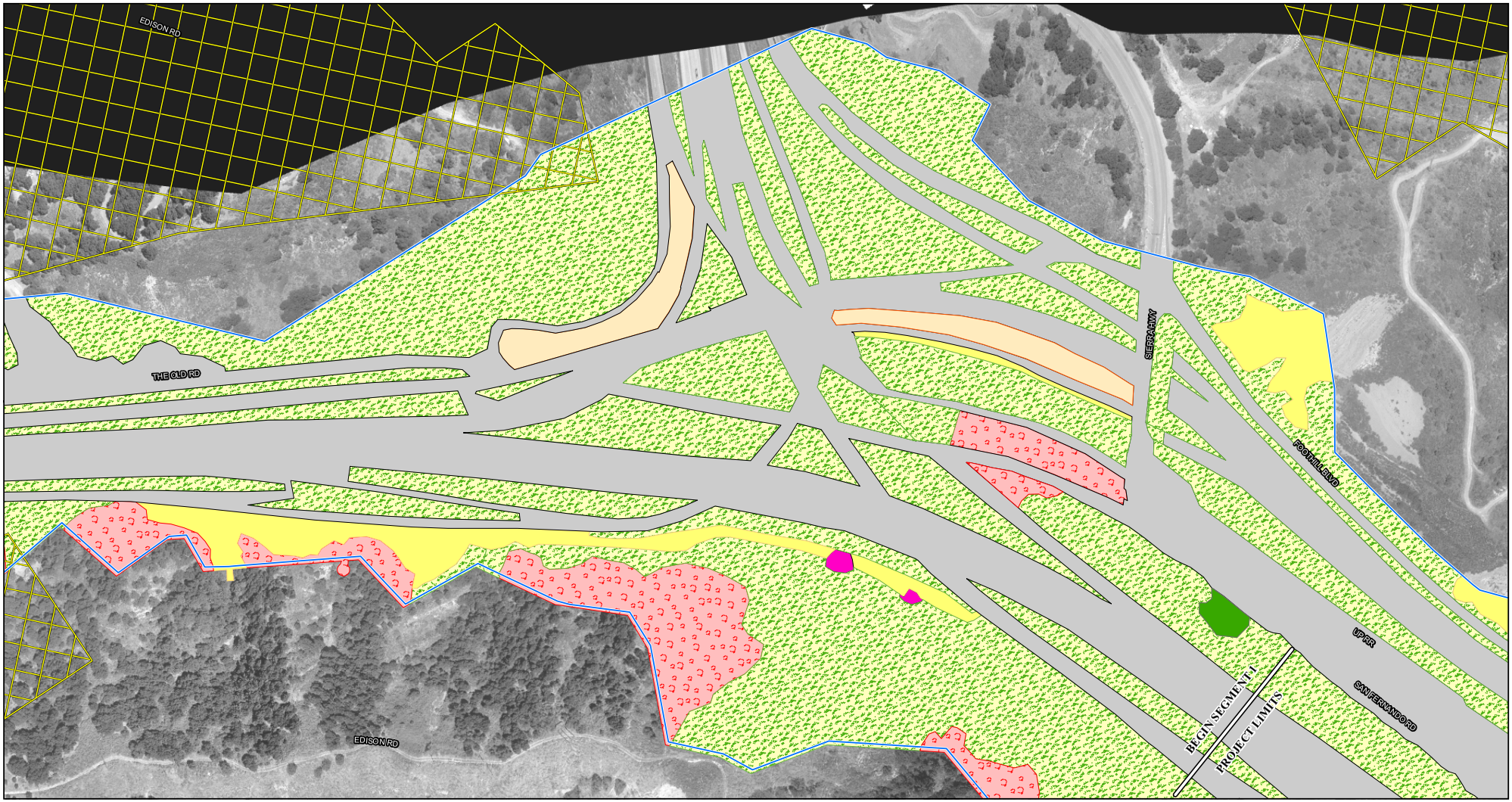
FIGURE 2.17.1
Sheet 16 of 18

I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



Environmental Study Limits
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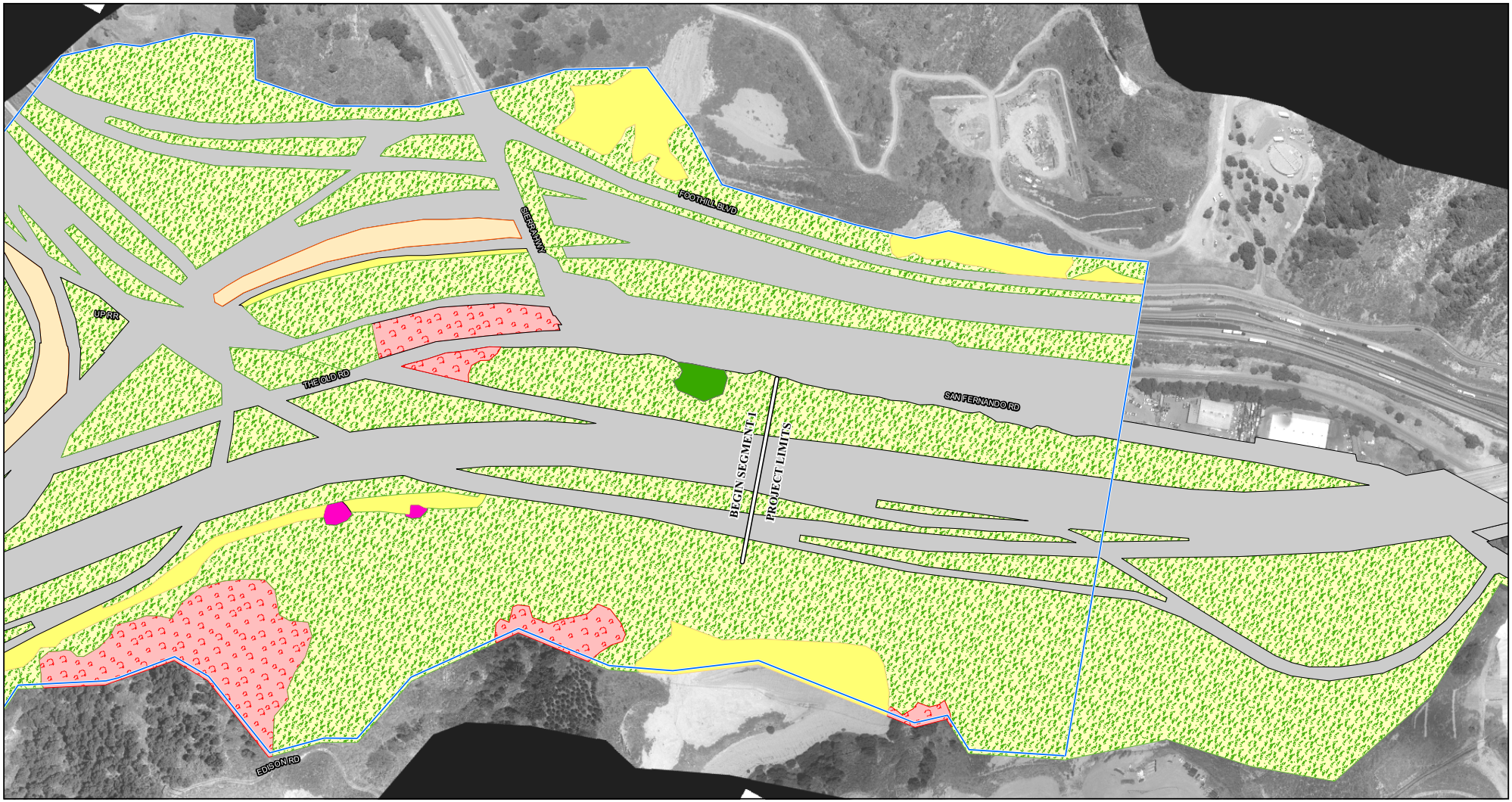
SOURCE: Psomas (2006).

I:\SIB0601\GIS\Natural_Comm_2.17.1_20081203.mxd (12/11/08)

FIGURE 2.17.1
Sheet 17 of 18

I-5 HOV/Truck Lanes Project
Natural Communities
07-LA-5 PM R45.4/R59.0
EA 2332E0



Environmental Study Limits
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SOURCE: Psomas (2006).

I:\SIB0601\GIS\Natural_Comm_2.17.1_20081203.mxd (12/11/08)

FIGURE 2.17.1
Sheet 18 of 18

I-5 HOV/Truck Lanes Project
Natural Communities
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EA 2332E0

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2.18 Wetlands and Other Waters

The information in this section is based on the Jurisdictional Delineation Report (LSA Associates, Inc., June 2008) and the Natural Environment Study (NES) (LSA Associates, Inc., December 2008).

2.18.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (ACOE) with oversight by the U.S. Environmental Protection Agency (EPA).

The Executive Order (E.O.) for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration (FHWA), cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and

Development Commission) may also be involved. Sections 1600–1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act (CWA). Please see the Water Quality section for additional details.

2.18.2 Affected Environment

The field work for the jurisdictional delineation was conducted on November 29 and 30, 2007, January 16 and 17, February 27 and 28, and March 5 and 6, 2008 and the formal wetland delineation survey was completed in June 2008. It was determined that there are jurisdictional features, including wetland areas, subject to the jurisdiction of the CDFG and ACOE. The total potential ACOE jurisdictional and nonjurisdictional areas within the project area are shown in Table 2.18.A and Figure 2.18.1 and are discussed in further detail below.

Table 2.18.A Potential ACOE Jurisdictional and Nonjurisdictional Areas

	Nonwetland Waters of the U.S. (ac)	Wetland Waters of the U.S. (ac)
Potential Jurisdictional Areas		
ACOE Jurisdictional Areas	49.96	3.56
Potential ACOE Jurisdictional Areas (significant nexus determination required)	7.46	4.37
Total Potential ACOE Jurisdictional Areas	**57.42**	**7.93**
Potential Nonjurisdictional Areas		
Roadside drainage ditches	2.17	N/A

ac = acres
ACOE = United States Army Corps of Engineers
N/A = not applicable

As part of the jurisdictional delineation, an analysis of the functions and values of the drainages in the project area was conducted. With the exception of the Santa Clara River and Castaic Creek, the functions and values of the majority of the drainages in the project area were determined to be low to moderate. The functions and values were determined to be high for the Santa Clara River and moderate to high for Castaic Creek. The functions and values are discussed in further detail below:

- **Hydrologic Regime** (rated high for Santa Clara River and moderate for Castaic Creek)**.** This function is the ability of a wetland or stream to absorb and store water belowground. The storage of water belowground allows for the fluctuation between anaerobic and aerobic conditions that benefit environmental conditions necessary for microbial cycling. The degree of this saturation is dependent on the soil composition and is affected by prior flooding events. For example, clay soils possess more pore space than sandy soils. However, the smaller pore size slows the rate at which water is absorbed and released, and therefore clay soil has a lower capacity to store water than sandy soils. As a result, drainages that have earthen bottoms consisting of sandy soils have a high hydrologic regime value.

- **Flood Storage and Flood Flow Modification** (rated high for Santa Clara River and Castaic Creek)**.** This function is determined based on the ability of a wetland or stream at which the peak flow in a watershed can be attenuated during major storm events and peak domestic flows to take in surface water that may otherwise cause flooding. This is dependent on the size of the wetland or stream, the amount of water it can hold, and the location in the watershed. For instance, larger wetlands or streams that have a greater capacity to receive waters have a greater ability to reduce flooding. In addition, areas high in the watershed may have more ability to reduce flooding in downstream areas, but areas lower in the watershed may have greater benefits to a specific area. Vegetation, shape, and the configuration of the wetland or stream may also affect flood storage by dissipating the energy of flows during flood events. Drainages that have a high flood storage and flood flow modification value are larger in size and can either absorb and store water belowground (high hydrologic regime) or can transport peak flows into a drainage that can. These drainages are less likely to flood during major storm events and during peak domestic flows.

- **Sediment Retention** (rated high for Santa Clara River and Castaic Creek)**.** Removal of sediment is the process that keeps sediments from migrating downstream. This is accomplished through the natural process of sediment

retention and entrapment. This function is dependent on the sediment load being delivered by runoff into the watershed. Similar to above, the vegetation, shape, and configuration of a wetland will also affect sediment retention if water is detained for long durations, as would be the case with dense vegetation, a bowl-shaped watershed, or slow-moving water. This function would be demonstrated (i.e., high) if the turbidity of the incoming water is greater than that of the outgoing water. Drainages that have sandy bottoms, bowl-shaped watersheds, slow-moving water, and/or vegetation have a high sediment retention value.

- **Nutrient Retention and Transformation** (rated high for Santa Clara River and moderate for Castaic Creek)**.** Nutrient cycling consists of two variables: uptake of nutrients by plants and detritus turnover, in which nutrients are released for uptake by plants downstream. Wetland systems in general are much more productive with regard to nutrients than upland habitats. The regular availability of water associated with the wetland or stream may cause the growth of plants (nutrient uptake) and associated detritivores and generate nutrients that may be utilized by a variety of aquatic and terrestrial wildlife downstream. Drainages with abundant vegetation and earthen bottoms have a high value.

- **Toxicant Trapping** (rated high for Santa Clara River and moderate for Castaic Creek)**.** The major processes by which wetlands remove nutrients and toxicants are as follows: (1) by trapping sediments rich in nutrients and toxicants, (2) by adsorption to soils high in clay content or organic matter, and (3) through nitrification and denitrification in alternating oxic and anoxic conditions. Removal of nutrients and toxicants is closely tied to the processes that provide for sediment removal. Drainages with abundant vegetation, with clay soils, and/or that meet wetland criteria have a high value.

- **Social Significance** (rated high for Santa Clara River and moderate for Castaic Creek)**.** This is a measure of the probability that a wetland or stream will be utilized by the public because of its natural features, economic value, official status, and/or location. This includes its being utilized by the public for recreational uses, such as boating, fishing, birding, walking, and other passive recreational activities. In addition, a wetland or stream that is utilized as an outdoor classroom, is a location for scientific study, or is near a nature center would have a higher social significance standing. Many conditions must be taken into account to consider drainages as having a high social significance value. Although the Santa Clara River and Castaic Creek have a high or moderate social

significance but do not have much public access, they have a natural setting and provide wildlife habitat for a variety of species.

- **Wildlife Habitat** (rated high for Santa Clara River and moderate for Castaic Creek)**.** General habitat suitability is the ability of a wetland to provide habitat for a wide range of wildlife. Vegetation is a large component of wildlife habitat. As plant community diversity increases along with connectivity with other habitats, so does potential wildlife diversity. In addition, a variety of open water, intermittent ponding, and perennial ponding is also an important habitat element for wildlife. Drainages with a high wildlife habitat value have a mixture of native vegetation, are more secluded from development, and provide water for drinking and/or habitat for aquatic wildlife.

- **Aquatic Habitat** (rated high for Santa Clara River and Castaic Creek)**.** The ability of a wetland or stream to support aquatic species requires that there be ample food supply, pool and riffle complexes, and sufficient soil substrate. Food supply is typically in the form of aquatic invertebrates and detrital matter from nearby vegetation. Pool and riffle complexes provide a variety of habitats for species diversity as well as habitat for breeding and rearing activities. Species diversity is directly related to the complexity of the habitat structure. Drainages with a high aquatic habitat value have water for at least a portion of the year, as well as pool and riffle complexes that provide for greater biodiversity. In addition, nearby vegetation provides enough detrital matter for aquatic invertebrates, which form the base of the aquatic food chain.

2.18.2.1 ACOE Jurisdiction

Nexus to Navigable Waters

The proposed project crosses over the Santa Clara River and Castaic Creek (a major tributary to the Santa Clara River). Because both the Santa Clara River and Castaic Creek have a relatively permanent (at least three months) flow during the year and are directly and indirectly tributaries to the Pacific Ocean, no further determination of significant nexus is likely required per ACOE guidance.

In addition, there are numerous other drainages within the project area where potential ACOE jurisdiction occurs. These remaining drainages on site connect directly to either the Santa Clara River or Bull Creek through the storm drain system. Both the Santa Clara River and Bull Creek (via the Los Angeles River) eventually flow into the Pacific Ocean. Drainages that appear natural or appear to function in a

capacity of more than a storm drain are believed to be potentially jurisdictional. However, because these drainages are not relatively permanent water and/or are part of the storm drain system, a significant nexus determination by the ACOE will be required.

There are some additional man-made drainages that appear to be roadside drainage ditches that function solely to convey storm water into the storm drain system. The ACOE typically does not assert jurisdiction over man-made roadside drainage ditches. However, the ACOE does reserve the right to regulate these waters on a case-by-case basis.

Potential Nonwetland Waters of the U.S.

Portions of the Santa Clara River and Castaic Creek, as well as most of the drainages within the project area, do not appear to remain inundated or saturated near the surface for long enough to meet the ACOE wetland criteria. However, portions of the Santa Clara River, Castaic Creek, and a few of the drainages within the project area appear to meet ACOE wetland criteria as described below. The drainages within the project area are comprised of a mixture of natural earthen bottoms, riprap bottoms, concrete v-ditches, and concrete rectangular channels, or a combination of these. All of these, with the exception of the natural earthen bottom drainages, appear to be man-made. With the exception of the Santa Clara River and Castaic Creek, the remaining potentially jurisdictional drainages are not relatively permanent waters that are tributary to a traditional navigable body. Therefore, a significant nexus finding will be required. The total acreage of potential ACOE nonwetland waters of the U.S. within the study area is 57.42 acres (ac).

Potential Wetland Waters of the U.S.

There are four principal areas within the study area where potential ACOE jurisdictional wetlands occur. Two of these areas, the Santa Clara River and Castaic Creek are perennial streams where the flows are conveyed under the I-5. Portions of these drainages appear to remain inundated or saturated long enough to meet ACOE wetland criteria. The third wetland area is located in the northern portion of the project, adjacent to Castaic Road, south of the Parker Road off-ramp, and north of Tapia Canyon Road. The fourth wetland area consists of a ponded area east of I-5 and west of Avenue Stanford. Several smaller potential ACOE jurisdictional wetland areas are also located within the project alignment. With the exception of the Santa Clara River and Castaic Creek, the remaining potentially jurisdictional wetland areas are not adjacent to relatively permanent tributaries to a traditional navigable body.

Therefore, a significant nexus finding will be required. The total acreage of potential ACOE wetland waters within the study area is 7.93 ac.

2.18.2.2 CDFG Jurisdiction

All of the areas satisfying the ACOE jurisdictional criteria for waters of the U.S. and adjacent wetlands, as described above, are also subject to CDFG jurisdiction pursuant to Section 1602 of the California Fish and Game Code. In addition, streambed banks and adjacent riparian areas extending beyond the limits of the ACOE jurisdiction are considered subject to CDFG jurisdiction. These areas failed to meet the ACOE wetland criteria. The total acreage of CDFG jurisdiction within the study area is 72.15 ac, which exceeds the total area delineated as ACOE jurisdiction (i.e., 65.35 ac) by 6.80 ac.

2.18.2.3 Regional Water Quality Control Board (RWQCB) Jurisdiction

Since there is no public guidance on determining RWQCB jurisdictional areas, jurisdiction was determined based on the federal definition of wetlands (three parameter) and other waters of the U.S. (ordinary high water mark). The total area of potential RWQCB jurisdiction is 65.35 ac.

2.18.2.4 Agency Coordination

As discussed in further detail in Chapter 4, Comments and Coordination, ACOE was a cooperating agency for the proposed project. As a cooperation agency, ACOE reviewed and provided comments on the project purpose and need and range of alternatives.

In addition, a field meeting with ACOE was conducted on October 7, 2008. The purpose of the meeting was to discuss the wetland and other water resources in the project area and the findings of the Jurisdictional Delineation.

A Section 404 Permit from ACOE would be required for the project. Although the determination of the type of permit (Individual or Nationwide) would not be determined until during the permitting process, it is anticipated that an Individual permit would be required.

2.18.3 Environmental Consequences

2.18.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse temporary impacts to wetlands and other waters in the study area.

Alternative 2: Reduced Median Alternative

Alternative 2 would result in temporary impacts to approximately 3.55 ac of nonwetland and wetland waters of the United States. Temporary impacts include physical impacts from construction activities, including bridge and drainage improvements. Table 2.18.B shows the breakdown of expected temporary impacts of Alternative 2 to potential ACOE jurisdictional and nonjurisdictional areas within the project area. Alternative 2 would result in temporary impacts to 4.01 ac of CDFG jurisdictional areas. Temporary impacts to potential RWQCB jurisdictional areas are the same as those for the ACOE listed in Table 2.18.B.

Table 2.18.B Temporary Impacts to ACOE Jurisdictional and Nonjurisdictional Areas for Alternative 2 and 3

Potential Jurisdictional Areas	Nonwetland Waters of the United States (ac)		Wetland Waters of the United States (ac)	
	Alternative 2	Alternative 3	Alternative 2	Alternative 3
ACOE Jurisdictional Areas				
ACOE Jurisdictional Areas	1.81	1.85	0.32	0.35
Potential ACOE Jurisdictional Areas (significant nexus determination required)	1.08	1.03	0.33	0.28
Total Potential ACOE Jurisdictional Areas	2.89	2.88	0.65	0.63
Potential Nonjurisdictional Areas				
Roadside drainage ditches	0.01	0.02	N/A	N/A

Source: Natural Environment Study (NES) (LSA Associates, Inc., December 2008).

Temporary impacts to the drainages depicted in Figure 2.18.1 are summarized in Table 2.18.C. As shown in this table, most of the impacts to wetlands and other waters are minor impacts to numerous roadside drainages.

With implementation of the measures outlined below in Section 2.18.4, potential temporary impacts to wetlands and other waters would not be adverse.

Table 2.18.C Temporary Impacts to ACOE and CDFG Jurisdictional and Nonjurisdictional Areas for Alternatives 2 and 3

Drainage #	Alternative 2				Alternative 3			
	ACOE			CDFG	ACOE			CDFG
	Wetland	Nonwetland	Total ACOE		Wetland	Nonwetland	Total ACOE	
1	–	–	–	0.07	–	–	–	0.07
8	–	0.01	0.01	–	0.01	–	0.01	–
11 (Castaic Creek)	0.07	0.55	0.62	0.62	0.09	0.44	0.52	0.52
12	–	0.01	0.01	0.01	–	–	–	–
13	–	–	–	0.09	–	–	–	0.04
15	–	–	–	0.10	–	–	–	0.10
18	0.14	–	0.14	–	0.17	–	0.17	–
19	–	–	–	–	–	0.01	0.01	0.02
20	–	0.57	0.57	0.57	–	0.37	0.37	0.37
21 (Santa Clara River)	0.25	1.25	1.50	1.50	0.25	1.41	1.66	1.81
23	–	–	–	0.08	–	–	–	0.05
24	–	–	–	0.05	–	–	–	0.04
25	–	0.01	0.01	0.01	–	–	–	–
26	–	–	–	0.09	–	–	–	0.09
27	–	–	–	0.04	–	0.12	0.12	0.25
28	–	–	–	0.01	–	–	–	0.01
29	–	0.01	0.01	0.03	–	0.01	0.01	0.01
30	–	–	–	0.01	–	–	–	0.01
33	–	–	–	–	–	0.03	0.03	0.06
34	–	0.01	0.01	0.01	–	0.01	0.01	0.01
35	0.01	–	0.01	0.03	0.01	–	0.01	0.02
36	–	–	–	–	–	0.01	0.01	0.01
37	–	–	–	0.06	–	–	–	0.03
39	0.18	–	0.18	0.13	0.10	–	0.10	–
40	–	0.46	0.46	0.46	–	0.46	0.46	0.46
41	–	–	–	0.01	–	–	–	0.01
42	–	0.01	0.01	–	–	0.01	0.01	–
45	–	–	–	–	–	–	–	–
47	–	–	–	–	–	–	–	0.01
48	–	0.01	0.01	0.01	–	–	–	0.01
52	–	–	–	–	–	0.02	0.02	–
53	–	–	–	–	–	–	–	0.01
54	–	–	–	0.01	–	–	–	0.01
63	–	–	–	0.01	–	–	–	0.01
Total Impacts	**0.65**	**2.90**	**3.55**	**4.01**	**0.63**	**2.90**	**3.52**	**4.04**

Note: Drainages not included in the table above would not have temporary impacts.

Alternative 3: Full Median Alternative

Alternative 3 would result in temporary impacts to approximately 3.52 ac of nonwetland and wetland waters of the United States, which is 0.03 ac less than Alternative 2. Temporary impacts include physical impacts from construction activities, including bridge and drainage improvements. Table 2.18.B shows the breakdown of expected temporary impacts of Alternative 3 to potential ACOE jurisdictional and nonjurisdictional areas within the project area. Alternative 3 would result in temporary impacts to 4.04 ac of CDFG jurisdictional areas, which is 0.03 ac greater than Alternative 2. Temporary impacts to potential RWQCB jurisdictional areas are the same as those for the ACOE listed in Table 2.18.B.

Temporary impacts to the drainages depicted in Figure 2.18.1 are summarized in Table 2.18.C. As shown in this table, most of the impacts to wetlands and other waters are minor impacts to numerous roadside drainages.

With implementation of the measures outlined below in Section 2.18.4, potential temporary impacts to wetlands and other waters would not be adverse.

Early Implementation Project (EIP)

Potential jurisdictional waters are present within the entire project study area, including the area affected by the EIP. Proposed drainage improvement associated with the EIP would result in temporary impacts to potential jurisdictional waters. Temporary impacts include physical impacts from construction activities, including bridge and drainage improvements. The EIP would impact up to 1.12 ac of temporary impacts, 0.04 ac of wetland, and 1.08 ac of nonwetland waters. Specifically, improvements to the Gavin Canyon Bridge would temporarily impact up to 0.04 ac of potential jurisdictional wetland area along the south side of Gavin Canyon Bridge. Improvements to the Gavin Canyon Culvert, north of Calgrove Boulevard, would temporarily impact up to 0.01 ac of potential jurisdictional nonwetland waters of the United States.

For the Gavin Canyon undercrossing widening, improvements would temporarily impact up to 1.08 ac of potential jurisdictional nonwetland waters of the United States, and all of the impacts to jurisdictional waters associated with EIP are within the total temporary acreage of wetland impacts identified for the Build Alternatives.

With implementation of the measures outlined below in Section 2.18.4, potential temporary impacts to wetlands and other waters would not be adverse.

2.18.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse permanent impacts to wetlands and other waters in the study area.

Alternative 2: Reduced Median Alternative

Alternative 2 would result in permanent impacts to approximately 1.84 ac of nonwetland and wetland waters of the United States. Permanent impacts include physical impacts from roadway widening and new structures. Table 2.18.D shows the breakdown of expected permanent impacts of Alternative 2 to potential ACOE jurisdictional and nonjurisdictional areas within the project area. Alternative 2 would result in permanent impacts to 1.65 ac of CDFG jurisdictional areas. Permanent impacts to potential RWQCB jurisdictional areas are the same as those for the ACOE listed in Table 2.18.D.

Table 2.18.D Permanent Impacts to ACOE Jurisdictional and Nonjurisdictional Areas for Alternatives 2 and 3

Potential Jurisdictional Areas	Nonwetland Waters of the United States (ac)		Wetland Waters of the United States (ac)	
	Alternative 2	Alternative 3	Alternative 2	Alternative 3
ACOE Jurisdictional Areas				
ACOE Jurisdictional Areas	1.00	1.06	0.35	0.39
Potential ACOE Jurisdictional Areas (significant nexus determination required)	0.22	0.49	0.27	0.37
Total Potential ACOE Jurisdictional Areas	1.22	1.55	0.62	0.76
Potential Nonjurisdictional Areas				
Roadside drainage ditches	0	0	N/A	N/A

Source: Natural Environment Study (NES) (LSA Associates, Inc., December 2008).
ac = acres
ACOE = United States Army Corps of Engineers

Permanent impacts to the drainages depicted in Figure 2.18.1 are summarized in Table 2.18.E. As shown in this table, most of the impacts to wetlands and other waters are minor impacts to numerous roadside drainages.

With implementation of the measures outlined below in Section 2.18.4, potential permanent impacts to wetlands and other waters would not be adverse.

Table 2.18.E Permanent Impacts to ACOE and CDFG Jurisdictional and Nonjurisdictional Areas for Alternatives 2 and 3

Drainage #	Alternative 2				Alternative 3			
	ACOE			CDFG	ACOE			CDFG
	Wetland	Nonwetland	Total ACOE		Wetland	Nonwetland	Total ACOE	
4	–	0.01	0.01	–	–	0.01	0.01	–
6	–	0.01	0.01	0.01	–	0.01	0.01	0.01
8	0.14	0.29	0.43	–	0.18	0.30	0.49	–
11 (Castaic Creek)	–	0.35	0.35	0.35	–	0.40	0.40	0.40
12	–	0.08	0.08	0.16	–	0.08	0.08	0.17
13	–	–	–	0.03	–	–	–	0.08
18	0.01	–	0.01	–	0.11	–	0.11	–
19	–	–	–	–	–	0.01	0.01	0.01
20	–	0.02	0.02	0.02	–	0.22	0.22	0.22
21 (Santa Clara River)	0.21	0.03	0.24	0.24	0.21	0.03	0.24	0.24
23	–	–	–	0.20	–	–	–	0.23
24	–	–	–	–	–	–	–	0.01
25	–	–	–	–	–	0.01	0.01	0.01
26	–	–	–	–	–	–	–	0.01
27	–	–	–	–	–	0.04	0.04	0.08
29	–	–	–	–	–	0.01	0.01	0.02
32	–	0.33	0.33	0.30	–	0.33	0.33	0.30
37	–	–	–	–	–	–	–	0.04
38	–	–	–	0.01	–	–	–	0.01
39	0.26	–	0.26	0.16	0.26	–	0.26	–
40	–	0.01	0.01	0.01	–	0.01	0.01	0.01
41	–	–	–	0.05	–	–	–	0.03
44	–	–	–	0.01	–	–	–	0.01
45	–	0.01	0.01	0.02	–	0.01	0.01	0.02
47	–	0.01	0.01	0.02	–	0.01	0.01	0.03
48	–	–	–	–	–	–	–	0.01
49	–	0.01	0.01	0.02	–	0.01	0.01	0.02
52	–	0.04	0.04	–	–	0.04	0.04	–
53	–	0.02	0.02	0.03	–	0.02	0.02	0.03
57	–	–	–	0.01	–	–	–	0.01
Total Impacts	0.62	1.22	1.84	1.65	0.76	1.55	2.32	2.01

Note: Drainages not included in the table above would not have permanent impacts.

Impacts to Function and Values

The impacts on the hydrologic functions and values of the Santa Clara River and Castaic Creek are expected to be minimal, due to the minimal activity that would occur within these waterways. Specifically, the Hydrologic Regime would remain virtually unchanged, because both of these drainage courses will remain unlined and the soil processes relating to movement of water between underground and aboveground regimes will not change. Similarly, flood storage and flood flow modification would remain essentially unchanged because there would be no changes in the grade or cross-section of the waterways.

There is some potential for a very small change in sediment retention, nutrient retention and transformation, and toxicant trapping. All of these functions are related to entrapment of sediments and other particulate matter. As with flood flow modification, there would be no changes in flow characteristics or the substrate, which are two important factors in sediment retention. The other important factor in these functions is vegetation, which can trap sediment and other particulates. There is potential for a slight effect on the vegetation beneath the edges of the bridge expansion areas due to the shading from the expanded structure. However, much of the vegetation in these riparian situations is adapted to shading that naturally results to some extent from a riparian canopy. Therefore, it is likely that vegetation would persist in the areas that experience greater shade, albeit there may be a shift in species and a slight decrease in density. This could result in a very small decrease in entrapment of sediments and other particulates along the bridge edges, but this effect would be very small when assessed in the context of the entire bridge crossing.

The social significance of the drainages would be virtually unchanged. Although there is very little legal access to the drainages at the bridge crossing locations, there is a high value scenic quality for the high volume of people who utilize the I-5 corridor. However, this view would essentially be unchanged for drivers along the edge of the road. Even for the relatively low access at ground level, the general character of the waterways will not be changed. Similarly, the Wildlife Habitat and Aquatic Habitat values would not be substantially decreased by the bridge widening, except for the incremental reduction in potential habitat along the edges of the wider bridges, due to the shading effect. As noted above, the shading can reduce the density of vegetation and possible affect the species composition. The Aquatic Habitat values can also be affected by the reduction in sunlight and corresponding lower water temperatures in eddies and pools. On the other hand, some aquatic species might

benefit from cooler, less vegetated water. In general, though, the incremental bridge widening would have little effect on the overall character of the habitat values.

The proposed mitigation measures, such as exotic vegetation removal and native vegetation planting, would tend to increase all of the functions and values of the Santa Clara River and Castaic Creek. Therefore, the relatively small, localized effects on functions and values would be offset, and there would be no substantial change to the overall functions and values of these waterways.

Alternative 3: Full Median Alternative

Alternative 3 would result in permanent impacts to approximately 2.32 ac of nonwetland and wetland waters of the U.S., which is 0.48 ac greater than Alternative 2. Permanent impacts include physical impacts from roadway widening and new structures. Table 2.18.D shows the breakdown of expected permanent impacts of Alternative 3 to potential ACOE jurisdictional and nonjurisdictional areas within the project area. Alternative 3 would result in permanent impacts to 2.01 ac of CDFG jurisdictional areas, which is 0.36 ac greater than Alternative 2. Permanent impacts to potential RWQCB jurisdictional areas are the same as those for the ACOE listed in Table 2.18.D.

Permanent impacts to the drainages depicted in Figure 2.18.1 are summarized in Table 2.18.E. As shown in this table, most of the impacts to wetlands and other waters are minor impacts to numerous roadside drainages

With implementation of the measures outlined below in Section 2.18.4, potential permanent impacts to wetlands and other waters would not be adverse.

Impacts to Functions and Values

Impacts of Alternative 3 on the functions and values of the Santa Clara River and Castaic Creek are similar to those discussed above for Alternative 2. However, in addition to the impacts discussed above, there may be some short-term, temporary change in ground water regime with Alternative 3, which may require temporary dewatering during the construction of new bridge supports in the Santa Clara River. Under Alternative 3, there would be no changes in flow characteristics or the substrate, with the possible exception of substrate around new Santa Clara River Bridge supports.

As discussed above under Alternative 2, the proposed mitigation measures, such as exotic vegetation removal and native vegetation planting, would tend to increase all

of the functions and values of the Santa Clara River and Castaic Creek. Therefore, the relatively small, localized effects on functions and values would be offset, and there would be no substantial change to the overall functions and values of these waterways.

Early Implementation Project (EIP)

Proposed drainage improvement associated with the EIP would result in permanent impacts to potential jurisdictional waters. The EIP would impact up to 0.11 ac of permanent impacts, 0.03 ac of wetlands, and 0.08 ac of nonwetland waters. Permanent impacts include physical impacts from roadway widening and new structures. Specifically, improvements to the Gavin Canyon Culvert, north of Calgrove Boulevard, would permanently impact up to 0.03 ac of potential jurisdictional wetland area along the northbound I-5 lanes. Improvements to the Gavin Canyon Culvert would also permanently impact up to 0.05 ac of potential jurisdictional nonwetland waters of the United States, in the area along the southbound lanes.

For the Gavin Canyon undercrossing widening, improvements would permanently impact up to 0.02 ac of potential jurisdictional nonwetland waters of the United States. All of the impacts to jurisdictional waters associated with EIP are within the total permanent acreage of wetland impacts identified for the Build Alternatives.

With implementation of the measures outlined below in Section 2.18.4, potential permanent impacts to wetlands and other waters, including functions and values, would not be adverse.

However, during preliminary design, Alternatives 2 and 3 were refined to avoid wetlands and other waters to the extent feasible, while still meeting the project purpose and need. Additional retaining structures, slope refinements, and reduction of the overall project footprint were used to reduce wetland impacts.

Least Environmentally Damaging Practicable Alternative

As part of the cooperating agency process, development of the range of alternatives and the project purpose and need was coordinated with ACOE. ACOE provided comments on the purpose and need on December 5, 2007, and comments on the alternatives on March 21, 2008. These comments were considered and changes to the range of alternatives and purpose and need were incorporated as appropriate.

Alternative 2 has been selected as the Preferred Alternative and is considered the Least Environmentally Damaging Practicable Alternative (LEDPA). As shown in Table 2.18.F, Alternative 1 (the No Build Alternative) would not impact the existing environment, but it fails to meet the purpose and need of the project. In addition, the comparison and justification of Alternative 2 having been selected as the LEPDA is provided in Table 2.18.F. Alternative 2 would have the least permanent impacts to jurisdictional waters (1.22 ac compared to 1.59 ac for Alternative 3) and generally has reduced environmental and community impacts compared to Alternative 3. In addition, the widening of the existing bridge over the Santa Clara River, would not be required for Alternative 2. The widening of the Santa Clara Bridge under Alternative 3 would have required placement of additional support columns in the Santa Clara River which would have resulted in additional impacted jurisdictional waters. Alternative 2 would have less impact on wetlands and cause the least damage to the overall environment. This analysis, therefore, identifies Alternative 2 as the LEDPA. Coordination with ACOE regarding selection of the LEDPA is currently ongoing.

Wetland Only Practicable Finding

Development of project alternatives was constrained by the purpose and need to reduce delays, improve operational and safety design features, and reduce congestion along I-5 within the project limits. Native habitats, including waters of the U.S., are located on both the east and west sides of the freeway.

The No Build Alternative (Alternative 1) would avoid impacts to wetlands and other waters; however, it would not meet the project purpose and need and is not considered a practicable alternative. Due to the purpose and need and the locations of environmental resources, an avoidance Build Alternative is not possible.

However, during preliminary design, Alternatives 2 and 3 were refined to avoid wetlands and other waters to the extent feasible, while still meeting the project purpose and need. Additional retaining structures, slope refinements, and reduction of the overall project footprint were used to reduce wetland impacts.

Pursuant to E.O. No. 11990, no federal agency can undertake projects located in wetlands unless the agency finds that (1) there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm. Alternative 2 would permanently impact approximately 1.22 ac of jurisdictional waters (0.54 ac of this being wetlands). Given the linear nature of the proposed project, the impacts to jurisdictional waters are distributed over 32

Table 2.18.F Identification and Justification of the Least Environmentally Damaging Practicable Alternative (LEDPA)

Balancing Factors	Alternative 1 (No Build)	Alternative 2	Alternative 3	LEDPA Alternative 2
Project Purpose and Need	Fails to meet the project purpose and need	Meets the project purpose and need	Meets the project purpose and need	Meets the project purpose and need
Public Comment Record	Perceived limited support	Received the most support	Received some support	Received the most support
Impacts to the Human Environment	No parcel acquisitions	1 partial/1 full parcel acquisition	3 partial/1 full parcel acquisition	Fewer partial parcel acquisitions
	No Farmland impacts	No Farmland impacts	Impacts to 3.02 ac of Prime Farmland and 1.024 ac of Farmland of Statewide Importance	Eliminates impacts to Farmlands
	No impacts to the CVEF	No impacts to the CVEF	Requires CVEF reconfiguration	Eliminates impact to the CVEF
	No reconstruction of the Biscailuz Drive overcrossing	No reconstruction of the Biscailuz Drive overcrossing	Requires reconstruction of the Biscailuz Drive overcrossing	Eliminates impacts to the Biscailuz Drive overcrossing
Impacts to the Physical Environment	No widening of the Santa Clara River Bridge	No widening of the Santa Clara River Bridge	Widening of the Santa Clara Bridge required	No encroachment into the Santa Clara River
Impacts to the Biological Environment (permanent)	No impacts to Oak Communities	Impactsto Oak Communities – 3.27 ac	Impacts to Oak Communities – 4.98 ac	Fewer impacts to Oak Communities
	No impacts to Riparian Communities	Impacts to Riparian Communities – 1.60 ac	Impacts to Riparian Communities – 1.92 ac	Fewer impacts to Riparian Communities
	No impacts to Coastal Sage Scrub	Impacts to Coastal Sage Scrub – 18.51 ac	Impacts to Coastal Sage Scrub – 22.25 ac	Fewer impacts to Coastal Sage Scrub
	No impacts to Oak Trees	Impacts to Oak Trees – 109 oak trees (including 20 heritage)	Impacts to Oak Trees – 120 oak trees (including 12 heritage)	Fewer impacts to Oak Trees
	No impacts to CDFG Jurisdictional areas	Impacts to CDFG Jurisdiction – 1.65 ac	Impacts to CDFG Jurisdiction – 2.01 ac	Fewer impacts to CDFG Jurisdictional areas
	No impacts to ACOE Jurisdictional areas	Impacts to ACOE Jurisdictional areas – 1.84 ac	Impacts to ACOE Jurisdictional areas –2.32 ac	Fewer impacts to ACOE Jurisdictional areas
Section 4(f) Resources	No impacts to Section 4(f) resources	0.02 ac acquisition in Santa Clarita Woodlands Park	0.05 ac acquisition in Santa Clarita Woodlands Park	Fewer impacts to the Santa Clarita Woodlands Park

Notes:
ac =acres
ACOE = United States Army Corps of Engineers
CDFG = California Department of Fish and Game
CVEF = Commercial Vehicle Enforcement Facility

drainages as presented in Table 2.18.E. These impacts are limited primarily to existing roadway drainage crossings where the freeway mainline would be widened. Impacts to jurisdictional waters at these drainages would occur with any improvement to the freeway mainline, given the presence of these cross drainages, and complete avoidance is not practicable. Alternative 2 does avoid widening of the bridge over the Santa Clara River and eliminates the need to place additional columns in the river.

The measures discussed below have been identified to avoid and/or minimize direct and indirect impacts to wetlands. Measures W-1 and W-2 would require coordination with ACOE and CDFG as part of the permit process to avoid and/or minimize direct impacts to wetlands. Measures NC-1, WQ-1, and WQ-2 would avoid and/or minimize temporary wetland impacts during construction. Measures NC-1 and NC-2 would protect wetlands outside the project impact area during construction. Measure WQ-1 would require the implementation of Construction BMPs to avoid and/or minimize changes to water quality during construction. Measures NC-6 and WQ-2 would further avoid and/or minimize permanent impacts to wetlands. Measure NC-6 would require in-kind replacement of impacted wetlands habitat. Measure WQ-2 would require the treatment of storm water runoff to avoid and/or minimize changes to water quality.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

2.18.4 Avoidance, Minimization and/or Mitigation Measures

In addition to Measures NC-1, NC-2, and NC-6, presented previously in Section 2.17, Natural Communities, and Measures WQ-1 and WQ-2, presented previously in Section 2.10, Water Quality, the following measures would avoid and minimize impacts to wetlands and other waters for the proposed project and the EIP.

W-1 Prior to initiation of construction, an Individual Permit will be obtained through the United States Army Corps of Engineers (ACOE) pursuant to Section 404 of the Clean Water Act. After coordination with ACOE, if appropriate, a Nationwide Permit would be pursued.

W-2 Prior to initiation of construction, a Streambed Alteration Agreement with the California Department of Fish and Game (CDFG) will be obtained.

Additional conditions may be required by the United States Army Corps of Engineers (ACOE) and CDFG as part of the permitting process, and those conditions would be adhered to. As discussed previously in Measure NC-8, riparian habitat would be replaced on or off site at a minimum 2:1 ratio with in-kind habitat for permanent impacts. Temporary impacts to riparian habitat would be replaced at a minimum of 1:1 ratio, with in-kind habitat restored in place within the project area. If off-site restoration is conducted, it would be done within the same watershed as the proposed project. Restoration would meet a success criterion of at least 80 percent cover of native riparian vegetation or composition structure similar to existing adjacent high-quality riparian vegetation.

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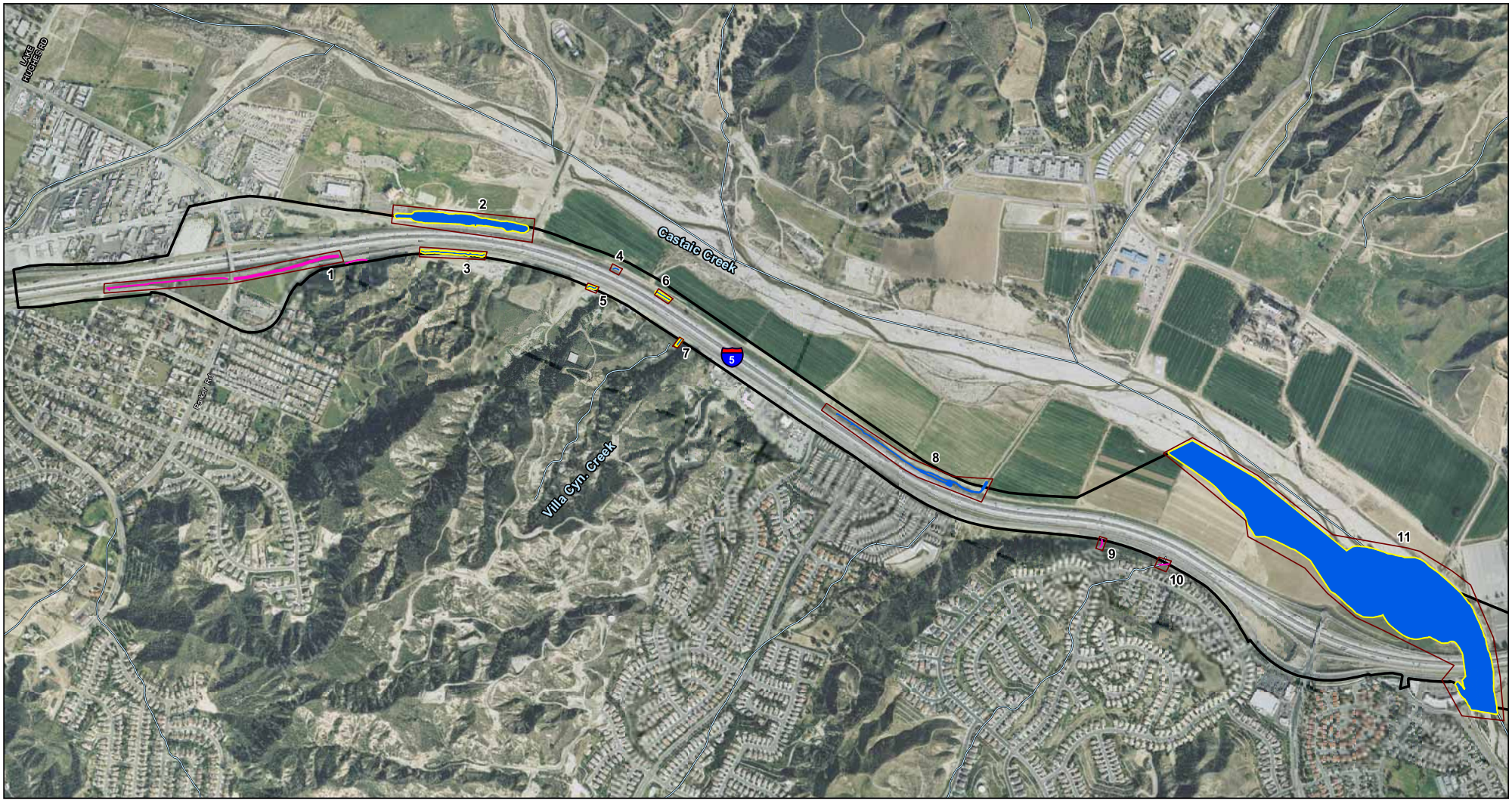

LEGEND

- Environmental Study Limits
- Potential USACE Jurisdictional Areas
- Potential CDFG Jurisdictional Areas
- Potential USACE and CDFG Jurisdiction (Overlapping Area)
- Surface Waters

0 500 1,000 Feet

SOURCE: Psomas (2007).

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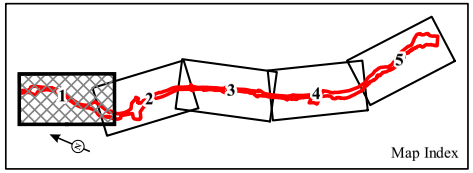
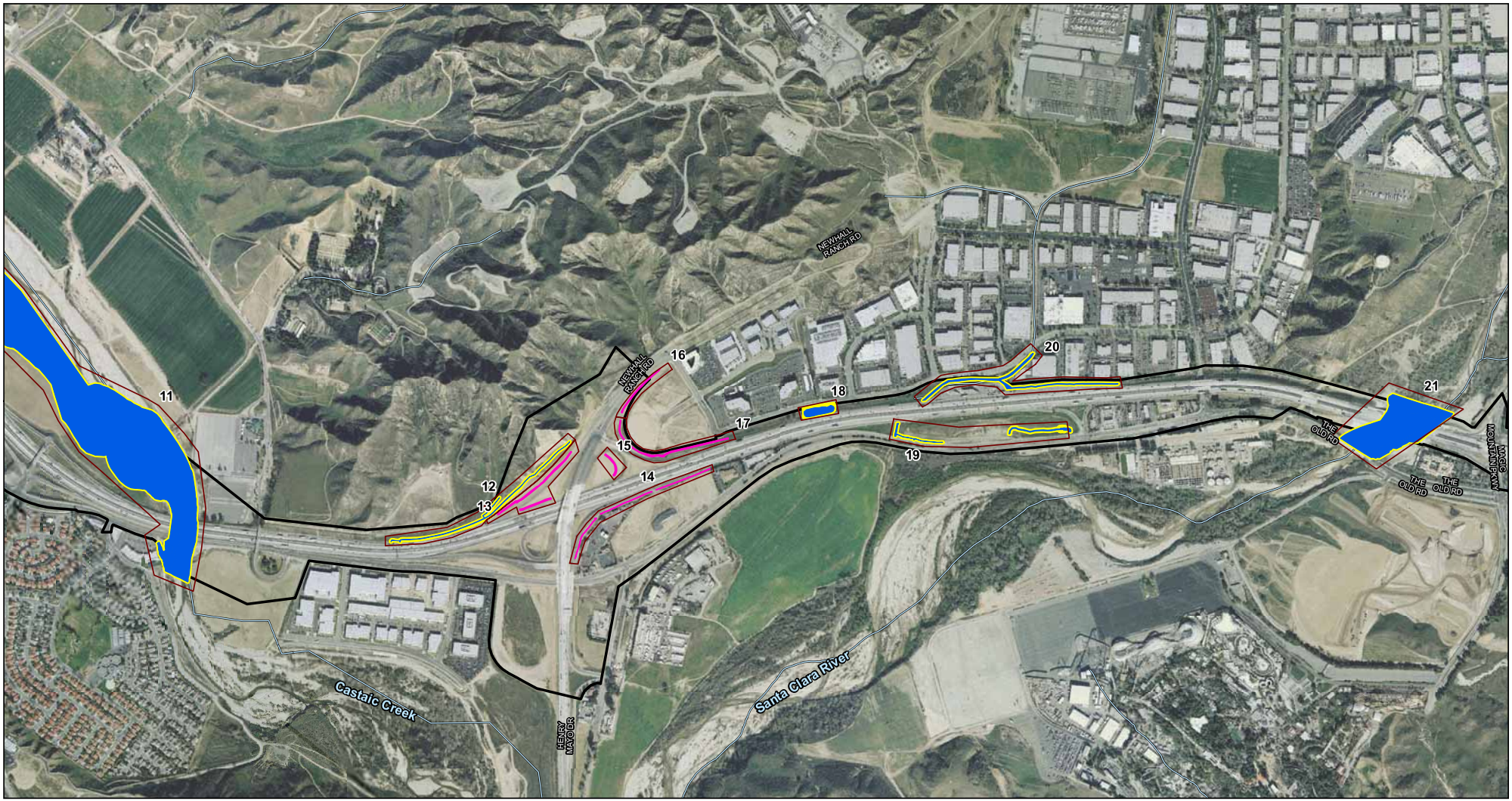


FIGURE 2.18.1
Sheet 1 of 5

I-5 HOV/Truck Lanes Project
Jurisdictional Waters
07-LA-5 PM R45.4/R59.0
EA 2332E0



LEGEND

- Environmental Study Limits
- Potential USACE Jurisdictional Areas
- Potential CDFG Jurisdictional Areas
- Potential USACE and CDFG Jurisdiction (Overlapping Area)
- Surface Waters

0 500 1,000 Feet

SOURCE: Psomas (2007).

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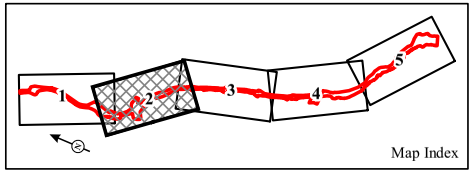
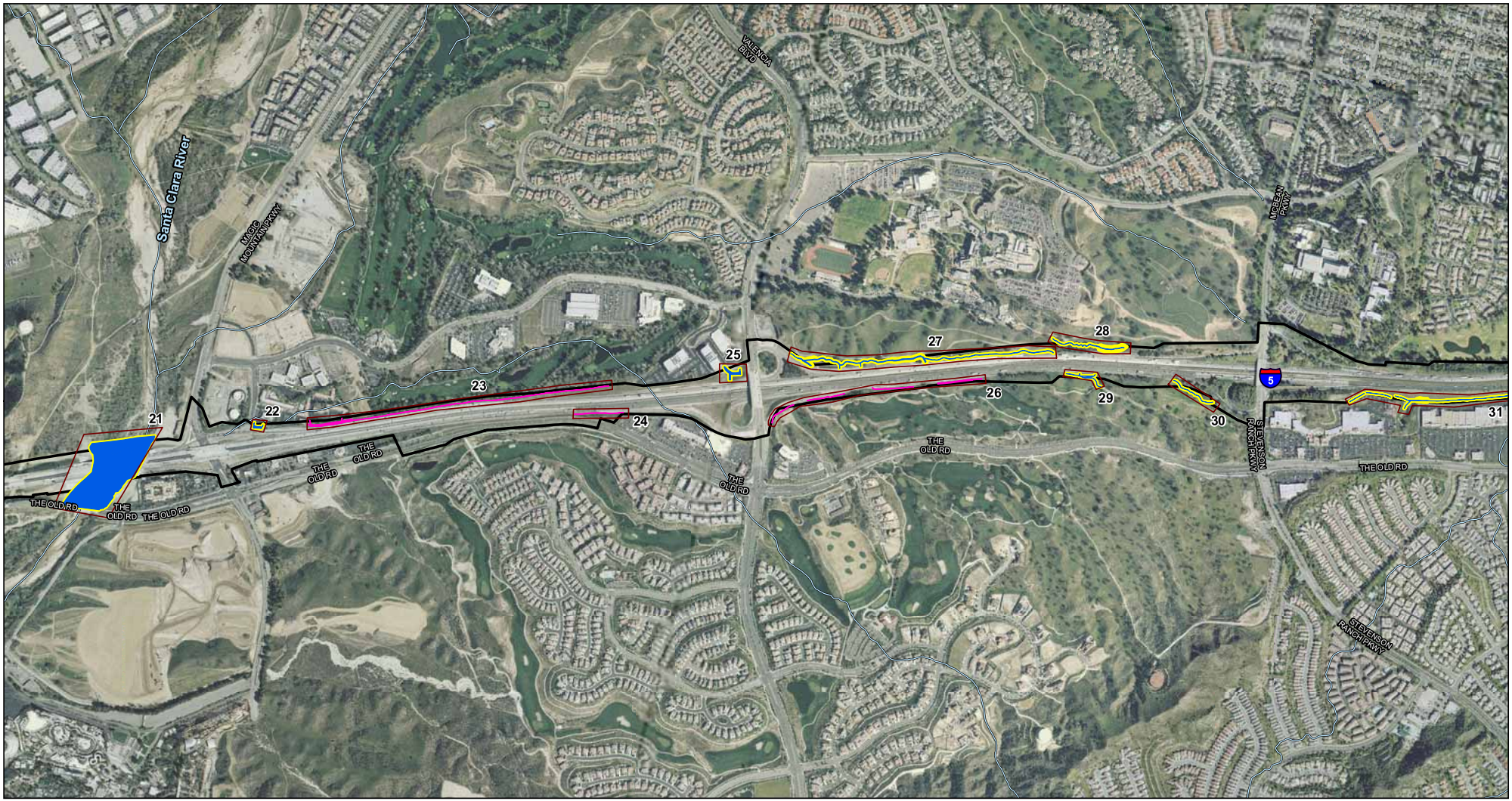


FIGURE 2.18.1
Sheet 2 of 5

I-5 HOV/Truck Lanes Project
Jurisdictional Waters
07-LA-5 PM R45.4/R59.0
EA 2332E0



LEGEND

- Environmental Study Limits
- Potential USACE Jurisdictional Areas
- Potential CDFG Jurisdictional Areas
- Potential USACE and CDFG Jurisdiction (Overlapping Area)
- Surface Waters

0 500 1,000 Feet

SOURCE: Psomas (2007).

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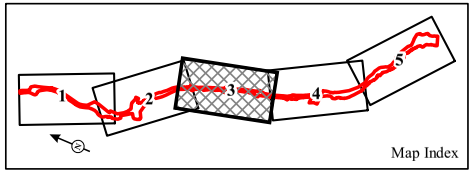

FIGURE 2.18.1
Sheet 3 of 5

I-5 HOV/Truck Lanes Project
Jurisdictional Waters
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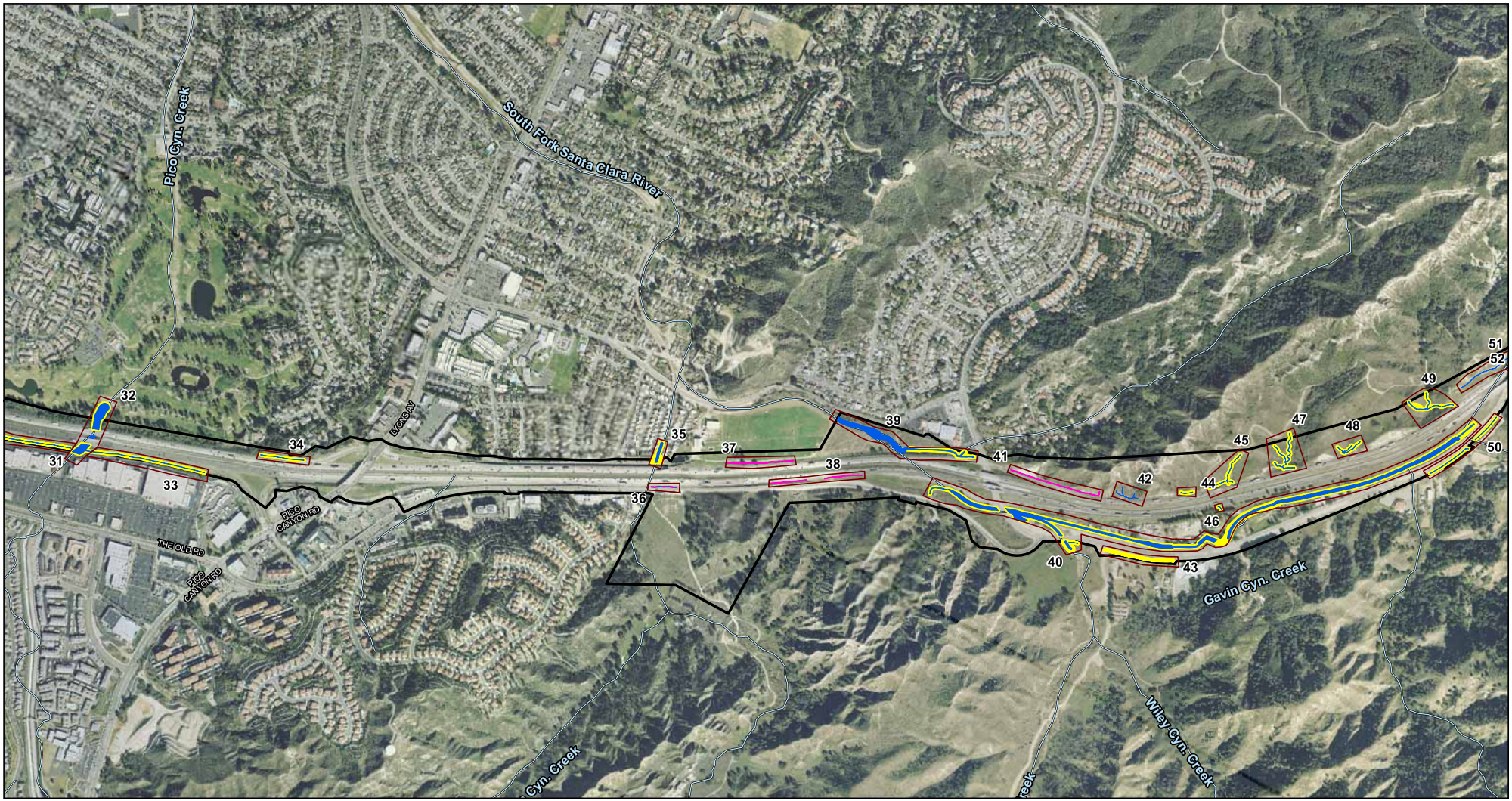

LEGEND

- Environmental Study Limits
- Potential USACE Jurisdictional Areas
- Potential CDFG Jurisdictional Areas
- Potential USACE and CDFG Jurisdiction (Overlapping Area)
- Surface Waters

0 500 1,000 Feet

SOURCE: Psomas (2007).

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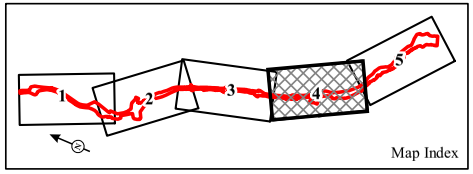

FIGURE 2.18.1
Sheet 4 of 5

I-5 HOV/Truck Lanes Project
Jurisdictional Waters
07-LA-5 PM R45.4/R59.0
EA 2332E0

LEGEND

- Environmental Study Limits
- Potential USACE Jurisdictional Areas
- Potential CDFG Jurisdictional Areas
- Potential USACE and CDFG Jurisdiction (Overlapping Area)
- Surface Waters

0 500 1,000 Feet

SOURCE: Psomas (2007).

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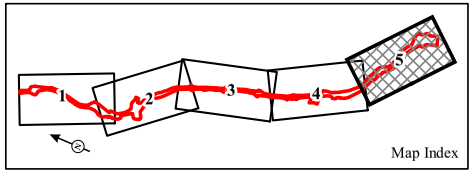

FIGURE 2.18.1
Sheet 5 of 5

I-5 HOV/Truck Lanes Project
Jurisdictional Waters
07-LA-5 PM R45.4/R59.0
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2.19 Plant Species

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to plant species is based on the *Natural Environment Study* (NES) (LSA Associates, Inc., December 2008).

2.19.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) share regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section 2.21 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (U.S.C.), Section 1531, et. seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et. seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900–1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100–21177.

2.19.2 Affected Environment

The natural communities in the project Biological Study Area (BSA) include a variety of plant species considered to be of special status by USFWS, CDFG, and the CNPS. Refer to Section 2.17.2.1 for the definition of the BSA. A literature review resulted in a list of 16 special-status plant species that may occur in or within the vicinity of the BSA. Six of these species are federally or state-listed as endangered or threatened and are discussed in more detail later in Section 2.21. Botanical surveys for any special-

status plant species known to occur or potentially occur in the BSA were conducted between May 26 and 31, 2006, and May 24 and 30, 2007. Of the 10 remaining special-status plant species, the following five were determined to have suitable habitat present in the BSA:

- Plummer's mariposa lily *(Calochortus plummerae)*
- San Gabriel bedstraw *(Galium grande)*
- Los Angeles sunflower *(Helianthus nuttallii* ssp. *Parishii)*
- Southern California black walnut *(Juglans californica)*
- Rayless ragwort *(Senecio aphanactis)*

Further information on these species, including status, habitat requirements, and potential for occurrence, is summarized in Appendix J.

Southern California black walnut is the only special-status plant species of the 9 listed above that was observed during the 2006 or 2007 surveys. Several individual Southern California black walnut trees were observed within the BSA in association with oak woodland habitat. Southern California black walnut is not federally and/or State-listed and has no official status. However, Southern California black walnut merits consideration under the California Environmental Quality Act (CEQA) because of the relatively limited distribution of walnut woodland.

None of other special-status plant species were observed and the suitable habitat was found to be lacking or highly degraded in the BSA.

2.19.3 Environmental Consequences

2.19.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse temporary impacts to special-status plant species in the study area.

Alternative 2: Reduced Median Alternative

Under Alternative 2, temporary impacts to Southern California black walnut trees would be limited to individual trees. Temporary impacts to individual trees would be limited to construction-related activities such as dust, potential fuel spills from construction equipment, and activities of equipment or personnel outside designated construction areas. Impacts to trees would also occur from operational activities and

impacts on the adjacent habitats caused by storm water runoff, traffic, and litter. However, because California black walnut trees are afforded no federal, State, or local protection, impacts to individual trees are not considered adverse. Because no other special-status plant species were observed during the 2006 and 2007 surveys or are expected to occur in the project area, no temporary impacts to special-status plant species are expected from Alternative 2.

Alternative 3: Full Median Alternative

Under Alternative 3, temporary impacts to special-status plant species are the same as those discussed for Alternative 2, and no temporary impacts to special-status species plant are expected from Alternative 3.

Early Implementation Project (EIP)

No temporary impacts to special-status plant species are expected from the EIP improvements.

2.19.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse permanent impacts to special-status plant species in the study area.

Alternative 2: Reduced Median Alternative

Under Alternative 2, permanent impacts to Southern California black walnut trees would be limited to individual trees. However, because California black walnut is not protected by any federal, State, or local ordinance, impacts to individual trees are not considered adverse. No other permanent impacts to special-status plant species are expected from Alternative 2.

Alternative 3: Full Median Alternative

Under Alternative 3, permanent impacts to special-status plant species are the same as those discussed for Alternative 2.

Early Implementation Project (EIP)

Given that there are no special-status plant species within the project study area identified in the project study area and the EIP would be constructed within the same footprint as the Build Alternatives, the EIP would not affect special-status plant species.

2.19.4 Avoidance, Minimization and/or Mitigation Measures

For the proposed project and the EIP, there would be no adverse impacts to the Southern California black walnut, and Southern California black walnut trees are not protected by any federal, State, or local ordinance, no avoidance, minimization and/or mitigation measures are warranted. However, the California black walnut is associated with the oak woodland habitat within the project area; therefore, all efforts to protect that sensitive habitat, as discussed in Measures NC-1 and NC-4 in Section 2.17 Natural Communities, would benefit the Southern California black walnut as well.

2.20 Animal Species

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to animal species is based on the *Natural Environment Study* (NES) (LSA Associates, Inc., December 2008).

2.20.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration (NOAA Fisheries) and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 3.21 below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Marine Mammal Protection Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600–1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

2.20.2 Affected Environment

A literature review resulted in a list of 54 special-status animal species that may occur in or within the vicinity of the Biological Study Area (BSA). Further information on these species, including status, habitat requirements, and potential for occurrence, is summarized in Appendix J. Of these 54 special-status animal species, 9 are federally and/or State-listed endangered or threatened, or proposed endangered or threatened. Eight of the threatened or endangered species are discussed later in Section 2.21,

Threatened and Endangered Species. Although federally listed as threatened, the Santa Clara River population of the Santa Ana sucker is specifically excluded from the federal listing, even though it was determined that this population is critical for the survival of this species. Therefore, the Santa Ana sucker is discussed in this section and not Section 2.21, Threatened and Endangered Species.

2.20.2.1 Fish Species

Fish species that are California Species of Special Concern and that have the potential to occur in the BSA are the Santa Ana sucker and the arroyo chub. A special-status fish species survey was conducted for Santa Ana sucker and arroyo chub in Gavin Canyon, near The Old Road underpass of I-5; Santa Clara River, at the I-5 crossing; and Castaic Creek, at the I-5 crossing. The results of the special-status fish survey indicated that the Santa Ana sucker and arroyo chub are abundant at the Santa Clara River crossing and the Castaic Creek site. The third site, Gavin Canyon, was dry during June 2006. Should flow be present, it is possible that the arroyo chub may be found at the Gavin Canyon site in the future, based on historical records of this species at Towsley Canyon (less than 1 mile [mi] downstream of the Gavin Canyon Site).

2.20.2.2 Bat Species

Special-status bat species with the potential to occur in the BSA include pallid bat, Mexican long-tongued bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, hoary bat, southwestern yellow bat, California leaf-nosed bat, Yuma myotis, western small-footed myotis, fringed myotis, cave myotis, long-legged myotis, pocketed free-tailed bat, and big free-tailed bat. A focused bat survey was conducted in July and August 2006. Western red bat, Yuma myotis, fringed myotis, and pocketed free-tailed bat were observed during the surveys at the Santa Clara River Bridge, including the bat surveys conducted in summer 2007, as part of the mitigation monitoring requirements for the 2005 Santa Clara River Bridge replacement. Of the remaining species, spotted bat, and western mastiff bat are not expected to occur on site. Although they are crevice-dwelling species and may potentially use bridge or culvert structures for roosting, there have been no recorded observations of these species using these structures.

2.20.2.3 Special-Status Coastal Sage Scrub and Chaparral Animal Species

Special-status coastal sage scrub and chaparral species with the potential to occur in the BSA include coastal western whiptail, San Diego horned lizard, coastal rosy boa, coast patch-nosed snake, Southern California rufous-crowned sparrow, Costa's hummingbird, California thrasher, Lawrence's goldfinch, San Diego black-tailed jackrabbit, and San Diego desert woodrat. The Southern California rufous-crowned sparrow, Costa's hummingbird, California thrasher, and Lawrence's goldfinch were observed within the BSA during the surveys conducted in 2006 and/or 2007. Some suitable habitat exists within the BSA, which could support these species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. However, it is possible for them to move onto the site prior to construction.

2.20.2.4 Special-Status Riparian and Aquatic Species

Special-status riparian and aquatic species with the potential to occur in the BSA include Cooper's hawk, western spadefoot, southwestern pond turtle, San Bernardino ringneck snake, two-striped garter snake, Costa's hummingbird, California yellow warbler, and yellow-breasted chat. Cooper's hawk, Costa's hummingbird, and yellow warbler were observed within the BSA during the 2006 and 2007 surveys. None of the remaining species were observed. Some suitable habitat exists within the BSA, which could support these species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. However, it is possible for these species to move onto the site prior to construction.

2.20.2.5 Special-Status Woodland and Montane Species

Special-status woodland and montane species with the potential to occur in the BSA include silvery legless lizard, long-eared owl, Nuttall's woodpecker, oak titmouse, and ringtail. Of these surveyed species, only the Nuttall's woodpecker and oak titmouse were observed within the BSA during surveys conducted in 2006 and 2007. Some suitable habitat exists within the BSA, which could support these species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. However, it is possible for these species to move onto the site prior to construction.

2.20.2.6 Special-Status Grassland and Open Habitat Species

Special-status grassland and open habitat species with the potential to occur in the BSA include western spadefoot, merlin, loggerhead shrike, lark sparrow, and white-tailed kite. Both lark sparrow and white-tailed kite were observed within the BSA during surveys conducted in 2006 and 2007. None of the remaining species were observed. Some suitable habitat exists within the BSA, which could support these species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. However, it is possible for these species to move onto the site prior to construction.

2.20.3 Environmental Consequences

2.20.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse temporary impacts to animal species in the study area.

Alternative 2: Reduced Median Alternative

Fish Species

Alternative 2 would widen the bridge over Castaic Creek, requiring lengthening of the existing wall and installation of riprap. In addition, Alternative 2 proposes installation of riprap to stabilize the banks of Castaic Creek and the Santa Clara River. Temporary impacts are expected to occur to Santa Ana sucker and arroyo chub occupied habitat due to construction activities. Temporary impacts are expected to result from water diversion and activities associated with the construction of new bridge supports and would be limited to the extent feasible to allow for adequate maneuvering of personnel, equipment, and vehicles. In addition, construction activities have the potential to introduce contaminants (sediments, trash, oil, and grease fuels from equipment, and materials used for concrete and asphalt installation) into adjacent waterways, including Castaic Creek and the Santa Clara River. Increased levels of contaminants could result in temporary impacts to Santa Ana sucker and arroyo chub in Castaic Creek and the Santa Clara River. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to fish species would not be adverse.

Bat Species

Although bats were only observed utilizing the Santa Clara River Bridge, it is possible for them to move to other areas within the BSA prior to and/or during construction. Temporary indirect impacts to bat species would include disturbance from construction at bridges (such as demolition, noise, dust, night lighting, and human encroachment), especially at and near the Santa Clara River Bridge.

In addition, construction noise and vibration could disturb the bats and temporarily impede access to roost sites in the crevices of bridges, culverts, and overhead structures. The potential impact to bats is expected to be temporary during construction. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to bat species would not be adverse.

Special-Status Coastal Sage Scrub and Chaparral Animal Species

Although Alternative 2 is not expected to result in direct temporary impacts to special-status coastal and sage scrub and chaparral animal species due to their low potential for occurrence within the BSA, there would be indirect temporary impacts through loss of habitat. As shown previously in Table 2.17.B, Alternative 2 would result in temporary impacts to 23.49 acres (ac) of Venturan coastal sage scrub habitat. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status coastal sage scrub and chaparral animal species would not be adverse.

Special-Status Riparian and Aquatic Species

Although Alternative 2 is not expected to result in direct temporary impacts to special-status riparian species due to their low potential for occurrence within the BSA, there would be indirect temporary impacts through loss of habitat. As shown previously in Table 2.17.B, Alternative 2 would result in temporary impacts to 2.65 ac of riparian/riverine habitat. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status riparian and aquatic species would not be adverse.

Special-Status Woodland and Montane Species

Although Alternative 2 is not expected to result in direct temporary impacts to special-status woodland and montane species because these species would move out of the area during construction, there would be temporary indirect impacts through loss of habitat. As shown previously in Table 2.17.B, Alternative 2 is expected to result in 4.96 ac of temporary impacts to oak woodland habitat. With implementation

of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status woodland and montane species would not be adverse.

Special-Status Grassland and Open Habitat Species

Western spadefoot, merlin, loggerhead shrike, and white-tailed kite breed/nest in other habitats already discussed above. Should any of these species be present within the grassland or open habitats, they are expected to move out of the area during construction. Because of this, Alternative 2 is not expected to result in direct temporary impacts to these species. However, there would be temporary indirect impacts through loss of foraging habitat. Lark sparrows are known to nest on the ground in grassland habitats sheltered by clumps of grass or other vegetation. Because of this, there is low potential for the proposed project to directly impact lark sparrow during its breeding season (May–July). However, the habitat within the project area is immediately adjacent to existing I-5 and of low quality. Higher-quality, more suitable habitat is available to all of these species outside of the BSA. Therefore, temporary impacts to special-status grassland and open habitat species would not be considered adverse.

Alternative 3: Full Median Alternative

Fish Species

Alternative 3 would widen the bridges over Castaic Creek and the Santa Clara River. In addition, Alternative 3 proposes installation of riprap to stabilize the banks of Castaic Creek and the Santa Clara River. Alternative 3 would result in similar temporary impacts as those discussed above for Alternative 2; however, more Santa Ana sucker and arroyo chub habitat would be disturbed during construction of Alternative 3. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to fish species would not be adverse.

Bat Species

Alternative 3 would result in the same temporary impacts to bat species as those discussed above for Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to bat species would not be adverse.

Special-Status Coastal Sage Scrub and Chaparral Animal Species

Alternative 3 would result in similar impacts to special-status coastal sage scrub and chaparral animal species as those discussed above for Alternative 2. However, as shown previously in Table 2.17.B, Alternative 3 would result in temporary impacts to

26.38 ac of Venturan coastal sage scrub habitat, which is more than Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status coastal sage scrub and chaparral animal species would not be adverse.

Special-Status Riparian and Aquatic Species

Alternative 3 would result in similar impacts to special-status riparian and aquatic species as those discussed above for Alternative 2. However, as shown previously in Table 2.17.B, Alternative 3 would result in temporary impacts to 2.43 ac of riparian/ riverine habitat, which is less than Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status riparian and aquatic species would not be adverse.

Special-Status Woodland and Montane Species

Alternative 3 would result in similar impacts to special-status woodland and montane species as those discussed above for Alternative 2. However, as shown previously in Table 2.17.B, Alternative 3 would result in temporary impacts to 5.01 ac of oak woodland habitat, which is more than Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status woodland and montane species would not be adverse.

Special-Status Grassland and Open Habitat Species

Alternative 3 would result in the same temporary impacts to special-status grassland and open habitat species as those discussed above for Alternative 2. As discussed above, temporary impacts to special-status grassland and open habitat species would not be considered adverse.

Early Implementation Project (EIP)

During the construction activities for the EIP, potential temporary impacts to bats could occur as a result of the widening of the Gavin Canyon undercrossings. The EIP would result in the same temporary impacts to bat species as those discussed above for Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to bat species would not be adverse.

Potential temporary impacts to migratory birds could occur where VCSS is impacted during the EIP reconstruction of the retaining wall along the southbound I-5. With implementation of the measures outlined below in Section 2.20.4, potential temporary impacts to special-status coastal sage scrub would not be adverse.

2.20.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse permanent impacts to animal species in the study area.

Alternative 2: Reduced Median Alternative

Fish Species

Under Alternative 2, the Castaic Creek Bridge would be widened, which would require lengthening of the existing wall within the creek bed. In addition, riprap would be installed in both Castaic Creek and the Santa Clara River. These improvements would result in 0.21 ac of direct permanent impacts to potential Santa Ana sucker and arroyo chub habitat in Castaic Creek and 0.24 ac of direct permanent impacts to occupied Santa Ana sucker and arroyo chub habitat in the Santa Clara River. Direct permanent impacts to Santa Ana sucker and arroyo chub occupied habitat (or historically occupied habitat) have been limited to lengthening existing walls at Castaic Creek. Increased pollutant loading due to increased impervious surface areas could result in permanent impacts to Santa Ana sucker and arroyo chub. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to fish species would not be adverse.

Bat Species

Only a small portion of bat roosting habitat would be permanently altered by the proposed modifications, and the project would not substantially affect the bats' long-term use of the structures. The widening and modification of bridge, culvert, and overhead structures would more likely increase future potential roosting habitat. However, Alternative 2 would result in permanent indirect impacts associated with human encroachment, such as the introduction of nonnative species and trash, and would permanently contribute to the degradation of bat foraging habitat (i.e., riparian/ riverine vegetation) in the vicinity. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to bat species would not be adverse.

Special-Status Coastal Sage Scrub and Chaparral Animal Species

Although Alternative 2 is not expected to result in direct permanent impacts to special-status coastal sage scrub and chaparral animal species due to their low potential for occurrence within the BSA, there would be indirect impacts through loss of habitat. As shown previously in Table 2.17.C, Alternative 2 would result in

permanent impacts to 18.51 ac of Venturan coastal sage scrub. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status coastal sage scrub and chaparral animal species would not be adverse.

Special-Status Riparian and Aquatic Species

Although Alternative 2 is not expected to result in direct permanent impacts to special-status riparian and aquatic species due to their low potential for occurrence within the BSA, there would be indirect permanent impacts through loss of habitat. As shown previously in Table 2.17.C, Alternative 2 would result in permanent impacts to 1.60 ac of riparian/riverine habitat. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status riparian and aquatic species would not be adverse.

Special-Status Woodland and Montane Species

Although Alternative 2 is not expected to result in direct permanent impacts to special-status woodland and montane species because these species would move out of the area during construction, there would be indirect impacts through loss of habitat. As shown previously in Table 2.17.C, Alternative 2 would result in permanent impacts to 3.27 ac of oak woodland habitat. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status woodland and montane species would not be adverse.

Special-Status Grassland and Open Habitat Species

Western spadefoot, merlin, loggerhead shrike, and white-tailed kite breed/nest in other habitats already discussed above. Should any of these species be present within the grassland or open habitats, they are expected to move out of the area during construction. Because of this, Alternative 2 is not expected to result in direct permanent impacts to these species. However, there would be indirect impacts through loss of foraging habitat. Lark sparrows are known to nest on the ground in grassland habitats sheltered by clumps of grass or other vegetation. Because of this, there is low potential for the proposed project to directly affect the lark sparrow during its breeding season (May–July). However, the habitat within the project area is immediately adjacent to existing I-5 and of low quality. Higher-quality, more suitable habitat is available to all of these species in the near vicinity outside of the BSA. Therefore, permanent impacts to special-status grassland and open habitat species would not be considered adverse.

Alternative 3: Full Median Alternative

Fish Species

Under Alternative 3, the bridges over Castaic Creek and the Santa Clara River would be widened and riprap would be installed in both of these drainages. These improvements would result in 0.25 ac of permanent impacts to potential Santa Ana sucker and arroyo chub habitat in Castaic Creek, which is more than Alternative 2. These improvements would also result in 0.24 ac of permanent impacts to occupied Santa Ana sucker and arroyo chub habitat in the Santa Clara River, which is slightly more than Alternative 2. Increased pollutant loading due to increased impervious surface areas could also result in permanent impacts to Santa Ana sucker and arroyo chub. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to fish species would not be adverse.

Bat Species

Alternative 3 would result in the same permanent impacts to bat species as those discussed above for Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status bat species would not be adverse.

Special-Status Coastal Sage Scrub and Chaparral Animal Species

Alternative 3 would result in similar permanent impacts to special-status coastal sage scrub and chaparral animal species as those discussed above for Alternative 2. However, as shown previously in Table 2.17.C, Alternative 3 would result in permanent impacts to 22.25 ac of Venturan coastal sage scrub, which is more than Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status coastal sage scrub and chaparral animal species would not be adverse.

Special-Status Riparian and Aquatic Species

Alternative 3 would result in similar permanent impacts to special-status riparian and aquatic species as those discussed above for Alternative 2. However, as shown previously in Table 2.17.C, Alternative 3 would result in permanent impacts to 1.92 ac of riparian/riverine habitat, which is more than Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status riparian and aquatic species would not be adverse.

Special-Status Woodland and Montane Species

Alternative 3 would result in similar permanent impacts to special-status woodland and montane species as those discussed above for Alternative 2. As shown previously in Table 2.17.C, Alternative 3 would result in permanent impacts to 4.98 ac of oak woodland natural community, which is more than Alternative 2. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status woodland and montane species would not be adverse.

Special-Status Grassland and Open Habitat Species

Alternative 3 would result in the same permanent impacts to special-status grassland and open habitat species as those discussed above for Alternative 2. As discussed above, permanent impacts to special-status grassland and open habitat species would not be considered adverse.

Early Implementation Project (EIP)

The widening of the Gavin Canyon undercrossing for the EIP could permanently impact a small portion of bat roosting habitat that would also be altered by the Build Alternatives' modifications, and the EIP would not substantially affect the bats' long-term use of the structures. The widening and modification of bridge, culvert, and overhead structures would more likely increase future potential roosting habitat. However, the EIP would result in permanent indirect impacts associated with human encroachment, such as the introduction of nonnative species and trash, and would permanently contribute to the degradation of bat foraging habitat (i.e., riparian/ riverine vegetation) in the vicinity. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to bat species would not be adverse.

Although the EIP is not expected to result in direct permanent impacts to special-status coastal sage scrub due to the low potential for occurrence within the EIP area, there would be indirect impacts through loss of habitat. The EIP would result in permanent impacts to Venturan coastal sage scrub due to the reconstruction of the retaining wall. With implementation of the measures outlined below in Section 2.20.4, potential permanent impacts to special-status coastal sage scrub animal species would not be adverse.

2.20.4 Avoidance, Minimization and/or Mitigation Measures

As discussed in detail in Section 2.10, Hydrology and Water Quality, with implementation of Measures WQ-1 and WQ-2, adverse temporary and permanent water quality impacts are not expected.

In addition to Measures NC-1 through NC-6 presented in Section 2.17, Natural Communities, and Measures TE-2 through TE-7 presented later in Section 2.21, Threatened and Endangered Species, the following measures would avoid, minimize, or compensate for the adverse project and EIP impacts to special-status animal species:

AS-1 A qualified bat biologist will perform preconstruction surveys during the spring and summer (May–August) prior to vegetation removal or alteration of any bridge structure, since bat roosts can change seasonally. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.

AS-2 In order to prevent impacts to bridge- and crevice-nesting bats, all bridgework will be scheduled between September 1 and November 30 to avoid hibernating bats and the maternity season. If this is not feasible, bat exclusion devices will need to be installed under the supervision of a qualified biologist. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. All bat exclusion techniques will be coordinated between the District Biologist and the resource agencies.

AS-3 Prior to any alteration of the Santa Clara River Bridge structure (or any other bridge structure deemed necessary after preconstruction surveys) or vegetation clearing in the vicinity, bat houses will be constructed and installed under the guidance of a qualified bat biologist and California Department of Transportation (Caltrans) standard practices. After completion of the project, a qualified bat biologist will perform postconstruction surveys prior to bat houses being removed and disposed of.

2.21 Threatened and Endangered Species

The analysis of effects of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) to threatened and endangered species is based on the *Natural Environment Study* (NES) (LSA Associates, Inc., December 2008).

2.21.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This Act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this Act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game (CDFG) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.21.2 Affected Environment

Records searches were conducted of the California Natural Diversity Database (CNDDB) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI) for the *Green Valley*, *Mint Canyon, Newhall, Oat Mountain, San Fernando, Santa Susana, Val Verde, Warm Springs Mountain, and Whitaker Peak, California* United States Geological Survey (USGS) 7.5-minute quadrangles. These databases contain records of reported occurrences of federal- or State-listed endangered, threatened, proposed endangered, or threatened species; California Species of Special Concern (CSC); or otherwise sensitive species or habitat that may occur within or in the immediate vicinity of the Biological Study Area (BSA). In addition, on July 28, 2006, the United States Fish and Wildlife Service (USFWS) provided a list of threatened, endangered, or proposed plant and wildlife species that may be present in the project area. Additional consultation with USFWS was sent October 23, 2008, and a response letter dated November 4, 2008, was received. An updated Listed and Candidate Species list was provided. The list added the Coastal California gnatcatcher *(Polioptila californica)* as a Threatened species that could occur within the vicinity of the proposed project. Both letters are included in Appendix I.

2.21.2.1 Threatened and Endangered Plant Species

The following six threatened, endangered, or candidate plant species that may occur within the BSA were identified through a literature review:

- Braunton's milk-vetch *(Astragalus brauntonii)*
- Nevin's barberry *(Berberis nevinii)*
- San Fernando Valley spineflower (*Chorizanthe parryi var.* Fernandina)
- Slender-horned spineflower *(Dodecahema leptoceras*)
- Spreading navarretia *(Navarretia fossalis)*
- California Orcutt grass *(Orcuttia californica)*

Further information on these species, including status, habitat requirements, and potential for occurrence, is summarized in Appendix J.

Botanical surveys for sensitive plant species known to occur or potentially occur in the BSA were conducted in 2006 and 2007. Braunton's milk-vetch, spreading navarretia, and California Orcutt grass were not observed during the 2006 and 2007 surveys, and suitable habitat for these species is not present within the BSA.

Nevin's barberry (Berberis nevinii)

Nevin's barberry is a perennial shrub that occurs on steep, north-facing slopes or in sandy washes in chaparral, cismontatane woodland, coastal sage scrub (CSS), and riparian scrub. It is found at elevations ranging from 900 to 2,700 feet (ft) above mean sea level (amsl). This species is federally and state listed as endangered. It is also a CNPS List 1B species. Some suitable habitat for Nevin's barberry exists within the BSA, which could support this species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. Nevin's barberry was not found during the focused surveys conducted in 2006 or 2007. Although both 2006 and 2007 were drought years, this perennial species would have been observed during botanical surveys.

San Fernando Valley spineflower (Chorizanthe parryi var. Fernandina)

San Fernando Valley spineflower is an annual herb that occurs in CSS on sandy soils. It is found at elevations ranging from 490 to 4,000 ft amsl. This species is a federal species of concern and is state listed as endangered. It is also a CNPS List 1B species. Some suitable Venturan coastal sage scrub habitat exists on site, which could support San Fernando Valley spineflower; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. Habitat requirements for this species do not exist outside of the identified Venturan coastal sage scrub communities. San Fernando Valley spineflower was not found during the focused surveys conducted in 2006 or 2007. Although both 2006 and 2007 were drought years, there is a low potential for the San Fernando Valley spineflower to occur within the BSA.

Slender-horned spineflower (Dodecahema leptoceras)

Slender-horned spineflower is an annual herb that occurs in chaparral, CSS, and alluvial fan sage scrub in flood-deposited terraces and washes. It is found at elevations ranging from 600 to 2,500 ft amsl. This species is federally and state listed as endangered. It is also a CNPS List 1B species. Some suitable habitat for slender-horned spineflower exists on site, which could support this species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. Slender-horned spineflower was not found during the focused surveys conducted in 2006 or 2007. Although both 2006 and 2007 were drought years, there is a low potential for slender-horned spineflower to occur within the BSA.

2.21.2.2 Threatened and Endangered Animal Species

The following nine threatened, endangered, or candidate animal species that may occur within the BSA were identified through a literature review:

- Santa Ana sucker *(Catostomus santaanae)*
- Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni)*
- Arroyo toad *(Bufo californicus)*
- California red-legged frog *(Rana aurora draytonii*)
- Western yellow-billed cuckoo *(Coccyzus americanus occidentalis)*
- Southwestern willow flycatcher (*Empidonax traillii extimus)*
- Least Bell's vireo *(Vireo bellii pusillus)*
- California gnatcatcher *(Polioptila californica californica)*
- Lesser long-nosed bat *(Leptonycteris curasoae verbabuenae)*

Further information on these species, including status, habitat requirements, and potential for occurrence, is summarized in Appendix J.

The Santa Clara River population of the Santa Ana sucker is specifically excluded from the federal listing, even though it was determined that this population is critical for the survival of this species. However, since it is still a CSC, the Santa Ana sucker is discussed previously in Section 2.20, Animal Species.

Because the California red-legged frog is not found in broad, sandy lowland drainages similar to those found within the BSA, is extremely rare, its nearest known location is approximately 4 miles east of the BSA, and as recommended by the USFWS, no California red-legged frog surveys were conducted. If the California red-legged frog were present within the BSA, it likely would have been observed during focused surveys conducted for arroyo toad.

Focused surveys were conducted in 2006 for unarmored threespine stickleback and in 2006 and 2007 for arroyo toad, southwestern willow flycatcher, California gnatcatcher, and least Bell's vireo.

Unarmored Threespine Stickleback (Gasterosteus Aculeatus Williamsoni)

The unarmored threespine stickleback (stickleback) is a federally and State listed as endangered fish species. A sensitive fish species survey was conducted in Gavin Canyon, near The Old Road underpass of I-5; Santa Clara River, at the I-5 crossing;

and Castaic Creek, at the I-5 crossing. The results of this survey indicated that stickleback are present at the Santa Clara River crossing. Although stickleback were not present at the Castaic Creek site, stickleback were observed at this site in 2005, and it is possible for the species to occupy the Castaic Creek area in the future. The third site, Gavin Canyon, was dry during June 2006.

Arroyo Toad (Bufo californicus)

Arroyo toads are primarily nocturnal and are identified by their olive green to light brown coloration, white belly, and white "v-shaped" stripe between the eyes. This species is federally listed as endangered, and State listed as a Species of Special Concern. The 2006 and 2007 surveys indicated that no arroyo toads or signs were observed within the BSA. During the 2006 survey, Castaic Creek did not exhibit favorable breeding conditions due to the rapid water flow through the rocky creek bed. During the 2007 survey, Castaic Creek did not exhibit proper breeding conditions due to its dry condition. During both 2006 and 2007, the Santa Clara River exhibited favorable conditions for the arroyo toad. The lightly flowing, shallow river channels would encourage breeding and foraging in this area.

Western yellow-billed cuckoo (Coccyzus americanus occidentalis)

The western yellow-billed cuckoo is a subspecies of yellow-billed cuckoo and was State-listed as endangered. The western yellow-billed cuckoo is a slender, medium-sized bird that feeds on large insects, frogs, and even other insectivorous birds. No western yellow-billed cuckoo was detected during the 2006 and 2007 surveys. Within the BSA, the riparian habitat associated with the Santa Clara River is the most suitable riparian environment for western yellow-billed cuckoo to breed. The lack of water flow and limited habitat in the other surveyed areas do not encourage as viable an environment for breeding western yellow-billed cuckoo as that associated with the Santa Clara River.

Southwestern willow flycatcher (Empidonax traillii extimus)

The Southwestern willow flycatcher is a subspecies of willow flycatcher and was federally and state listed as endangered. The Southwestern willow flycatcher is a migratory songbird, occurring in this region only during the breeding season (late May to early August) and is the only subspecies of willow flycatcher that nests in Southern California. No Southwestern willow flycatcher were detected in the survey area. However, there was on sighting of a willow flycatcher at the Santa Clara River site on May 10, 2007. This bird did not sing, nor was it seen again the area. Therefore, it is unknown if it was the southwestern subspecies (i.e., *extimus*). Within

the BSA, the Santa Clara River is the most suitable riparian environment for the Southwestern willow flycatcher to breed. Lack of water flow and limited habitat makes Castaic Creek a less appealing environment for the Southwestern willow flycatcher compared to the Santa Clara River.

Least Bell's vireo (Vireo bellii pusillus)

The least Bell's vireo is listed as an endangered species by state and federal agencies. The least Bell's vireo is a small migratory songbird that nests in Southern California. This species is a summer resident of Southern California and breeds in willow thickets and other dense, low riparian growths in lowlands and lower portions of canyons. No least Bell's vireo was detected during the 2006 and 2007 surveys. Within the BSA, the riparian habitat associated with the Santa Clara River is the most suitable riparian environment for least Bell's vireo to breed. The lack of water flow and limited habitat in the other surveyed areas do not encourage as viable an environment for breeding least Bell's vireo as that associated with the Santa Clara River.

California gnatcatcher (Polioptila Californica Californica)

The California gnatcatcher is a nonmigratory songbird that typically nests and forages in moderately dense stands of coastal sage scrub (CSS) below 2,500 ft in Southern California. This species is federally listed as threatened, and State-listed as a Species of Special Concern.). No California gnatcatchers were observed during the 2006 and 2007 surveys. Some suitable Venturan coastal sage scrub habitat exists on site, which could support California gnatcatcher; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. In addition, some vegetation near The Old Road (north of State Route 14 [SR-14] and east of I-5) burned in a fire during the early part of 2007. This area was very likely Venturan coastal sage scrub. Although the BSA contains mature Venturan coastal sage scrub vegetation, which provides the California gnatcatcher with a suitable foraging habitat, it is unlikely that a breeding territory will develop in the BSA due to the limited size of any territories available.

Lesser Long-Nosed Bat (Leptonycteris Curasoae Verbabuenae)

Since the federal listing of the lesser long-nosed bat in 1988, this species has been the subject of considerable controversy. The scientific community familiar with this species has questioned and debated the information on population size (both at the time of the listing and at present), census techniques, total range, etc. As a result, no Critical Habitat has been proposed or designated for the lesser long-nosed bat at this

time. The lesser long-nosed bat typically migrates seasonally from Mexico to southern Arizona and southwestern New Mexico. Although not a typical migrant to California, some observations have been recorded. However, there are only two recorded observations from public health records in Los Angeles County and no recorded observations of this species from the CNDDB.

2.21.3 Environmental Consequences

Caltrans, under its assumption of responsibility pursuant to 23 USC 327, submitted a Request for Concurrence of Determination, dated May 18, 2009, to the USFWS for the Natural Environment Study (NES), regarding the proposed project's impacts to federally listed species. The United States Fish and Wildlife Service determined that the project is not likely to adversely affect least Bell's vireo and unarmored threespine stickleback and would have no effect on arroyo toad, southwestern willow flycatcher, slender-horned spineflower, and San Fernando Valley spineflower. The concurrence is provided in Appendix I.

2.21.3.1 Temporary Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse temporary impacts to threatened and endangered species in the study area.

Alternative 2: Reduced Median Alternative

Plant Species

Alternative 2 would not result in temporary impacts to Braunton's milk-vetch, spreading navarretia, or California Orcutt grass because suitable habitat for these species is not present within the BSA. Alternative 2 would not result in temporary impacts to Nevin's barberry, San Fernando Valley spineflower, or slender-horned spineflower due to the low potential for occurrence of these species within the BSA.

Unarmored Threespine Stickleback

Alternative 2 would widen the bridge over Castaic Creek. In addition, Alternative 2 proposes installation of riprap to stabilize the banks of Castaic Creek and the Santa Clara River.

Alternative 2 is expected to result in temporary impacts to unarmored threespine stickleback occupied habitat due to construction activities. Temporary impacts are expected to result from water diversion and activities associated with the placement

of riprap. Temporary impacts would be limited to the extent feasible to allow for adequate maneuvering of personnel, equipment, and vehicles.

In addition, construction activities have the potential to introduce contaminants (sediments, trash, oil and grease fuels from equipment, and materials used for concrete and asphalt installation) into adjacent waterways, including Castaic Creek and the Santa Clara River. Increased levels of contaminants could result in temporary impacts to unarmored threespine stickleback in Castaic Creek and the Santa Clara River. With the measures outlined below in Section 2.21.4, potential temporary impacts to unarmored threespine stickleback are not expected to be adverse.

Arroyo Toad

Although the Castaic Creek and Santa Clara River surveys were negative for arroyo toads, there is no designated critical habitat within the BSA, and Castaic Creek does not appear to be favorable conditions for breeding arroyo toads, it is possible for them to move onto the site prior to construction. If arroyo toads move into Castaic Creek and Santa Clara River prior to construction, temporary impacts to arroyo toad would be the same as those for unarmored threespine stickleback, as discussed above, with the exception of temporary impacts to potential arroyo toad habitat. Temporary impacts to potential arroyo toad habitat from Alternative 2 are shown in Table 2.21.A.

Table 2.21.A Temporary Impacts to Potential Arroyo Toad Habitat

Designated Critical Habitat	Alternative 2 (ac)	Alternative 3 (ac)
Potential Arroyo Toad Breeding Habitat	1.50	1.64
Potential Arroyo Toad Upland Habitat	3.24	3.80
Total Potential Arroyo Toad Habitat	4.74	5.44

Source: Natural Environment Study (LSA Associates, Inc., October 2008).
ac = acre(s)

As shown in this table, the majority of the temporary impacts to potential arroyo toad habitat by Alternative 2 are to potential upland habitat. With the measures outlined below in Section 2.21.4, potential temporary impacts to arroyo toad or their potential habitat are not expected to be adverse.

California Red-Legged Frog

Because the California red-legged frog is considered absent from the BSA and there is no designated critical habitat within the project area, the project is not expected to result in temporary impacts to any California red-legged frogs.

Least Bell's Vireo

Alternative 2 would result in direct and indirect impacts to riparian/riverine habitat, which is potential least Bell's vireo habitat, through disturbance and/or removal of existing riparian/riverine vegetation. Although some least Bell's vireo designated critical habitat is located within the BSA (1.65 acres [ac]), those areas did not contain the necessary constituent elements for a determination of adverse modification. Therefore, no consultation for potential adverse effects is required and there are no impacts to actual critical habitat (e.g., areas that are designated and contain constituent elements). Alternative 2 would result in 1.43 ac of temporary impacts to potential least Bell's vireo habitat. Temporary impacts would only occur during construction to allow for construction and equipment staging. At the Santa Clara River, temporary impacts would be limited to activities associated with installation of riprap within the channel.

In addition to direct temporary impacts, Alternative 2 would result in indirect temporary impacts through the degradation of riparian/riverine habitats. Temporary indirect impacts to riparian/riverine habitat include construction-related impacts such as dust, potential fuel spills from construction equipment, possible night lighting during construction, and activities of equipment or personnel outside designated construction areas, as well as operational impacts such as impacts on adjacent habitats caused by storm water runoff, traffic, and litter.

With the measures outlined below in Section 2.21.4, potential temporary impacts to least Bell's vireo or their designated critical habitat are not expected to be adverse.

Southwestern Willow Flycatcher

Because they occupy the same habitat, Alternative 2 would result in the same temporary impacts to southwestern willow flycatcher as those described above for least Bell's vireo. There is no southwestern willow flycatcher-designated critical habitat within the BSA. With the measures outlined below in Section 2.21.4, potential temporary impacts to southwestern willow flycatcher are not expected to be adverse.

Western Yellow-billed Cuckoo

Because they occupy the same habitat, Alternative 2 would result in the same temporary impacts to western yellow-billed cuckoo as those described above for least Bell's vireo, with the exception of temporary impacts to designated critical habitat. Because the western yellow-billed cuckoo is not federally listed, there is no designated critical habitat for this species. With the measures outlined below in Section 2.21.4, potential temporary impacts to western yellow-billed cuckoo are not expected to be adverse.

California Gnatcatcher

Some habitat suitable for California gnatcatcher (i.e., Venturan coastal sage scrub) exists within the BSA. Alternative 2 is expected to result in 23.49 ac of temporary impacts to Venturan coastal sage scrub within the BSA. Although Alternative 2 would impact Venturan coastal sage scrub, it appears to be marginally suitable for California gnatcatcher, and it is unlikely that California gnatcatcher would breed within the project area. However, as this habitat is marginal for California gnatcatcher, Alternative 2 is not expected to result in temporary impacts to California gnatcatcher or their designated critical habitat.

Alternative 3: Full Median Alternative

Plant Species

For the same reasons discussed above for Alternative 2, Alternative 3 would not result in temporary impacts to threatened and endangered plant species.

Unarmored Threespine Stickleback

Alternative 3 would widen the bridges over Castaic Creek and the Santa Clara River. Alternative 3 proposes installation of riprap to stabilize the banks of Castaic Creek and the Santa Clara River. In addition, Alternative 3 proposes the placement of bridge supports in the Santa Clara River. Alternative 3 would result in temporary impacts similar to those discussed above for Alternative 2. With the measures outlined below in Section 2.21.4, potential temporary impacts to unarmored threespine stickleback are not expected to be adverse.

Arroyo Toad

Alternative 3 would result in similar temporary impacts to arroyo toad as those discussed above for Alternative 2. However, as shown in Table 2.21.A, Alternative 3 would result in temporary impacts to 5.44 ac of potential arroyo toad habitat, which is more than under Alternative 2 because Alternative 3 would require more

construction activities within the Santa Clara River. As shown in this table, the majority of the temporary impacts to potential arroyo toad habitat by Alternative 3 are to potential upland habitat. With the measures outlined below in Section 2.21.4, potential temporary impacts to arroyo toad or their potential habitat are not expected to be adverse.

California Red-Legged Frog

Alternative 3 would result in the same temporary impacts to California red-legged frog as those discussed above for Alternative 2.

Least Bell's Vireo

Alternative 3 would result in similar direct and indirect temporary impacts to least Bell's vireo as those discussed above for Alternative 2. However, Alternative 3 would result in temporary impacts to 1.52 ac of potential least Bell's vireo habitat. With the measures outlined below in Section 2.21.4, potential temporary impacts to least Bell's vireo are not expected to be adverse.

Southwestern Willow Flycatcher

Because they occupy the same habitat, temporary impacts of Alternative 3 to the southwestern willow flycatcher are the same as those described above for least Bell's vireo, with the exception of temporary impacts to designated critical habitat. There is no southwestern willow flycatcher designated critical habitat within the BSA. With the measures outlined below in Section 2.21.4, potential temporary impacts to southwestern willow flycatcher are not expected to be adverse.

Western Yellow-billed Cuckoo

Because they occupy the same habitat, temporary impacts of Alternative 3 to the western yellow-billed cuckoo are the same as those described above for least Bell's vireo, with the exception of temporary impacts to designated critical habitat. Because the western yellow-billed cuckoo is not federally listed, there is no designated critical habitat for this species. With the measures outlined below in Section 2.21.4, potential temporary impacts to western yellow-billed cuckoo are not expected to be adverse.

California Gnatcatcher

Some habitat suitable for California gnatcatcher (i.e., Venturan coastal sage scrub) exists within the BSA. Alternative 3 is expected to result in temporary impacts to approximately 26.38 ac of Venturan coastal sage scrub within the BSA. As discussed above under Alternative 2, this habitat is marginal for California gnatcatcher;

therefore, Alternative 3 is not expected to result in temporary impacts to California gnatcatcher or their designated critical habitat.

Early Implementation Project (EIP)

The only threatened and endangered species that could potentially be present within the EIP area is the California gnatcatcher due to the presence of Venturan coastal sage scrub. The Venturan coastal sage scrub impacted by the EIP is located where the reconstruction of the retaining wall along southbound I-5 is to be constructed and represents a portion of the total temporary impacted Venturan coastal sage scrub for the Build Alternatives. The NES determined that the potential for the Venturan coastal sage scrub within the project study area to support a breeding pair of gnatcatchers was low. Given that the habitat is marginal for California gnatcatchers; therefore, the EIP is not expected to result in temporary impacts to California gnatcatchers.

2.21.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in adverse permanent impacts to threatened and endangered species in the study area.

Alternative 2: Reduced Median Alternative

Plant Species

Alternative 2 would not result in permanent impacts to Braunton's milk-vetch, spreading navarretia, or California Orcutt grass because suitable habitat for these species is not present within the BSA. Alternative 2 would not result in permanent impacts to Nevin's barberry, San Fernando Valley spineflower, or slender-horned spineflower due to the low potential for occurrence of these species within the BSA.

Unarmored Threespine Stickleback

Under Alternative 2, the Castaic Creek Bridge would be widened and riprap would be installed in both Castaic Creek and the Santa Clara River, which would result in direct permanent impacts to unarmored threespine stickleback habitat. As shown in Table 2.21.B, Alternative 2 would result in 0.21 ac of permanent impacts to potential unarmored threespine stickleback habitat in Castaic Creek and 0.24 ac of permanent impacts to occupied unarmored threespine stickleback habitat in Santa Clara River. Direct permanent impacts to unarmored threespine stickleback occupied habitat (or

Table 2.21.B Permanent Impacts to Stickleback Habitat

Stickleback Habitat	Alternative 2 (ac)	Alternative 3 (ac)
Castaic Creek (Potential Habitat)	0.21	0.25
Santa Clara River (Occupied Habitat)	0.24	0.24
Total Impacts to Stickleback Habitat	0.45	0.49

Source: Natural Environment Study (LSA Associates, Inc., October 2008)
ac = acre(s)

historically occupied habitat) have been limited to lengthening existing walls at Castaic Creek. Increased pollutant loading due to increased impervious surface areas could result in permanent impacts to unarmored threespine stickleback. With the measures outlined below in Section 2.21.4, potential permanent impacts to unarmored threespine stickleback are not expected to be adverse.

Arroyo Toad

Although there is no designated critical habitat in the BSA, the Castaic Creek and Santa Clara River surveys were negative for arroyo toads, and Castaic Creek does not appear to be favorable conditions for breeding arroyo toads, it is possible for them to move onto the site prior to construction. If arroyo toads move into Castaic Creek and Santa Clara River prior to construction, permanent impacts to arroyo toads would be the same as those for unarmored threespine stickleback, discussed above. Permanent impacts to potential arroyo toad habitat from Alternative 2 are shown in Table 2.21.C. As shown in this table, the majority of the permanent impacts by Alternative 2 are to potential upland habitat. With the measures outlined below in Section 2.21.4, potential permanent impacts to arroyo toad or their potential habitat are not expected to be adverse.

Table 2.21.C Permanent Impacts to Potential Arroyo Toad Habitat

Designated Critical Habitat	Alternative 2 (ac)	Alternative 3 (ac)
Potential Arroyo Toad Breeding Habitat	0.24	0.24
Potential Arroyo Toad Upland Habitat	5.67	4.40
Total Potential Arroyo Toad Habitat	5.91	4.64

Source: Natural Environment Study (LSA Associates, Inc., October 2008).
ac = acre(s)

California Red-Legged Frog

Because the California red-legged frog is considered absent from the BSA and there is no designated critical habitat within the project area, Alternative 2 is not expected to result in permanent impacts to the California red-legged frog.

Least Bell's Vireo

Within the BSA, the riparian habitat associated with the Santa Clara River is the most suitable riparian environment for least Bell's vireo to breed. Although some least Bell's vireo designated critical habitat is located within the BSA, those areas did not contain the necessary constituent elements for a determination of adverse modification. Therefore, no consultation for potential adverse effects is required and there are no impacts to actual critical habitat (e.g., areas that are designated and contain constituent elements). Alternative 2 would result in direct permanent impacts to riparian/riverine habitat through disturbance and/or removal of existing vegetation. Alternative 2 would result in 0.50 ac of permanent impacts to potential least Bell's vireo habitat. Increased pollutant loading due to increased impervious surface areas could also result in permanent impacts to least Bell's vireo habitat. With the measures outlined below in Section 2.21.4, potential permanent impacts to least Bell's vireo or their designated critical habitat are not expected to be adverse.

Southwestern Willow Flycatcher

Because they occupy the same habitat, Alternative 2 would result in the same permanent impacts to the southwestern willow flycatcher as those described above for least Bell's vireo. There is no southwestern willow flycatcher-designated critical habitat within the BSA. With the measures outlined below in Section 2.21.4, potential permanent impacts to southwestern willow flycatcher are not expected to be adverse.

Western Yellow-billed Cuckoo

Because they occupy the same habitat, Alternative 2 would result in the same permanent impacts to western yellow-billed cuckoo as those described above for least

Bell's vireo, with the exception of permanent impacts to designated critical habitat. Because the western yellow-billed cuckoo is not federally listed, there is no designated critical habitat for this species. With the measures outlined below in Section 2.21.4, potential permanent impacts to western yellow-billed cuckoo are not expected to be adverse.

California Gnatcatcher

Some habitat suitable for California gnatcatcher (i.e., Venturan coastal sage scrub) exists within the BSA. Alternative 2 is expected to result in permanent impacts to approximately 18.51 ac of Venturan coastal sage scrub within the BSA. As discussed above, this habitat is marginal for California gnatcatcher; therefore, Alternative 2 is not expected to result in permanent impacts to California gnatcatcher habitat. In addition, Alternative 2 would not result in permanent impacts to designated California gnatcatcher critical habitat.

Alternative 3: Full Median Alternative

Plant Species

For the same reasons discussed above for Alternative 2, Alternative 3 would not result in permanent impacts to threatened and endangered plant species.

Unarmored Threespine Stickleback

Under Alternative 3, the bridges over Castaic Creek and the Santa Clara River would both be widened and riprap would be installed in both of these drainages. In addition, Alternative 3 proposes the placement of bridge supports in the Santa Clara River. As shown in Table 2.21.B, these improvements would result in 0.25 ac of permanent impacts to potential unarmored threespine stickleback habitat in Castaic Creek, which is slightly more than Alternative 2. The improvements would also result in 0.24 ac of permanent impacts to occupied unarmored threespine stickleback habitat in Santa Clara River, which is the same as Alternative 2. Increased pollutant loading due to increased impervious surface areas could also result in permanent impacts to the unarmored threespine stickleback. With the measures outlined below in Section 2.21.4, potential permanent impacts to unarmored threespine stickleback are not expected to be adverse.

Arroyo Toad

Alternative 3 would result in similar permanent impacts to the arroyo toad as those discussed above for Alternative 2. However, Alternative 3 would result in permanent impacts to 4.64 ac of potential arroyo toad habitat, as shown in Table 2.21.C, which

is less than under Alternative 2. As shown in this table, the majority of the permanent impacts to potential arroyo toad habitat by Alternative 3 are to potential upland habitat. With the measures outlined below in Section 2.21.4, potential permanent impacts to arroyo toad or their potential habitat are not expected to be adverse.

California Red-Legged Frog

Similar to Alternative 2, Alternative 3 would not result in permanent impacts to California red-legged frogs.

Least Bell's Vireo

Alternative 3 would result in similar direct and indirect permanent impacts to the least Bell's vireo as those discussed above for Alternative 2. However, Alternative 3 would result in permanent impacts to 0.43 ac of potential least Bell's vireo habitat. With the measures outlined below in Section 2.21.4, potential permanent impacts to least Bell's vireo or their designated critical habitat are not expected to be adverse.

Southwestern Willow Flycatcher

Because they occupy the same habitat, permanent impacts of Alternative 3 to the southwestern willow flycatcher are the same as those described above for the least Bell's vireo. There is no southwestern willow flycatcher designated critical habitat within the BSA. With the measures outlined below in Section 2.21.4, potential permanent impacts to southwestern willow flycatcher are not expected to be adverse.

Western Yellow-billed Cuckoo

Because they occupy the same habitat, permanent impacts of Alternative 3 to the western yellow-billed cuckoo are the same as those described above for least Bell's vireo, with the exception of permanent impacts to designated critical habitat. Because the western yellow-billed cuckoo is not federally listed, there is no designated critical habitat for this species. With the measures outlined below in Section 2.21.4, potential permanent impacts to western yellow-billed cuckoo are not expected to be adverse.

California Gnatcatcher

Some habitat suitable for the California gnatcatcher (i.e., Venturan coastal sage scrub) exists within the BSA. Alternative 3 is expected to result in permanent impacts to approximately 22.25 ac of Venturan coastal sage scrub within the BSA. As discussed above, this habitat is marginal for California gnatcatcher; therefore, Alternative 3 is not expected to result in permanent impacts to California gnatcatcher habitat. In addition, Alternative 3 would not result in permanent impacts to designated California gnatcatcher critical habitat.

Early Implementation Project (EIP)

The only threatened and endangered species that could potentially be present within the EIP area is the California gnatcatcher due to the presence of Venturan coastal sage scrub. The EIP would result in permanent impacts to Venturan coastal sage scrub due to the reconstruction of the retaining wall and represents a portion of the total permanent impacted Venturan coastal sage scrub for the Build Alternatives. The EIP would not result in permanent impacts to designated California gnatcatcher critical habitat.

2.21.4 Avoidance, Minimization and/or Mitigation Measures

In addition to Measures WQ-1, WQ-2, NC-1, NC-2, NC-4, NC-5, and NC-6, presented previously in Section 2.10, Hydrology and Water Quality, and Section 2.17, Natural Communities, the following measures would avoid, minimize, or compensate for impacts to threatened and endangered species:

TE-1 To ensure that no arroyo toads have moved onto the site, preconstruction surveys will be conducted by a qualified biologist prior to any work within these streambeds. This survey will include searching for any other listed amphibian species, including California red-legged frog. Should the arroyo toad or California red-legged frog be found on site at that time, a buffer will be established, and no work will be allowed within that buffer until consultation (formal or informal) with the United States Fish and Wildlife Service (USFWS) has been conducted.

TE-2 Work within and near the Santa Clara River and Castaic Creek will take place outside of the peak reproductive time for the unarmored threespine stickleback (March through July) or within Castaic Creek when it is not flowing.

TE-3 A flow diversion path will be constructed within the Santa Clara River and Castaic Creek during project construction that will ensure safe passage of sensitive fish species through the project site. No work will be allowed to take place within this diversion.

TE-4 Construction activities in the vicinity of the Santa Clara River and Castaic Creek will occur outside of any rain event, and Best

Management Practices (BMPs) will be employed to prevent sedimentation in these drainages.

TE-5 No fueling, lubrication, storage, or maintenance of construction equipment will be allowed within 150 feet (ft) of California Department of Fish and Game (CDFG) and United States Army Corps of Engineers (ACOE) jurisdictional areas.

TE-6 Spoil sites will not be located within California Department of Fish and Game (CDFG) or United States Army Corps of Engineers (ACOE) jurisdictional areas or in areas where refuse could be washed into the creek.

TE-7 In order to avoid impacts to nesting birds, any native vegetation removal or tree (native or exotic) trimming activities will occur outside of the nesting bird season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing shall not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.

2.22 Invasive Species

The analysis of impacts of the proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) related to invasive species is based on the *Natural Environment Study* (NES) (LSA Associates, Inc., December 2008).

2.22.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

2.22.2 Affected Environment

Exotic plant species exist within the nonnative plant communities throughout the biological study area (BSA), within patches of native plant communities, and in areas that have been disturbed by human uses. Exotic species are typically more numerous adjacent to roads and developed areas and frequently border the ornamental landscape. In the past, these areas likely supported grasslands, oak woodland, Venturan coastal sage scrub, and riparian habitats. Consequently, scattered plant species associated with these plant communities are often found in these areas.

The California Invasive Plant Council (Cal-IPC) 2006 Invasive Plant Inventory is based on information submitted by members, land managers, botanists, and researchers throughout the state as well as published sources. The inventory highlights nonnative plants that are serious problems in wildlands (natural areas that support native ecosystems, including national, State, and local parks; ecological reserves; wildlife areas; national forests; Bureau of Land Management lands; etc.). The inventory categorizes plants as High, Moderate, or Limited based on the species' negative ecological impact in California. Plants categorized as "High" have severe ecological impacts. Plants categorized as "Moderate" have substantial and apparent,

but not severe, ecological impacts. Plants categorized as "Limited" are invasive, but their ecological impacts are minor on a statewide level.

A total of 37 exotic plants occurring on Cal-IPC's California Invasive Plant Inventory were identified in the BSA. Of these species, there are 9 with an overall High rating, 16 with a Moderate rating, and 12 with a Limited rating. Species with a High rating identified within the BSA are: sweet fennel *(Foeniculum vulgare),* yellow star-thistle *(Centaurea solstitialis*), Spanish broom *(Spartium junceum),* tamarisk (*Tamarix* sp.), giant reed *(Arundo donax)*, foxtail chess *(Bromus madritensis* ssp. *rubens),* cheatgrass *(Bromus tectorum),* jubatagrass *(Cortaderia jubata*), and pampas grass *(Cortaderia selloana*).

2.22.3 Environmental Consequences

2.22.3.1 Temporary Impacts

Impacts related to invasive species are considered permanent impacts because the introduction of invasive species into previously undisturbed areas would result in permanent impacts to the habitat. Therefore, impacts related to invasive species are described below under permanent impacts.

2.22.3.2 Permanent Impacts

Alternative 1: No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to I-5 and therefore would not result in any adverse permanent impacts related to invasive species.

Alternative 2: Reduced Median Alternative

The construction of Alternative 2 has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that the seed is spread along the highway. With the avoidance and minimization measure outlined below in Section 2.22.4, potential permanent impacts related to invasive species would not be adverse.

Alternative 3: Full Median Alternative

Alternative 3 would result in the same impacts related to invasive species as Alternative 2, which are discussed above.

Early Implementation Project (EIP)

Similar to the Build Alternatives, there is the potential for introduction and transport of invasive species during construction activities within the project area. With the avoidance and minimization measure outlined below in Section 2.22.4, potential permanent impacts related to invasive species would not be adverse.

2.22.4 Avoidance, Minimization and/or Mitigation Measures

The following avoidance and minimization measures will be implemented during construction of the project and the EIP to avoid potential impacts related to invasive species:

IS-1 Inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) will be employed should an invasion occur.

IS-2 In compliance with Executive Order 13112, affected areas will be revegetated with plant species native to the vicinity, and the use of species listed on the California Invasive Plant Council's (Cal-IPC) Invasive Plant Inventory with a high or moderate rating will be avoided.

IS-3 During construction, the contractor will follow all pollution and litter laws and regulations

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2.23 Cumulative Impacts

2.23.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

2.23.2 Affected Environment

The proposed Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) is located in Los Angeles County on I-5, from State Route 14 (SR-14) on the south to Parker Road on the north, and covers a distance of approximately 13.6 miles. This segment of I-5 is located within the Santa Clarita Valley. The Santa Clarita Valley is bordered by the Lake Piru area, the Los Padres National Forest, and Castaic Lake to the northwest; the Sierra Pelona Mountains and Angeles National Forest to the north and northeast; the San Gabriel Mountains to the east and southeast; the Santa Susana Mountains to the south and southwest; and Ventura County and the Santa Clara River Valley to the west. The project area bisects several creeks and

washes within the Upper Santa Clara River Watershed, including the Santa Clara River.

Development in the Santa Clarita Valley is concentrated within the city of Santa Clarita, with mostly residential communities located in areas of unincorporated Los Angeles County. Large master-planned communities currently typify the Santa Clarita Valley, with a large number of residents commuting out of the Valley along I-5.

The natural topography of the Santa Clara River, its many tributary canyons, the surrounding mountains, and the Angeles National Forest jurisdiction have directed the region's growth to the more central, flatter areas between I-5 and SR-14. The existing pattern of land uses is influenced largely by these geographic constraints, in conjunction with the recreation, wildlife habitat, and open space protection afforded by the National Forest to the north, east, and south.

2.23.3 Methodology

The cumulative impacts analysis for the project was developed by following the eight-step process as set forth in the California Department of Transportation (Caltrans) Standard Environmental Reference (SER) and the Federal Highway Administration's (FHWA) *Interim Guidance: Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process* (2003). The eight-step process is as follows:

- Identify resources to be analyzed
- Define the study area for each resource
- Describe the current health and historical context for each resource
- Identify direct and indirect impacts of the proposed project
- Identify other reasonably foreseeable actions that affect each resource
- Assess potential cumulative impacts
- Report results
- Assess the need for mitigation

As specified in Caltrans/FHWA guidance, if the proposed project would not result in a direct or indirect impact to a resource, it would not contribute to a cumulative impact on that resource. This cumulative impact analysis includes resources that are substantially affected by the project and resources that are currently in poor or declining health, or at risk even if project impacts would not be substantial.

The reasonably foreseeable actions used in this cumulative analysis were based on information provided by the Los Angeles County Department of Regional Planning and the City of Santa Clarita Planning Department, which identified approved and pending developments proposed in the proximity of the project area. These files were cross-checked against files maintained by the State of California, Office of Planning and Research. Future transportation projects were provided by Caltrans. I-5 provides the only regional north-south access for Santa Clarita, as well as surrounding unincorporated communities. Therefore, reasonably foreseeable projects for this region are concentrated in the vicinity of the freeway.

Examples of reasonably foreseeable actions include: future development for which a General Plan or Specific Plan has been adopted that designates future land uses; projects for which the applicable jurisdiction has received an application for site development; or infrastructure improvement projects planned by the local jurisdiction or other public agency. The reasonably foreseeable actions are listed in Tables 2.23.A and 2.23.B and are shown on Figure 2.23.1.

2.23.4 Resources Excluded from Cumulative Impacts Analysis

The proposed project involves widening of an existing freeway in order to reduce delay associated with heavy truck traffic; relieve congestion; and improve operational and safety design features. Based on the nature of the project, the nature of the project area, and the technical studies prepared for the EIR/EA, the following resources would not be substantially affected by the proposed project and are not at risk:

- **Land Use.** The expansion of I-5 to accommodate Alternatives 2 and 3 is consistent with the California Transportation Plan 2025 (CTP) (Caltrans 2006), the Transportation Concept Report for I-5 (Caltrans 1998), the North County Combined Highway Corridors Study (Los Angeles County Metropolitan Transportation Authority 2004), the Santa Clarita Valley Area Plan, and the Santa Clarita General Plan.
- **Growth.** Alternatives 2 and 3 would improve existing and future operations and safety and reduce congestion. The Build Alternatives do not induce growth or remove obstacles to growth in the area.
- **Utilities/Emergency Services**. Utilities/Emergency Services would only be affected during the construction period. The project does not result in permanent impacts to utilities or emergency services.

Table 2.23.A Reasonably Foreseeable Transportation Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
1	Interstate 5 (I-5)/State Route 14 (SR-14) Interchange High-Occupancy Vehicle (HOV) Widening Project	Santa Clarita	Construction of an elevated two-lane HOV direct connector from I-5 to SR-14.	Construction during 2008 through 2011.
2	I-5/SR-14 HOV Connector	Santa Clarita	Reconstruct the median on SR-14 to add HOV lanes from I-5 to San Fernando Road.	Construction completed and HOV lanes open in April 2008.
19	Newhall Ranch Road	East of the Northbound I-5 off-ramp	Newhall Ranch Road will be constructed from east of the northbound I-5 off-ramp as an ultimate six- to eight-lane city arterial connecting McBean Parkway. This connection to I-5/State Route 126 (SR-126) will provide access via SR-12 to the Newhall Ranch Development.	Construction is ongoing.
24	Valencia Boulevard/I-5 Interchange Improvements	City of Santa Clarita/County of Los Angeles	Widening of Valencia Boulevard through the interchange with I-5, modifying the ramp configuration to improve overall operation of the interchange, replacing the existing bridge. and constructing a new southbound direct on-ramp.	Construction is complete.
27	I-5/Magic Mountain Parkway Interchange	City of Santa Clarita/County of Los Angeles	Modifying the I-5 Magic Mountain Parkway interchange, reconstructing the Santa Clara River Bridge, realigning the Old Road, and realigning and widening Magic Mountain Parkway from six to eight lanes	Construction is ongoing. Estimated completion date is late 2008.
28	Santa Clara River Bridge Replacement	County of Los Angeles	Replacement of the Santa Clara River Bridge at The Old Road.	In environmental review. Construction expected in 2012.

Table 2.23.A Reasonably Foreseeable Transportation Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
29	I-5/Rye Canyon Road	City of Santa Clarita/ County of Los Angeles	Modifications to southbound ramps.	Construction to begin in 2009/2010.
34	North Valencia Interchange	Valencia	Magic Mountain Parkway and McBean Parkway	Construction is complete.
35	Cross Valley Connector	City of Santa Clarita	Improvements include connections at the I-5/ SR-126 interchange, extension of Newhall Ranch Road between Bouquet Canyon Road and Soledad Canyon Road, construction of an interchange at Golden Valley Road and Soledad Canyon Road, extension of Golden Valley Road from Sierra Hwy to SR-14, and construction of the SR-14/Golden Valley Road Bridge (Cross streets: Copper Hill Drive/Rye Canyon/I-5/ SR-126) East Connector – Extension of Newhall Ranch Road and Golden Valley Road. A typical section would include a six-lane roadway, 128 feet (ft) wide, with a 24 ft median island and pedestrian and bicycle lanes.	Construction is still ongoing. Estimated completion date is 2009.
50	SR-126/Commerce Center Drive Interchange Project	County of Los Angeles	Construction of a grade-separation interchange at the existing signalized SR-126 intersection with Commerce Center Drive. Project also proposes to reconfigure the Commerce Center Drive and Henry Mayo Drive intersection.	Construction is complete.
57	The Old Road Improvements Phase 2 – Rye Canyon Road to Turnberry Lane	County of Los Angeles	Widening from four to six lanes.	In environmental review. Construction expected to begin in 2015.

Table 2.23.A Reasonably Foreseeable Transportation Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
58	The Old Road Widening Phase 1 – Magic Mountain Parkway to Turnberry Lane	County of Los Angeles	Widening from four to six lanes.	In environmental review. Construction expected in 2012.
60	I-5/SR-126 Interchange Improvement Project	County of Los Angeles/ City of Santa Clarita	Reconstruct and reconfigure interchange to provide missing directional movements, improve traffic operations, increase capacity, improve local access and circulation, enhance the safety of the interchange, and accommodate planned growth.	Construction is ongoing.
62	I-5 Hasley Canyon Road Interchange	County of Los Angeles	Reconfigure existing interchange by replacing Hasley Canyon Road overcrossing and modifying the existing ramps and widening local roads.	Under construction, expected completion in 2011.
65	The Old Road Widening – Parker Road to Hillcrest Parkway	County of Los Angeles	Widen roadway from two to four lanes.	In environmental review.

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
3	Las Lomas Specific Plan	North of I-5 and the SR-14 interchange	5,800 residential units, 2.3 million-square-foot (sf) office space, 225,000 sf retail, 3 public schools.	In environmental review; pending in the County; being processed in the City of Los Angeles along with an annexation (currently in litigation)
4	Tract 53419	North of Golden Valley Road and northwest of Sierra Highway	111 multifamily dwelling units (DU) (under construction)	Approved
5	The Avenue at Santa Clarita	Smiser Ranch, I-5 at Calgrove Boulevard.	770,000 sf office 25,000 sf hotel, 71,000 sf restaurants, 462,000 sf retail, 550 townhomes/ condominiums, 250 senior residences	On hold per developer's request
6	Lyons Canyon/ Warner Ranch, TR 53653	The Old Road, southwest of Sagecrest Circle	93 single-family, 92 senior condos, 5 open spaces, 6 public facilities, 1 fire station, 1 park	In environmental review; pending
7	TR 50242	Off of the proposed Lyons Ranch Road, west of I-5	8 single-family units	Pending
8	Southern Oaks Adjacent, TR 52905	South of Pico Canyon Road between Oaks Drive and McBean Parkway	37 single-family residences, 6 open space lots, 1 public facility, 1 park, 1 recreation lot	Pending

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
9	Homestead/Tract 60678 (Part of Approved Newhall Ranch Specific Plan)	West of the proposed Mission Village development, west and south of the proposed Landmark development, and south of the existing Val Verde community (via extensions of Valencia Boulevard and Magic Mountain Parkway, as well as intersections with SR-126)	965 single-family residential DU, 4,812 multifamily (condominium/ townhome) DU, 1,310,000 sf commercial	Pending
10	Downtown Newhall Specific Plan Area	West of I-5, south of SR-126/Saugus Ventura Road, around Larres Canyon Road	712 net new DU (1,402 total DU), 29,710 net new thousand square feet (TSF), (1,107,400 TSF)	Adopted by the City in 2005
11	North Newhall Specific Plan Area	West of I-5, north of SR-126/Saugus Ventura Road, around Chiquito Canyon Road	628 DU–673 DU, 58,500 – 84,000 sf nonresidential uses, 1 elementary school, (673 DU, 632.5 TSF, 1 hotel, and 1 elementary school included in the interim year horizon)	Pending
12	Landmark Village/ Tract 53108(Part of Approved Newhall Ranch Specific Plan)	South of SR-126 at Wolcott and Chiquito Canyon Road, Santa Clarita	308 single-family residential DU, 1,136 multifamily residential DU, 10,300 sf commercial	Pending
13	Mission Village/ Tract 61105, (Part of Approved Newhall Ranch Specific Plan)	South of SR-126, west of Six Flags Magic Mountain	291 single-family residential DU, 5,040 multifamily (condominium/ townhome) DU, 13,000 sf commercial	Pending

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
14	Valencia Commerce Center, PM 26363	Commerce Center Drive and SR-126	11 light industrial/office lots, 5 open space lots, 750,000 sf building floor area; proposed 1,415, approved 750 dwelling units; proposed 13 million sf, approved 3.9 million sf industrial; request 1.52 million sf to be added, mixed-use and trails	Various stages of construction; Approved
15	Newhall Land, PM 18108	West of The Old Road, north of SR-126 (Part of the Approved Valencia Commerce Center)	32.9-acre site	Pending
16	Pico Canyon Condominiums, Tract 48208,	Pico Canyon	6 multifamily lots for 51 condo units, 1 recreation lot, 2 open space lots	Recorded
16	Newhall Land, PM 18108	West of The Old Road, north of SR-126 (Part of the Approved Valencia Commerce Center)	391.28-acre site	Pending
17	Lennar Homes, Tract 33608	The Old Road and Stevenson Ranch, north of Pico Canyon Road	140 single-family units, 126 NC 567 apartments	Recorded
18	Tract 060030	West of Commerce Center Drive (via extension of Witherspoon Parkway)	1,221,360 sf industrial park	Pending
20	Westridge, Tract 45433	North and south of Valencia Boulevard/west of The Old Road	1232 single-family units, 997 multifamily units, 526 condominium units	Recorded
20	Lyons Ranch/Tract 53653	West of I-5 and south of Calgrove Boulevard	95 single-family DU, 95 multifamily (senior housing) DU	Pending

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
21	Westridge Executive, PM 27143	Between The Old Road and the I-5, south of Valencia Boulevard	2 lots	Approved
22	UCLA Film Archives	North of McBean Parkway and west of Rockwell Canyon Road	386,730 sf commercial office (under construction)	Under construction in September 2008
23	College of the Canyons Expansion	South of Valencia Blvd and west of Rockwell Canyon Road	6,500 students (additional)	Construction completed
25	Magic Mountain Entertainment, Tract 53295	West of The Old Road and Magic Mountain Parkway	428 single-family units, 2959 condominium units	Pending
26	PM 18654	West of The Old Road, north of Magic Mountain Parkway	11 lots, 200,000 sf office building (under construction)	Recorded
30	PM 24801	Between The Old Road and I-5, north of Rye Canyon Road	2 lots, 1.515 acre	Pending
31	MC 03-146	South of Valencia Boulevard, west of McBean Parkway		Approved
32	JSB Mixed Use Project	Northwest corner of McBean Parkway and Valencia Boulevard	10 multifamily DU, 37,000 sf office/commercial uses	Pending
33	Valencia Town Center Mall Expansion	East of McBean Parkway, north of Valencia Boulevard.	331,860 sf commercial uses	Pending
36	North Valencia II Specific Plan	Along SR-126, west of Copper Hill Drive	Up to 1,900 dwelling units, 1,134 single-family, 298 multifamily, 210,000 sf commercial/industrial use, annexation of 596.2 acres for a Specific Plan	Completed as of May 2007
37	Gate-King Industrial Park	South of San Fernando Road, west of Sierra Highway	4,200,000 sf industrial park	Pending

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
38	CinqueTerra Office Park	23658 Sierra Highway	51,300 sf office uses	Pending
39	Heritage Hills/Tract 65806	Northwest and southwest corner of Dockweiler and Sierra Highway	190 single-family DU	Pending
40	Materials Recovery/ Transfer Facility	Northeast corner of Sierra Highway and Placerita Canyon Road	160,000 sf industrial uses	Pending
41	The Masters College Expansion	Placerita Canyon Road, north of SR-14	213,288 sf educational uses, 100-room dorm building, 54 multifamily (condominium) DU	Pending
42	Porta Bella/Whittaker-Bermite	South side of Soledad Canyon Road and east of Circle J Ranch area	1,244 single-family DU, 1,667 multifamily DU, 2,482,358 sf nonresidential uses, 448.7 acres of open space (approximately 50 percent of total project shown above is included in the interim-year horizon)	Pending
43	Milestone/Tract 61811	North side of Golden Valley Road at Robert C. Lee Parkway	167 single-family DU, (33 total acres) (under construction)	Pending
44	Soledad Village	South of Santa Clara River, north of Soledad Canyon Road at Gladding Way	407 multifamily (Condominium) DU (including 22 live/work units), 8,000 sf commercial uses	Pending
45	Riverpark/ Tract 53425	North and south of Santa Clara River, terminus of Newhall Ranch Road, south of Bouquet Canyon Road, and north of Soledad Canyon Road	439 single-family residential DU, 650 multifamily residential DU, 16,000 sf commercial uses (under construction)	Pending

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
46	Bridgeport Market Place	Northeast corner of McBean Parkway and Newhall Ranch Road	130,000 sf commercial uses, 30,000 sf church, 5-acre park (under construction)	Construction completed
47	Golden Valley Ranch/ Tract 52414	South of SR-14, north of Placerita Canyon Road, and west of Sand Canyon Road	498 single-family DU, 618,800 sf commercial, 1 elementary school	Approved
48	Soledad Circle Estates	South of Soledad Canyon Road at Penlon Court	147 single-family DU	Pending
49	The Keystone	Northeast portion of the future intersection of Newhall Ranch Road and Golden Valley Road	319 single-family DU, 180 multifamily DU, 1 junior high school, YMCA building	Pending
51	PM 26574	North of SR-126, at The Old Road and Middleton Lane	16 industrial units	Recorded
52	Tract 60257	East of Del Valle Road	233 DU, 30,000 sf commercial retail	Pending
53	Tract 60665	East of Del Valle Road	7 single-family DU	Pending
54	Tract 45084	Hasley Canyon Road	294 single-family units	Recorded
55	Tract 52475	North of Hasley Canyon Road, west of Del Valle Road	46 single-family DU	Pending
56	Tract 53725	North of Hasley Canyon Road, west of Sloan Canyon Road	42 single-family DU	Pending
59	PM 060734 Commercial Development	Henry Mayo Drive and The Old Road	Shopping center with 134,898 sf, 10 buildings, 30,000 sf retail	Pending
61	Tracts 23916 and 51826	Along Brady Parkway, north of SR-126	4.4 million sf	Recorded

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
63	Tract 060319 Residential Development	On the west side of The Old Road, between Sedona Way and Hillcrest Parkway	35 single-family detached condos	Approved
64	Tract 067617	North of Hillcrest Parkway, west of Romeo Canyon Road	13 condominium units	Pending
66	Tract 46798-01	North of Hillcrest Parkway, south of Romeo Canyon Road		Recorded
67	Tract 46798	North of Hillcrest Parkway, west of The Old Road	55 single-family units	Approved
68	Lakeview Estates, Tract 53933	North of Romeo Canyon Road, west of The Old Road	70 single-family units	Under construction
69	Tract 53822	Cunningham/ Tapia Canyon Tapia Canyon Road, Gate Road	405 single-family residences, 5 open space lots, 1 park, 2 water tanks	In environmental review; Approved
70	Tract 060611	Cherry Drive, north of Parker Road	18 multifamily units	Recorded
71	Tract 060674	North of Parker Road, adjacent to The Old Road	21 single-family units	Recorded
72	Jenkins, PM 25852	North of Parker Road, adjacent to The Old Road	4 single-family units	Approved
73	Larwin/Golden Valley Ranch, TR 52535	North of Sloan Canyon Road, adjacent to The Old Road	199 single-family units	In review; pending
74	PM 064825	North of Lake Hughes Road, adjacent to Castaic Road	8.78-acre site	Approved

Table 2.23.B Reasonably Foreseeable Development Projects

Project ID Number	Project Name	Project Location	Project Description	Status as of September 2008
75	Tract 060024	East and west of Van Gorder Way, between Lake Hughes and Violin Canyon	84 single-family detached condos	Recorded
76	Northlake Phase 1/ Tract 51852	North of Lake Hughes Road, east of Ridge Route Road	1,696 DU, middle school	Pending
77	Castaic High School	North of Lake Hughes Road, east of Ridge Route Road	3,000 students	Pending

- **Traffic & Transportation/Pedestrian and Bicycle Facilities.** Alternatives 2 and 3 would improve traffic operations and would not substantially affect pedestrian and bicycle facilities.
- **Visual/Aesthetics.** Alternatives 2 and 3 would not substantially change the existing views of and from I-5.
- **Cultural Resources.** Alternatives 2 and 3 would not affect known cultural resources.
- **Hydrology and Floodplain.** Alternatives 2 and 3 would not result in substantial temporary impacts. These alternatives would not result in permanent impacts to drainage or floodplains.
- **Geology and Soils.** Alternatives 2 and 3 would not result in substantial temporary impacts. These alternatives would not result in permanent impacts to soils.
- **Hazardous Waste/Materials.** There are no recognized environmental concerns associated with Alternatives 2 and 3.
- **Air Quality.** Alternatives 2 and 3 would not result in a violation of existing air quality standards. The air quality analysis utilizes regional traffic projections that include future planned growth and considers both the project and cumulative impacts of the proposed project. No additional analysis is required to address cumulative air quality impacts.
- **Energy.** Energy impacts would only occur during the construction period.
- **Plant Species.** No sensitive plant species would be temporarily or permanently affected by Alternatives 2 and 3.
- **Invasive Species.** Alternatives 2 and 3 would not substantially increase the potential for the spread of invasive species. Compliance with standard procedures would be sufficient to address this impact.

2.23.5 Resources Evaluated for Cumulative Impacts

The following resources have the potential to be adversely impacted by the cumulative impacts of the proposed project in combination with the reasonably foreseeable actions:

- Farmlands
- Community
- Water Quality
- Paleontology
- Noise
- Natural Communities

- Wetlands and Other Waters
- Sensitive Animal Species
- Threatened or Endangered Species

2.23.6 Environmental Consequences

The following discussion of potential cumulative impacts is presented by environmental resource area. No cumulative impact discussion is provided for the No Build Alternative because the No Build Alternative would not result in either temporary or permanent changes to the environment that could contribute to cumulative impacts.

2.23.6.1 Farmlands and Timberlands

The cumulative resource study area (RSA) for farmlands is the Santa Clarita Valley, which supports the agriculture alongside the I-5 corridor, generally in the vicinity of the Santa Clara River and its tributaries.

Farmland acres in Los Angeles County have been drastically reduced over the past several decades (since World War II) due to population pressure. Farmland is now concentrated in specific areas, such as the San Joaquin Valley, but agricultural activities do continue in northern Los Angeles County, although in limited distribution. Currently, the health of agricultural resources in Los Angeles County, and in particular the Santa Clarita Valley, is characterized by continued pressure from urbanization, foreign competition, and rising production costs. Production cost increases result from rising land values, water scarcity, theft and vandalism of farm equipment, crop pilferage, road congestion, and personal injury liability resulting from trespassing on farms.

Alternative 2: Reduced Median Alternative

There would be no direct temporary impacts associated with Alternative 2. Indirect impacts would occur via dust and noise, but these impacts would be minimized through implementation of dust control measures and adherence to Caltrans standards for air quality and noise.

There would be no permanent impacts associated with Alternative 2.

Alternative 3: Full Median Alternative

Alternative 3 would not result in direct temporary impacts. Similar to Alternative 2, indirect impacts would occur via dust and noise, but these impacts would be

minimized through implementation of dust control measures and adherence to Caltrans standards for air quality and noise.

Alternative 3 would require acquisition of 3.02 ac of farmland on the edge of the agricultural parcels within the project limits, which is designated as Prime Farmland and Farmland of Statewide Importance. This designated farmland would be impacted linearly along the edge of the property. Much of the impact area does not occur on active agricultural areas, but along an uncultivated buffer. Therefore, the impact would not interfere with the existing or future agricultural use on the parcel.

Overall, neither Build Alternative will have a substantial adverse impact on agricultural lands. This determination is supported by the conclusions derived from the NRCS-CPA-106 forms, which indicate that a total score of less than 160 points shall be given a "minimum level of consideration for protection." Therefore, the acquisition of Prime Farmland or Farmland of Statewide Importance would not be adverse or significant due the combined scores on the Farmland Conversion Impact Rating Form and the minimal nature of the impacts to the agricultural parcels.

Cumulative Impacts

Each reasonably foreseeable project with federal approval is required to determine its potential farmland impacts using NRCS forms and in consultation with NRCS. Nonfederal projects would evaluate impacts based on the Lead Agency's thresholds of significance. Conversion of farmland exceeding NRCS or Lead Agency thresholds would be considered a significant and adverse project-specific and cumulative impact. Because the proposed project's impacts to farmland are minimal, they are not considered cumulatively considerable.

2.23.6.2 Community Impacts

The RSA for community impacts is the City of Santa Clarita and other unincorporated communities within and adjacent to the project area that could be reasonably affected by direct land acquisition, or indirect impacts associated with increased traffic such as noise and air quality.

The Santa Clarita Valley covers approximately 200 square miles and comprises two political regions: the unincorporated area of Los Angeles County and the city of Santa Clarita. The city of Santa Clarita includes most of the communities of Valencia, Newhall, Saugus, and Canyon Country, and the subcommunities of Sand Canyon and Placerita Canyon. Other communities within the Santa Clarita Valley but beyond the

borders of the city include Agua Dulce, Castaic, Stevenson Ranch, and Val Verde. Traditionally, the Valley was utilized for oil production, mining, ranchland, and agriculture. The area has transitioned into master-planned communities that are primarily residential.

Alternative 2: Reduced Median Alternative

Temporary impacts associated with Alternative 2 include:

- Late-night lane closures along I-5
- Temporary ramp closures
- Local detours/short-term traffic delays
- Business access impairment

Alternative 2 would require two partial acquisitions and one full acquisition of vacant parcels. Alternative 2 is consistent and/or compatible with state, regional, and local land use plans.

Alternative 3: Full Median Alternative

Temporary impacts for Alternative 3 would be similar to those for Alternative 2.

Alternative 3 would require eight partial acquisitions and one full acquisition of private properties. All but one of the acquisitions would involve vacant lands. One partial acquisition would be required from agricultural land discussed in Section 2.3, Farmlands and Timberlands.

Alternative 3 is consistent and/or compatible with state, regional, and local land use plans.

Cumulative Impacts

Community impacts associated with the reasonably foreseeable actions include road detours, temporary or permanent displacement of residents and workers, and physical changes to local communities. Each future project will be required to analyze community impacts related to growth, community cohesion, and character, and land use consistency and project-specific avoidance, minimization, or mitigation measures would be identified. Adherence to land use and community requirements, including zoning ordinances, land use ordinances, traffic management plans, public outreach and notification plans, and relocation assistance, would be required for each of the reasonably foreseeable projects as applicable. Since the proposed project would only result in acquisition of undeveloped land and would not require relocations of

residences or businesses, community character would not be affected. Community impacts would be temporary and would be related to traffic detours and noise/air quality impacts during construction. For these reasons, the project-related community impacts are not considered cumulatively considerable.

2.23.6.3 Water Quality and Stormwater Runoff

The RSA for water quality and storm water runoff includes the Upper Santa Clara River Watershed, a subwatershed of the Los Angeles-San Gabriel Hydrologic Unit.

The majority of the Upper Santa Clara River Watershed is undeveloped; therefore, most of the streams and rivers are in their natural state. Agriculture has been and continues to be concentrated in the river plains and chemicals associated with modern agricultural production, such as fertilizers and pesticides, are easily transmitted to local waters. In the developed areas, flood control engineering has resulted in the installation of concrete/riprap channels and other structures. In addition, impervious area associated with development inhibits percolation and increases runoff velocity.

The Santa Clara River, Reaches 5 and 6 were designated are within the RSA. On the 2006 Clean Water Act (CWA) 303(d) list of water quality limited segments, Reach 5 is listed as impaired for coliform bacteria, and Reach 6 is listed as impaired for coliform bacteria, chlorpyrifos (a pesticide), toxicity, and Diazinon (a pesticide), with a proposed TMDL (Total Maximum Daily Load) allocation document completion date of 2019.

TMDL studies have been completed on Reaches 5 and 6 of the Santa Clara River. Reach 6 has a TMDL for nitrite and Reach 5 has a TMDL for chloride and high coliform count.

The beneficial use for the groundwater in and downstream of the project area is municipal, which reflects the importance of groundwater as a source of drinking water in the region both in the past and in the present.

Alternative 2: Reduced Median Alternative

Construction impacts for Alternative 2 include:

- Increased surface runoff and erosion and increased stream sedimentation
- Accidental releases of hazardous materials
- Groundwater dewatering

These impacts have the potential to affect adjacent receiving waters as well as downstream waters.

Operational impacts for Alternative 2 include:

- Increased loading of sediments, turbidity, floating material, oils, greases, and chemical contamination due to the increase in impervious area
- Removal or reduction of riparian vegetation or other vegetation from the buffer zone of streams, creeks, or wetlands, which affects water quality by increasing the potential for erosion

These impacts have the potential to affect adjacent receiving waters as well as downstream waters.

The proposed project will comply with the requirements of Caltrans Stormwater Management Plan, which specifies implementation of construction, pollution prevention, and treatment best management practices (BMPs). Currently, no treatment BMPs are in place in the project area. Construction site BMPs are designed to control erosion, control use of hazardous materials, including spill clean-up, thereby preventing impacts to receiving waters. Pollution prevention BMPs are measures that are part of the project design to avoid impacts, minimize erosion during operation, and minimize the sources of pollutants. Treatment BMPs are measures to treat the increased loading of pollutants from the increase in impervious area so that receiving waters are not affected.

Alternative 3: Full Median Alternative

Temporary and permanent impacts for Alternative 3 would be similar to those for Alternative 2. Because of the increase in area temporarily disturbed as well as permanent impervious area, the impacts would be incrementally greater than those associated with Alternative 2.

Cumulative Impacts

The existing trend of urbanization of the Santa Clara River Watershed is projected to continue. Conversion of undeveloped land to transportation, commercial/industrial, or residential uses results in hydromodification and increased loading of pollutants into surface waters and indirectly into groundwater. It also introduces new sources of pollutants associated with the new land uses.

In order to counteract the impacts associated with increased development, each project must undergo review by the Lead Agency for compliance with National Pollutant Discharge Elimination System (NPDES) permits for construction activities, groundwater dewatering, and project operations, as well as compliance with local urban runoff ordinances. For projects within Caltrans jurisdiction, this includes compliance with the Storm Water Management Plan (SWMP) and any local requirements of the RWQCB. For development projects, this includes compliance with the regional Los Angeles County Standard Urban Stormwater Mitigation Plan (SUSMP) as specified in local ordinances. BMPs must be employed in site design and to reduce sources of pollutants as well as to treat storm water runoff. Impacts from future projects can be avoided or minimized by designing projects to minimize impervious area, reduce runoff, and reduce sources of pollutants. Measures to minimize stream impacts for reasonably foreseeable projects are required to minimize potential water quality and storm water runoff.

The purpose of the NPDES permit program and, by extension, the TMDL program is to restore the beneficial uses of receiving waters. NPDES permits are updated every five years by the RWQCB based on the conditions of the watershed. Compliance with the NPDES program is considered sufficient to mitigate impacts to water quality.

Because the proposed project involves widening of an existing freeway and includes treatment measures that currently do not exist, the cumulative impact of the project on water quality would not be substantial.

2.23.6.4 Paleontology

The project area is located within the Transverse Ranges geomorphic province. The Transverse Ranges include the Santa Ynez, Santa Susanna, Santa Monica, San Gabriel, and San Bernardino Mountains, as well as the Santa Clara and Simi Valleys. For the purposes of this analysis, the RSA is the Santa Clarita Valley.

Much of the RSA is undeveloped; therefore, sediments have not been disturbed. There are several fossil localities in the project area within specific formations. These formations are found throughout the Transverse Ranges. These sediments have the potential to contain important paleontological remains, especially in canyon and river plain areas.

Alternative 2: Reduced Median Alternative

Paleontological impacts for Alternative 2 include:

A high potential for direct adverse impacts to paleontological resources could result during ground-disturbing activities associated with the clearing of vegetation and soil, excavation, and construction of the proposed improvement within the Pico, Saugus, and Towsley Formations and within older alluvium.

Alternative 3: Full Median Alternative

Impacts for Alternative 3 would be similar to those for Alternative 2. Because of the increase in area disturbed during construction, the impacts would be incrementally greater than those associated with Alternative 2.

Cumulative Impacts

All the reasonably foreseeable projects with deep excavation into the Pico, Saugus, and Towsley Formations or into older alluvium have the potential to result in adverse impacts to paleontological resources. The project is required to implement a Paleontological Mitigation Plan (PMP), which includes monitoring and recovery of paleontological resources that are found during project construction. A PMP will be required for every project with high-sensitivity sediments that is subject to Caltrans oversight. For other projects, implementation of and adherence to a Paleontological Resources Mitigation Program would be required to minimize impacts to resources within high-sensitivity sediments. Because the project includes this requirement, the project's contribution to cumulative paleontological resources impacts would not be considerable.

2.23.6.5 Noise

Because the proposed project is a freeway improvement associated with traffic noise, the RSA for noise analysis includes the reasonably foreseeable actions along the I-5 corridor within the project segment. Noise is localized and decreases rapidly with geographic distance.

The RSA has been developing for several years due to increased pressure for housing opportunities within Los Angeles County. Existing land uses in the vicinity of the project area include single- and multifamily residential, office, industrial, commercial, institutional, and recreational uses. The majority of the sensitive receptor locations in the project vicinity consist of residential land uses. The primary source of noise in the project area is traffic on I-5 and local streets such as The Old Road and Castaic Road. Of the 291 receptor locations modeled in the Noise Impact Analysis, 59 receptors with outdoor uses currently approach or exceed the Noise Abatement Criteria (NAC) established by FHWA. Interior noise levels measured at 11 locations

where residences do not have outdoor active use areas or outdoor active use areas that are physically shielded, as well as classrooms and hotels located along the project corridor, were below the applicable NAC.

Alternative 2: Reduced Median Alternative

Construction impacts for Alternative 2 are listed below.

- A high single-event noise exposure potential at a maximum level of 87 A-weighted decibels (dBA) L_{max} from trucks passing at 50 feet (ft) would occur; however, the projected construction traffic would be minimal when compared to existing traffic volumes on I-5 and The Old Road and other adjacent streets.
- The worst-case composite noise level at the nearest noise-sensitive receptor during grading and excavation would be 91 dBA L_{max} at a distance of 50 ft from an active construction area. If pile-driving is conducted concurrently with site preparation, the construction site could potentially generate noise levels of 95 dBA L_{max} at a distance of 50 ft.
- Short-term construction-related vibration levels from pile drivers and jackhammers would result in residential annoyance at the closest existing residence.

Operational impacts for Alternative 2 are listed below.

- Of the 291 receptor locations modeled, 68 receptors would exceed or would continue to approach or exceed the NAC under the worst-case traffic conditions. No receptor locations would experience a substantial increase of 12 dBA or more over their corresponding existing modeled noise levels.
- The predicted future interior noise levels at all 11 modeled locations would remain below the applicable NAC.
- Groundborne noise is not likely to be a problem because noise arriving via the normal airborne path usually will be greater than groundborne noise.
- One receptor (R-35, Wedgewood Court) would experience a noise increase as a result of Alternative 2 in the worst-case traffic condition (maximum traffic capacity) when compared to the future no build condition. Even with a 16 ft noise barrier, this increase would still occur.

Alternative 3: Full Median Alternative

Construction impacts associated with Alternative 3 would be similar to those for Alternative 2. For Alternative 3, permanent impacts would be similar to Alternative 2,

although 64 receptors would exceed or would continue to approach or exceed the NAC under the worst-case traffic conditions. No receptor locations would experience a substantial increase of 12 dBA or more over their corresponding existing modeled noise levels; however, one receptor (R-35) would be subjected to a noise increase, when compared to the future No Build scenario above County noise thresholds.

Cumulative Impacts

The noise analysis is based on the traffic data provided in the Traffic Impact Analysis for the project. The traffic analysis considered all future projects predicted in the project vicinity through 2030. Therefore, the project impacts described above include the reasonably foreseeable projects through 2030 and/or the worst-case traffic condition on I-5. No receptor locations would experience a substantial increase of 12 dBA or more over their corresponding existing modeled noise levels; however, one receptor (R-35) would be subjected to a noise increase above County noise thresholds.

Like the proposed project, future transportation projects within the RSA will be required to analyze sound barriers to protect sensitive receptors to see if they are reasonable and feasible under FHWA protocol and/or local noise regulations, and will be implemented as required. Measures to reduce interior noise levels, such as double-paned windows and air-conditioning units will be required if these levels approach or exceed the NAC. Measures to reduce groundborne vibration will be required, if applicable. Future development projects would be required to comply with local ordinances with respect to noise abatement. Noise attenuation measures could include equipment enclosures, insulation, or muffling devices.

2.23.6.6 Natural Communities

The project area is surrounded by hills and located within the Transverse Mountain Ranges, which are in the South Coast subregion of the Southwestern California region of the California Floristic Province. The South Coast subregion stretches from Santa Barbara to Baja California and east to the Mojave Desert. For natural community purposes, the RSA is the Santa Clarita Valley.

The RSA is mostly undeveloped; 51 natural communities have been identified in this area, with California Sagebrush and Northern Mixed Chaparral predominant. Much of the natural vegetation in the developed areas occurs in scattered, often fragmented patches on hills or in other areas not easily developed. The development trends and conversion of natural communities are concentrated in areas adjacent to highways and

freeways. Natural communities in the developed areas have been affected by transition of land uses to agricultural, commercial, industrial, and residential uses.

There are two areas within the project alignment that provide opportunities for wildlife to cross from one side of I-5 to the other. These are at the San Fernando Pass and Santa Clara River. Except for the existing barriers created by I-5, The Old Road, and adjacent development and infrastructure, San Fernando Pass provides nearly contiguous habitat that may potentially be used by wildlife traversing the Santa Susana and San Gabriel Mountains. The Santa Clara River is somewhat restricted as a wildlife corridor within the project area due to surrounding development and future proposed development in the vicinity of the Santa Clara River to the west of I-5.

Alternative 2: Reduced Median Alternative

Temporary impacts associated with Alternative 2 are listed below.

- Oak woodland habitat: 4.86 acres (ac). Temporary impacts to oak trees would be limited to trimming and pruning.
- Riparian/riverine communities within Santa Clara River and Castaic Creek: 3.29 ac. These impacts are a result of the proposed bridge-widening process at Castaic Creek and adjacent construction efforts that may require equipment access through the creek bed.
- Venturan coastal sage scrub: 23.90 ac.

Permanent impacts associated with Alternative 2 are listed below.

- Oak woodland habitat: 3.27 ac. The development of mature large trees requires 60–80 years; therefore, the direct removal of this habitat type would result in unavoidable long-term loss of habitat, which would remain considerable even after mitigation.
- Riparian/riverine communities within Santa Clara River and Castaic Creek: 1.54 ac for Alternative 2 through disturbance and/or removal of existing vegetation. The major impact to riparian/riverine habitats would be to a drainage ditch in the vicinity of Castaic Creek resulting from construction in the northern portion of the project.
- Venturan coastal sage scrub: 19.78 ac through disturbance and/or removal of existing vegetation.
- Reduce wildlife movement below I-5 by widening the freeway.

Alternative 3: Full Median Alternative

The types of temporary and permanent impacts for Alternative 3 would be the same as those for Alternative 2. Alternative 3 would affect larger areas as shown below

Temporary impacts to habitat are as follows:

- Oak woodland habitat: 5.01 ac
- Riparian/riverine communities within Santa Clara River and Castaic Creek: 2.85 ac
- Venturan coastal sage scrub: 27.49 ac

Permanent impacts to habitat are as follows:

- Oak woodland habitat: 4.98 ac
- Riparian/riverine communities within Santa Clara River and Castaic Creek: 2.40 ac
- Venturan coastal sage scrub: 22.63 ac

Cumulative Impacts

Similar to the proposed project, impacts associated with reasonably foreseeable projects would include temporary loss of natural community habitat due to construction access and staging such as trimming, pruning, ground vegetation disturbance, and stream crossings. Permanent impacts would constitute habitat removal for replacement with structures, pavement, or other landscape-altering features. The reasonably foreseeable projects would likely require removal of oak woodland, riparian/riverine, Venturan coastal sage scrub, and possibly other sensitive habitats. Habitat impacts of these projects would be mitigated through restoration/ enhancement/replacement. However, because of the time for mature oak trees to recover, cumulative impacts to oak woodland would be considerable even after avoidance, minimization, and mitigation measures are implemented, but not adverse.

Because the project is limited to widening of an existing freeway, it is not expected to have substantial wildlife movement impacts compared to current conditions. As part of the proposed project, measures would be implemented to improve wildlife movement in the area. Reasonably foreseeable projects have the potential to adversely impact wildlife movement through direct or indirect impacts to existing wildlife corridors such as obstruction, noise, lighting, or proximity to human activity. Each project will be required to evaluate potential impacts to wildlife movement and to

determine the avoidance, minimization, or mitigation measures that are necessary to address potential impacts.

Therefore, the project's contribution to cumulative wildlife movement and natural community impacts, with the exception of oak woodland habitat, would not be considerable.

2.23.6.7 Wetlands and Other Waters

In the project area, I-5 crosses many creeks and washes that are part of the Upper Santa Clara River Watershed. For this reason, the RSA for wetlands and other waters is the Upper Santa Clara River Watershed.

Many of the streams and rivers within the RSA are in their natural state, such as the Santa Clara River and Castaic Creek. Other waters in the area include ditches and concrete channels used to control flooding in the developed areas. Limited agriculture has been and continues to be concentrated in the river plains of northern Los Angeles County, and chemicals associated with modern agricultural production such as fertilizers and pesticides are easily transmitted to local waters.

Alternative 2: Reduced Median Alternative

Temporary impacts associated with Alternative 2 are listed below.

- Approximately 4.52 ac of streambed potentially jurisdictional under California Department of Fish and Game (CDFG) regulations.
- Approximately 4.20 ac of nonwetland and wetland waters potentially jurisdictional under United States Army Corps of Engineers (ACOE) regulations

Permanent impacts associated with Alternative 2 are listed below.

- Approximately 1.7 ac of streambed potentially jurisdictional under CDFG regulations.
- Approximately 1.22 ac of nonwetland and wetland waters potentially jurisdictional under ACOE regulations.

Alternative 3: Full Median Alternative

Temporary impacts associated with Alternative 3 are listed below.

- Approximately 4.52 ac of streambed potentially jurisdictional under CDFG regulations.

- Approximately 4.20 ac of nonwetland and wetland waters potentially jurisdictional under ACOE regulations

Permanent impacts associated with Alternative 3 are listed below.

- Approximately 2.16 ac of streambed potentially jurisdictional under CDFG regulations.
- Approximately 1.59 ac of nonwetland and wetland waters potentially jurisdictional under ACOE regulations.

Cumulative Impacts

Temporary and permanent project impacts to wetlands and other waters would be mitigated through revegetation/enhancement/restoration or purchase of credits in an approved mitigation bank at a ratio to be determined by the resource agencies. Permanent impacts to potentially jurisdictional nonwetland and wetland waters are less than 2 acres for either Build Alternative. Impacts associated with reasonably foreseeable projects would include temporary loss of riparian/riverine habitat due to construction access and staging, such as trimming, pruning, ground vegetation disturbance, and stream crossings. Permanent impacts would constitute habitat removal for replacement with structures. The reasonably foreseeable projects that involve stream crossings or fill of jurisdictional waters would be required to implement similar measures and comply with resource agency requirements for permits under the CWA. Consultation with resource agency staff during the environmental document preparation processes is utilized to determine the severity of impacts and also to identify appropriate avoidance, minimization, or mitigation measures. Because the proposed project involves widening of an existing freeway and would impact wetlands and other waters through stream crossings to widen existing bridges, impacts to these resources are not cumulatively considerable and will be mitigated through federal and state permitting processes.

2.23.6.8 Animal Species

Because the presence of sensitive animal species is associated with the presence of natural communities, the RSA is the Santa Clarita Valley.

The health and historical context for sensitive animal species is directly related to that of the natural communities present in the study area. Loss of habitat associated with development has reduced populations and diversity of species in the area. However, much of the RSA remains undeveloped with limited accessibility.

Alternative 2: Reduced Median Alternative

Temporary impacts for Alternative 2 to sensitive animal species (not threatened or endangered) include:

- Impacts to unarmoured stickleback and arroyo chub habitat within the Santa Clara River during bridge construction
- Indirect impacts to Santa Ana sucker and arroyo chub due to potential for introduction of hazardous materials and sediment during construction activities
- Impacts to bat roosting areas from light, noise, and human encroachment during construction activities in bridge areas
- Indirect impacts due to loss of habitat described in the Natural Communities section above

Permanent impacts for Alternative 2 to sensitive animal species include:

- Impacts to unarmoured threespine stickleback and arroyo chub occupied habitat
- Indirect impacts to Santa Ana sucker and arroyo chub due to increased pollutant loading associated with an increase in impervious area
- Minor loss of bat roosting habitat
- Indirect impacts due to loss of habitat described in the Natural Communities section above

Alternative 3: Full Median Alternative

Impacts for Alternative 3 would be similar to those for Alternative 2.

Cumulative Impacts

Impacts associated with reasonably foreseeable projects would be generally similar to the proposed project and would include temporary loss of occupied and potential habitat due to vegetation disturbance, bridge construction, and water quality impacts associated with stream crossings and potential fill of waters. Permanent impacts would consist of habitat removal for replacement with structures, pavement, or other landscape-altering features, which may result in water quality impacts. The proposed project includes measures to designate and avoid ESAs during construction. An HMMP is also required. Avoidance of bat nests and construction of alternative roosting sites (i.e., bat houses) are required. BMPs to minimize water quality impacts, with specific attention to stream areas, are required. Because the animal species impacts associated with the project would be minimized through application of

standard measures to protect habitat and species, the project's contribution to cumulative impacts to animal species is not considerable.

The measures described above would be applicable to the reasonably foreseeable projects and would be reviewed by applicable resource agencies during early consultation or as part of the environmental document review process. Additional measures may be included based on current habitat and affected species' status.

2.23.6.9 Threatened and Endangered Species

Because the presence of threatened and endangered species is associated with the presence of natural communities, the RSA is the Santa Clarita Valley.

Unarmored threespine stickleback was listed as federally endangered in 1970 and a Recovery Plan has been prepared by United States Fish and Wildlife Service (USFWS). The unarmored threespine stickleback has been consistently found in the Santa Clara River near the project site for the past 16 years.

Arroyo toad was listed as federally endangered in 1994 and critical habitat was designated in 2005. This species requires lightly flowing, shallow river channels, which encourage breeding and foraging, as found in the Santa Ana River. Fast-flowing rivers typical of the human environment are not conducive to the survival of this species.

Least Bell's vireo was listed as an endangered species by state and federal agencies in 1980 and 1986, respectively, and critical habitat was designated in 1994. Riparian habitat-associated natural rivers such as the Santa Clara River are the most suitable riparian environment for least Bell's vireo to breed.

The southwestern willow flycatcher is a subspecies of willow flycatcher and was federally listed as endangered by USFWS in 1995 and state-listed as an endangered species by the CDFG in 1992. This species breeds in riparian habitat along rivers, streams, and other wetlands in floodplains and broader canyons, and prefers dense riparian thickets near surface water often with adjacent open areas for foraging, as found in the Santa Clara River area.

The coastal California gnatcatcher was listed as threatened by the USFWS in 1993. Revised final critical habitat was designated in 2007. The coastal California gnatcatcher typically nests and forages in moderately dense stands of coastal sage scrub below 2,500 ft in Southern California. Gnatcatchers usually defend breeding

territories ranging in size from 2 to 14 ac and occupy home ranges that vary in size from 13 to 39 ac such as foothill areas in the RSA.

Alternative 2: Reduced Median Alternative

Impacts to unarmored threespine stickleback occupied habitat and arroyo toad habitat within Castaic Creek would occur due to construction activities. Temporary impacts were limited to the best extent feasible to allow for enough maneuvering of personnel, equipment, and vehicles.

Indirect impacts to unarmored threespine stickleback, arroyo toad, least Bell's vireo, and southwestern willow flycatcher may occur due to potential for introduction of hazardous materials and sediment into Castaic Creek and the Santa Clara River during construction activities.

Temporary impacts to habitat are as follows:

- Arroyo toad habitat: 4.74 ac
- Least Bell's vireo and southwestern willow flycatcher habitat: 1.43 ac
- Coastal California gnatcatcher habitat: 23.49 ac

There would be permanent impacts to unarmored threespine stickleback occupied habitat due to bridge widening. Direct impacts have been limited to lengthening existing walls and adding a few columns at Castaic Creek.

Potential permanent indirect impacts to unarmored threespine stickleback, arroyo toad, least Bell's vireo, and southwestern willow flycatcher would occur due to increased pollutant loading associated with increased impervious surface.

Permanent impacts to habitat are as follows:

- Arroyo toad habitat: 5.91 ac
- Least Bell's vireo and southwestern willow flycatcher habitat: 0.5 ac
- California gnatcatcher habitat: 18.51 ac
- Unarmored threespine stickleback occupied habitat: 0.45 ac for Alternative 2 and 0.49 ac for Alternative 3.

Alternative 3: Full Median Alternative

The types of temporary and permanent impacts for Alternative 3 would be the same as Alternative 2; however, Alternative 3 would mostly affect larger areas, as shown below.

Temporary impacts to habitat would be as follows:

- Arroyo toad habitat: 5.44 ac
- Least Bell's vireo and southwestern willow flycatcher habitat: 1.52 ac
- Coastal California gnatcatcher habitat: 26.38 ac

Permanent impacts to habitat would be as follows:

- Arroyo toad habitat: 4.64 ac
- Least Bell's vireo and southwestern willow flycatcher habitat: 0.43 ac
- Coastal California gnatcatcher habitat: 22.45 ac
- Unarmored threespine stickleback occupied habitat: 0.49 ac

Cumulative Impacts

Impacts associated with reasonably foreseeable projects would include temporary loss of occupied and potential habitat due to vegetation disturbance, bridge construction, and water quality impacts associated with stream crossings and potential fill of waters. Permanent impacts would consist of habitat removal for replacement with structures, pavement, or other landscape-altering features. In the future, there may be an increase of contaminants into the waters occupied by the unarmored threespine stickleback and arroyo toad, as well as the degradation of aquatic habitats as a result of off-site development. Likewise, the reasonably foreseeable projects may result in an increase of traffic noise and additional nighttime light spill into preserved areas, as well as the further degradation of sensitive habitat from off-site development.

The proposed project includes a series of measures to minimize impacts to threatened or endangered species that are applicable to the reasonably foreseeable actions. These measures are as follows:

- Designate and avoid ESAs during construction.
- Implement an HMMP.
- Implement BMPs to minimize water quality impacts, with specific attention to stream areas, as required.
- Restrict work within Castaic Creek to outside the peak reproduction time for the unarmoured threespine stickleback.
- Construct a flow diversion path within the Santa Clara River and Castaic Creek during project construction to ensure safe passage of sensitive fish species

through the project site. No work would be allowed to take place within this diversion.

- Restrict construction activities in the vicinity of the Santa Clara River and Castaic Creek to outside of any rain event.
- Restrict construction storage or maintenance areas to at least 150 ft from streambeds.
- Limit construction activities to outside the bird breeding season or provide a buffer zone.
- Implement vegetation replacement ratios.
- Complete Section 7 Consultation.

Similar to the proposed project, any of the reasonably foreseeable actions that would potentially impact threatened or endangered species would be required to evaluate the design to avoid those impacts as well as to implement minimization and mitigation measures. For those projects, consultation with USFWS for federally listed species and with CDFG for state-listed species may be required. The Biological Opinion issued by USFWS and the Section 2081 finding issued by CDFG may include additional avoidance, minimization and mitigation measures. These agencies are tasked with preventing threatened and endangered species from being jeopardized by any project. The findings and measures specified by USFWS and CDFG would ensure that cumulative impacts to threatened and endangered species are not cumulatively significant.

2.23.7 Avoidance, Minimization and/or Mitigation Measures

No measures beyond those identified in Section 2.1 through 2.12 are required to address the Build Alternatives' contribution to cumulative impacts. Specific measures to minimize harm are identified in the other sections of Chapter 2 of this EIR/EA for each environmental concern analyzed. These measures address both temporary as well as permanent impacts.

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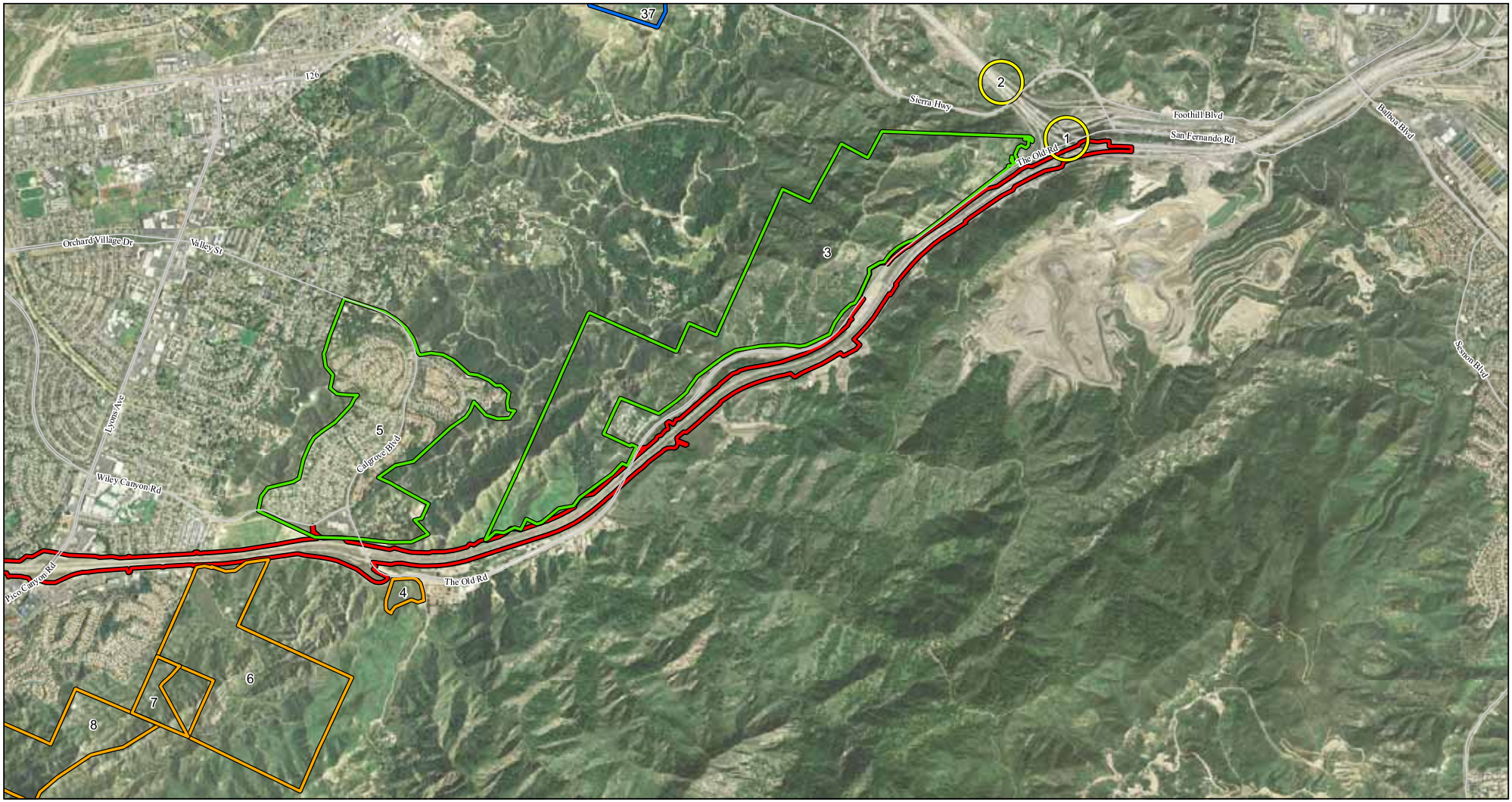

LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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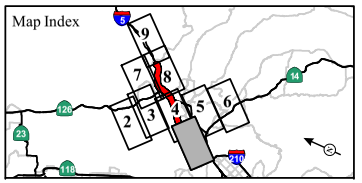


FIGURE 2.23.1

Sheet 1 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

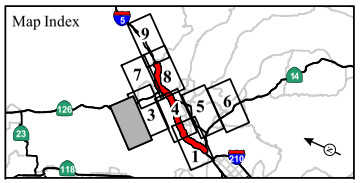
EA 2332E0

LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet



SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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FIGURE 2.23.1

Sheet 2 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0

LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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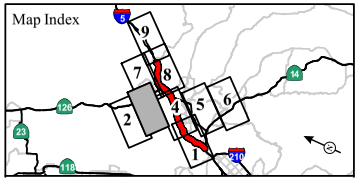


FIGURE 2.23.1

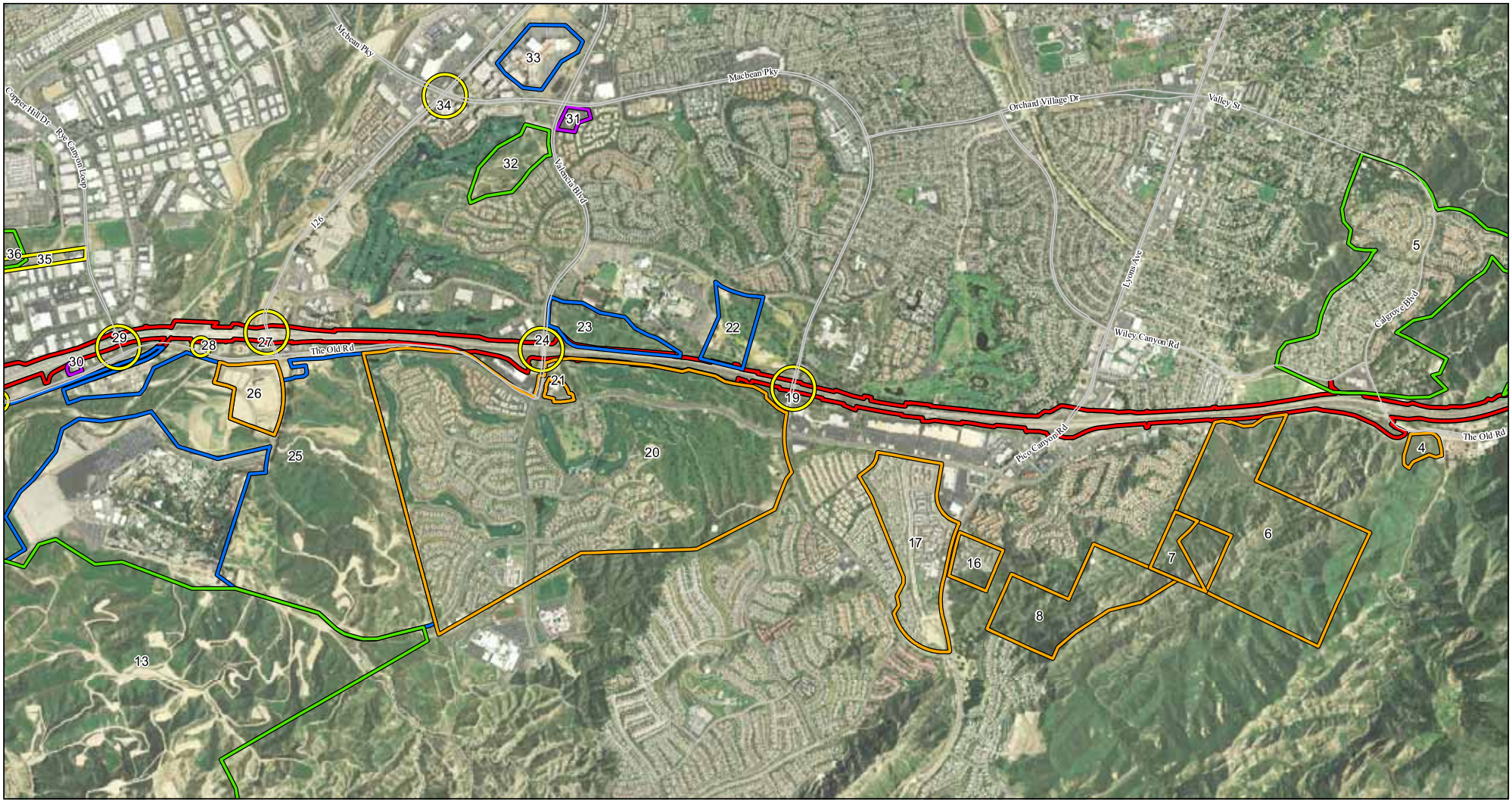
Sheet 3 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0



LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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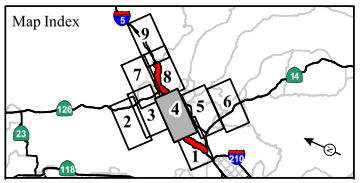


FIGURE 2.23.1

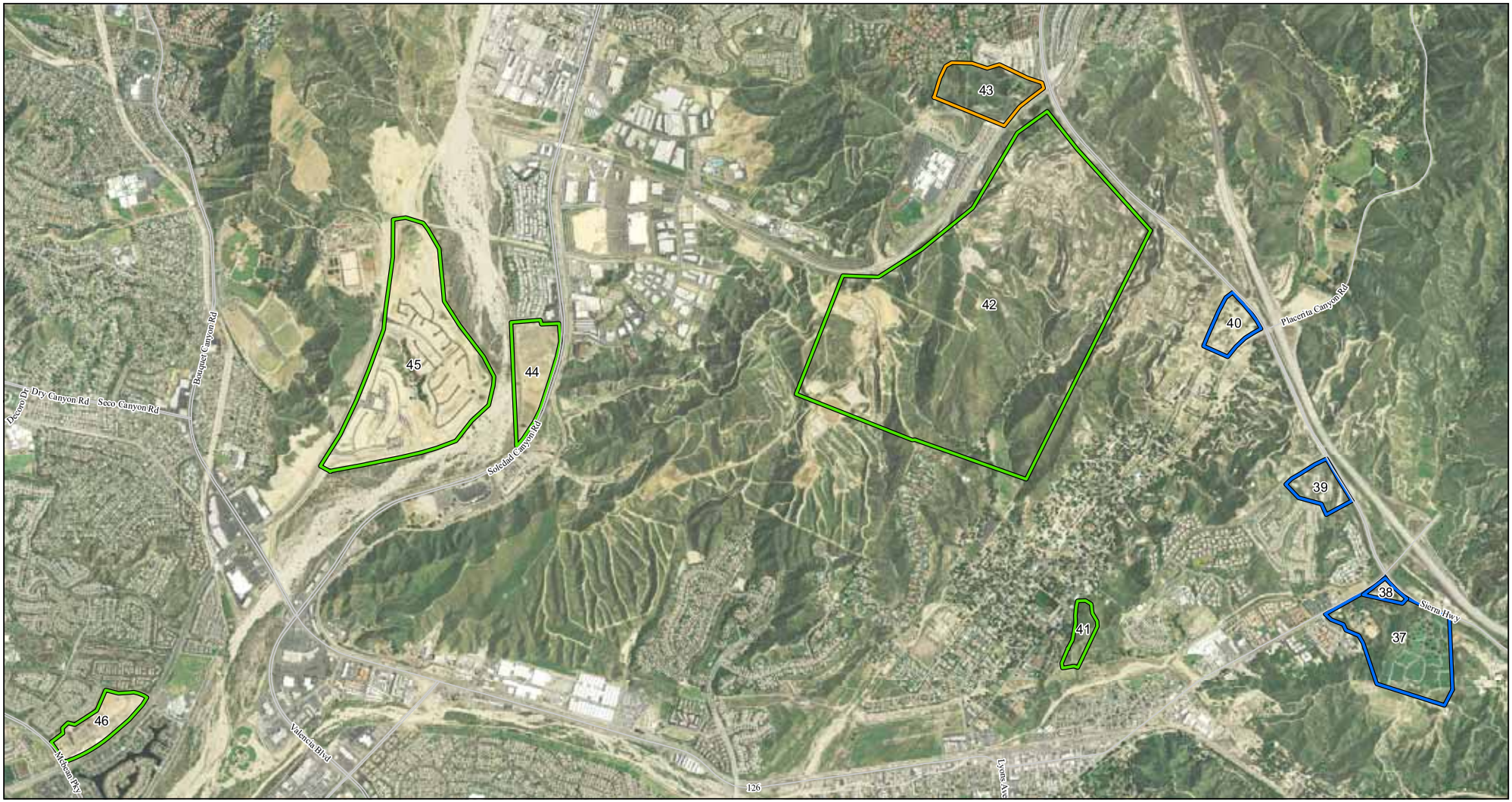
Sheet 4 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0



LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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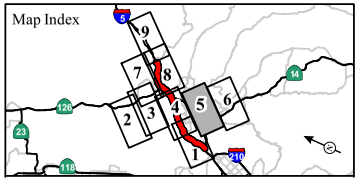


FIGURE 2.23.1

Sheet 5 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0

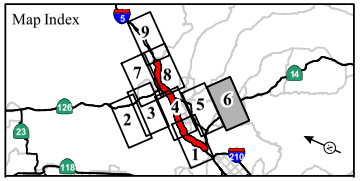
LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

Map Index



SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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FIGURE 2.23.1

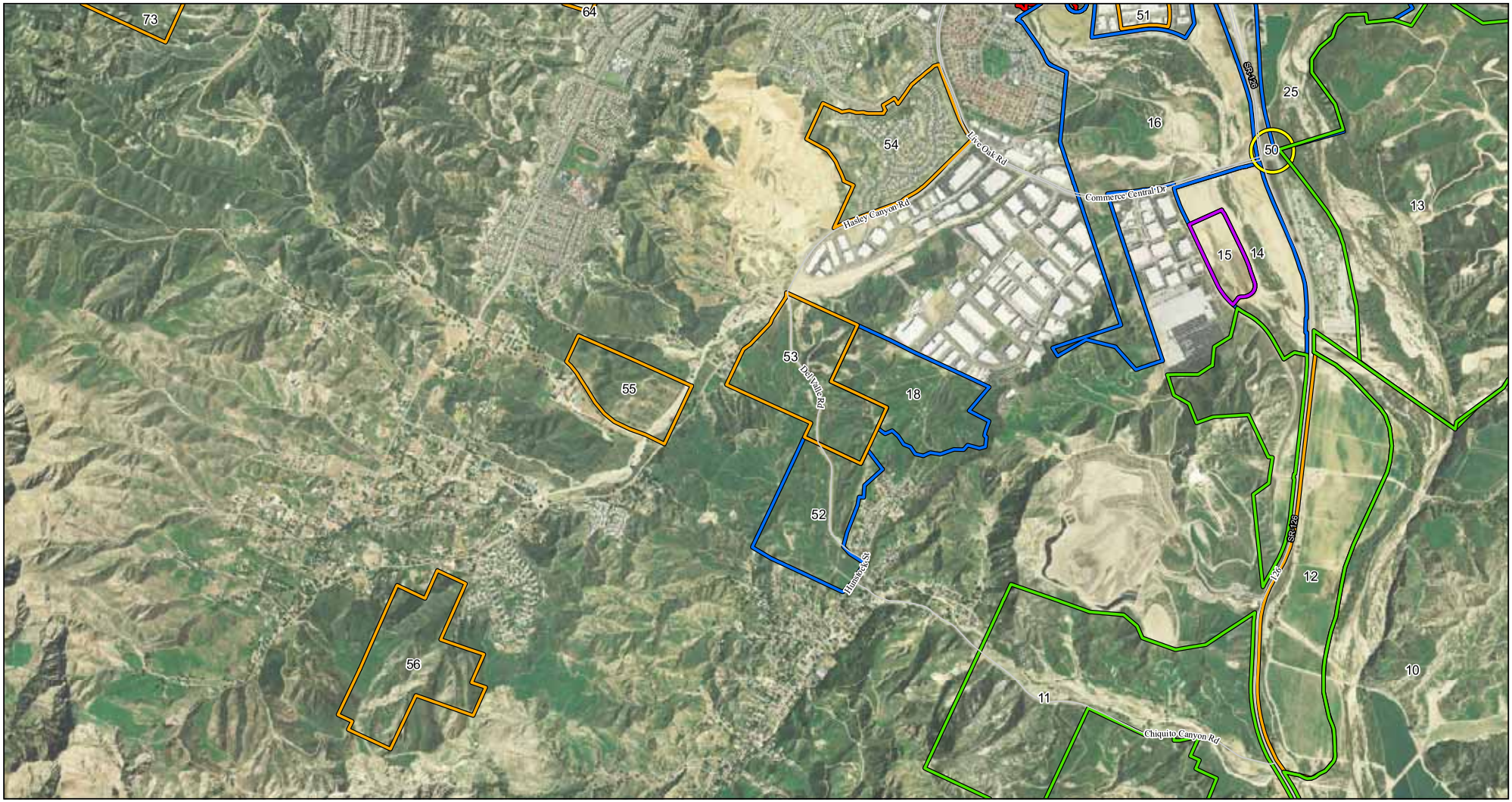
Sheet 6 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0

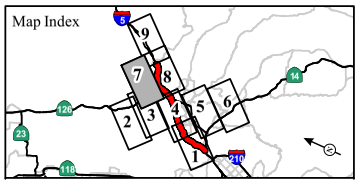


LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet



SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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FIGURE 2.23.1

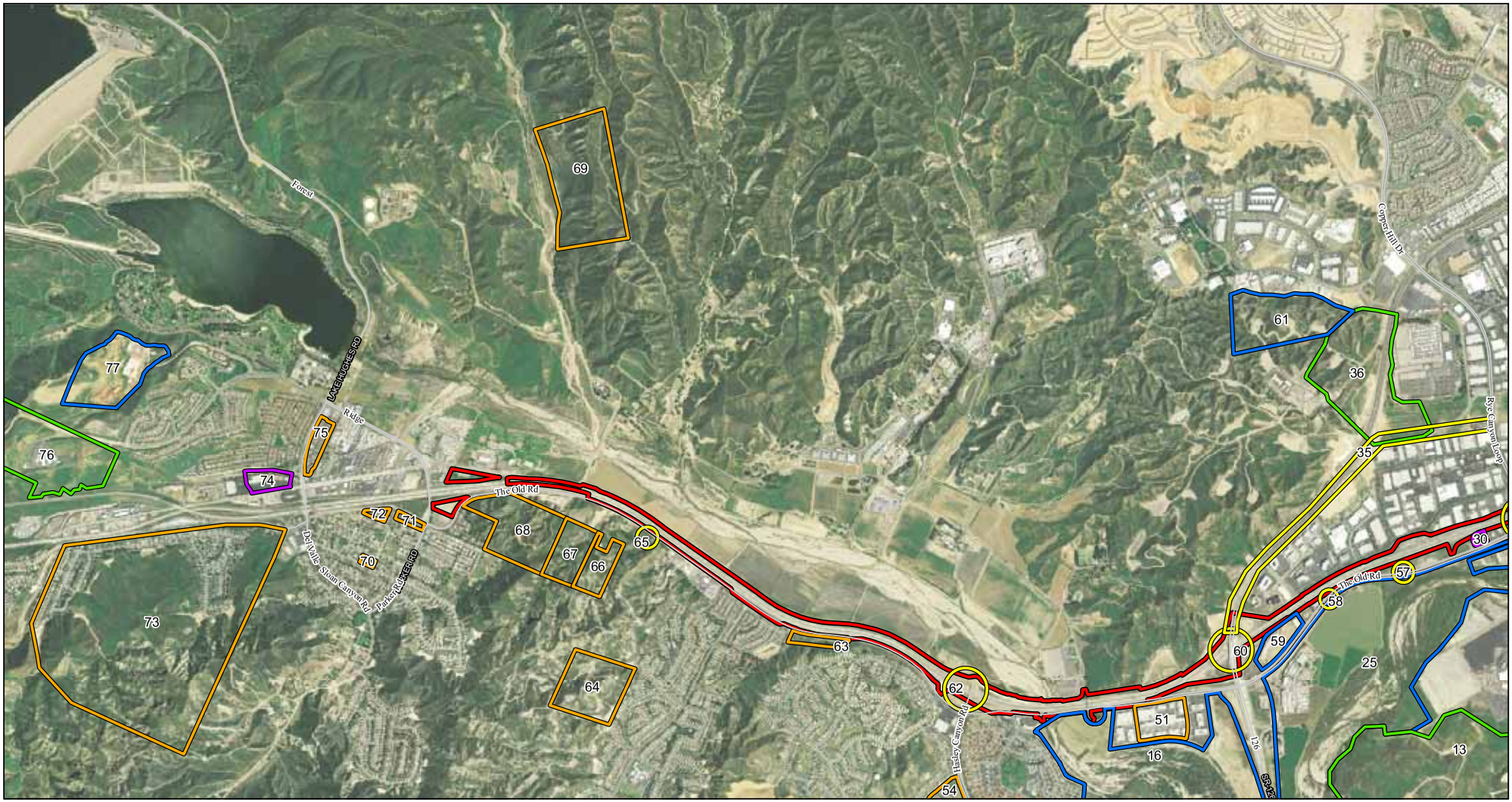
Sheet 7 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0



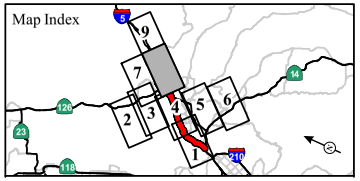
LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

Map Index



SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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FIGURE 2.23.1

Sheet 8 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0

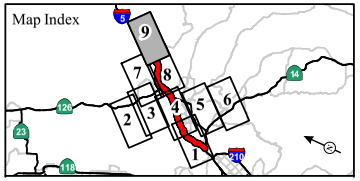
LEGEND

Cumulative Projects (with Table ID number)

- Commercial/Industrial
- Mixed-Use
- Not Specified
- Residential
- Transportation
- Project Area

0 1,000 2,000 Feet

Map Index



SOURCE: Air Photo USA (2008), County of Los Angeles (2007), Psomas (2007).

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FIGURE 2.23.1

Sheet 9 of 9

I-5 HOV/Truck Lanes Project

Reasonably Foreseeable Projects

07-LA-5 PM R45.4/R59.0

EA 2332E0

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Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under CEQA

The Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA responsibility for the environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327. Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS) or some lower level of documentation will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant impact. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of

actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 Discussion of Significance of Impacts

The significance of the potential impacts of the Build Alternatives under CEQA was assessed based on the CEQA Checklist provided in Appendix A and the analyses of project impacts as discussed in detail in Section 2.0, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures. The impacts of the project Build Alternatives are summarized in the following sections, based on the level of significance of the project impacts under CEQA. This section focuses the analysis on the two Build Alternatives. For a comparative discussion of the impacts of the No Build Alternative, please refer to Section 2.0.

3.2.1 No Impacts

For the following topics, the project will have no impacts.

3.2.1.1 Mineral Resources

The proposed project would not affect any existing mineral resources operations in the project limits. Therefore, the project would not have any impacts on mineral resources or mineral resources extraction operations. The project would utilize some mineral resources for the construction of the project (e.g., concrete, asphalt, rock), but would not result in a significant depletion of the base resources.

3.2.1.2 Population and Housing

The proposed project would not result in the division of an existing community or the displacement of any residents. The project is aligned with existing I-5 and would not realign the roadway to necessitate any full residential takes or relocations. As described in Section 2.2, Growth, the proposed project would have no temporary or permanent impacts on the rate of population, housing, or employment growth.

3.2.1.3 Utilities and Service Systems

The proposed project does not generate demand for potable water or wastewater conveyance or treatment facilities and would not affect these facilities or water supply.

The existing stormwater conveyance channels would be extended. These extensions are described in Section 2.9. In general, these facilities do not increase the capacity of the drainage system. The capacity at one drainage, Gavin Canyon, would be increased to convey the 100-year flood event as it is currently undersized.

3.2.2 Less Than Significant Impacts of the Proposed Project

The following project impacts have been determined to be less than significant.

3.2.2.1 Aesthetics

I-5 is not a designated State Scenic Highway; therefore, the proposed project would not damage scenic resources within a designated scenic corridor.

Caltrans identifies I-5 within the project limits as eligible to be a State Scenic Highway. There are no specific designated or protected scenic vistas in the project limits. The Build Alternatives focus on widening of the freeway at-grade and do not include any new elevated structures. They would not, therefore, alter existing views of the distant, surrounding scenic areas. Because the Build Alternatives are improvements to an existing road, they will not substantially alter the visual quality and character of the existing setting within the project limits. However, the Build Alternatives would result in the removal of trees and vegetation that constitute a scenic view and require construction of retaining walls and noise barriers. Measures V-1, V-2, V-3, and V-6 would be implemented to minimize the visual impacts related to tree removal and the construction of walls and reduce potential impacts to less than significant.

Temporary visual impacts during construction, such as construction activity, staging sites, truck hauling, excavation activity, and construction area signage, are anticipated under the Build Alternatives. The project would require temporary construction easements (TCEs). However, use of TCEs is for a short duration and would not result in permanent visual impacts. Implementation of Measures V-4 and V-5 would

minimize construction-related impacts, and Measures V-1 and V-2 would revegetate areas that were used as TCEs, as feasible.

I-5, within the project limits, is illuminated at night from vehicle headlights and intersection street lights. Also, the commercial and residential land uses adjacent to the project limits create some nighttime light. The proposed Build Alternatives would not add substantial new sources of lighting, so light and glare conditions resulting from the proposed project would be similar to what exists today and impacts are considered less than significant.

3.2.2.2 Agriculture Resources

Based on the earlier discussion in Section 2.3.3, the project study area has both Prime Farmland (Prime) and Farmland of Statewide Importance (Important) present, as shown on Figure 2.3.1. No Unique Farmland is present. Based on the mapping of the project study area, Alternative 3 would permanently impact Important Farmlands. Analysis of Alternative 3 shows that 3.02 acres (ac) of Important Farmland would be permanently lost on the edge of the agricultural parcels within the project limits.

However, these impacts are considered less than significant for the following reasons:

The categorized farmlands that are impacted would be impacted linearly along the edge of the property. Therefore, the impact would not interfere with the existing or future agricultural use on the parcel. In addition, the area of impact would not result in any secondary impacts that would result in the permanent loss of the parcel in agricultural production, such as loss of water supply/access or parcel bifurcation.

According to the CIA, this small amount of impact does not trigger the analysis of an avoidance alternative. Based on the discussion above, impacts to agricultural uses in the project study area would still be considered less than significant.

As discussed in Section 2.3, there are no temporary impacts from the proposed project and no impacts to property under Williamson Act contract.

3.2.2.3 Air Quality

The proposed project is included in the 2008 Regional Transportation Plan (RTP) and in the 2008 Regional Transportation Improvement Project (RTIP) (Project ID: [ID No. LAE0465]**.** The RTP Program EIR states that all emissions are anticipated to be

consistent with applicable Air Quality Management Plan (AQMPs) and State Implementation Plans (SIPs) and on-road emissions within regional conformity emission budgets. Therefore, the Build Alternatives are consistent with the SIP and the AQMP.

As described in Section 2.14.3.2, the Build Alternatives are not expected to result in worsening of air quality or create new violations of the CO standard, would not result in a particulate matter less than 10 microns in size or particulate matter less than 2.5 microns in size (PM_{10}/$PM_{2.5}$) hot spot or substantial increases in mobile-source air toxics emissions, and would have only less than significant permanent air quality effects on sensitive receptors.

Short-term impacts to air quality are expected during construction due to types of work performed, construction equipment, and motor vehicles used. There would be the potential for air pollutant emissions to be generated in quantities that would exceed the current air quality standards. However, temporary air quality impacts are considered less than significant with the mitigation proposed in the Air Quality section of this EIR/EA (Section 2.15).

Operation of the proposed project would comply with all applicable air quality plans and is expected to improve traffic circulation in the area, which would result in improved air quality. Therefore, project contributions to cumulative air quality impacts are considered less than significant.

Construction activities associated with the Build Alternatives could generate odors. These odors would be temporary and are considered less than significant.

3.2.2.4 Cultural Resources

Based on the earlier discussion in Section 2.8.3, surveys for both archaeological and historical resources in the potential impact area of the project for the Build Alternatives did not identify any resources. Therefore, the project would have no temporary or permanent impacts on any known cultural resources. However, it is possible that previously undiscovered resources or human burials may be unearthed during construction. Measures CR-1 and CR-2 are included in the project to address this potential. With the incorporation of these measures, the potential impact would be considered less than significant.

Based on the earlier discussion in Section 2.12.3, the project area has soils present that have a high potential to have fossiliferous content. Therefore, it is possible that unknown paleontological resources may be disturbed during construction. Measure PAL-1, which requires the preparation of a Paleontology Mitigation Program, including monitoring and resource recovery, is included in the project to address this potential. With the incorporation of this measure, potential impacts would be considered less than significant.

3.2.2.5 Geology and Soils

Based on the earlier discussion in Section 2.11.3, the Build Alternatives for the project would be subject to potential temporary and permanent impacts from faulting/ seismicity, landslides, liquefaction, and soil type. However, based on the Preliminary Geotechnical Design Report, these impacts can be minimized through project design and compliance with recommendations from the Report as enumerated in Measures GEO-1 through GEO-7. Therefore, potential geology and soils impacts would be considered less than significant.

No septic tanks or alternative wastewater disposal systems are proposed, and soil issues related to these facilities would not be encountered.

3.2.2.6 Hazards and Hazardous Waste

Based on the earlier discussion in Section 2.13.3, the Build Alternatives would not result in permanent hazardous waste impacts as the improvements do not generate hazardous waste and would not result in an increase in the transport of hazardous materials over existing or forecast conditions.

Impacts from hazardous materials for the Build Alternatives would be temporary. Potential hazards include: petroleum hydrocarbons, petroleum/natural gas, asbestos-containing materials, aerially deposited lead, lead and chromium, and polychlorinated biphenyls from old transformers. With implementation of Measures HW-1 through HW-8, which address this potential, these impacts are considered less than significant.

The proposed project is not located within an airport land use plan or within two miles of a public airport and would not result in a safety hazard to aircraft operations or persons living or working near an airport.

The proposed project would not impair the implementation of or physically interfere with the adopted emergency response or evacuation plans of the City of Santa Clarita and the County of Los Angeles. By providing a freeway that operates more efficiently in the peak hours, the Build Alternatives would have a beneficial effect on emergency response or evacuation.

The proposed project is located within areas of high risk for wildland fires given the undeveloped nature of the area. The Build Alternatives would not result in or be affected by wildland fires more than the existing conditions. These impacts are considered less than significant.

3.2.2.7 Hydrology and Water Quality

As discussed in Section 2.9.3, both Build Alternatives would require improvements at five floodplain crossings. These improvements include culvert lengthening and/or improvement and bridge widening, which would encroach on the 100-year floodplain. The locations of floodplain encroachment and the proposed improvements at these locations are shown previously in Table 2.9.A. All of the encroachments would be transverse (i.e., encroachments resulting from construction, or placement of fill, in the base floodplain perpendicular to the direction of flow). Alternative 3 would also require improvement at the Santa Clara River. In addition, the area of encroachment in Castaic Creek would be greater because more columns would be added in the 100-year floodplain at this location. At this location, the existing bridge at the Santa Clara River would be widened, which would result in a transverse encroachment. The timing of construction in the floodplains and falsework for areas above the floodplain crossings would be limited to the drier months of the year, as specified in Measures HY-1 and HY-2, and floodplain impacts are considered less than significant.

Water quality will be addressed in the project design to the extent required under the Caltrans Storm Water Management Plan. As discussed in Section 2.10.3, for temporary construction impacts related to water quality and the additional runoff associated with the added impervious areas and any retrofitted storm drains, Measures WQ-1 and WQ-2 are included to address water quality issues. With the application of Measures WQ-1, and WQ-2, water quality impacts would be less than significant.

3.2.2.8 Land Use and Planning

Based on the analysis in Section 2.1.3, the project would have less than significant impacts on land use for the following reasons:

- There is only one full acquisition for both Build Alternatives and limited partial takes (one for Alternative 2 and three for Alternative 3) required to construct the Build Alternatives, and no relocations will be necessary. Therefore, there are no substantial changes to the existing or planned land uses to accommodate the new ROW.
- The existing land uses along the segment are already compatible with existing I-5. The new ROW would not result in the creation of any new incompatible land uses or incompatibility with existing land uses.
- The project is consistent with the transportation planning programs and local land use planning documents. The southern project area intersects the proposed Santa Clara River Significant Ecological Area (Figure 2.1.2). Alternative 2 would require limited alteration within the Santa Clara River to extend the existing bridge abutment to support the widened freeway deck. Alternative 3 would require construction of additional columns in the river to support the widened freeway. Both alternatives would require temporary impacts within the Santa Clara River to construct these improvements. Measures to minimize the project impacts on the riverine habitat and its inhabitants have been identified, and final mitigation measures must be approved by the CDFG, ACOE, and USFWS. Wildlife movement under the I-5 along the River may be temporarily impacted during construction but, with the identified measures, would not be substantially compromised in the long term. Potential impacts within the Santa Clara River Sensitive Environmental Area (SEA) are considered less than significant.

The proposed project would not conflict with any Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP).

3.2.2.9 Noise

Implementation of the project would result in potential short-term noise impacts during construction and long-term noise impacts from use of the completed project. As discussed in Section 2.15.3, noise impacts from both Build Alternatives would originate from construction activities (transport and use of equipment) and operation of the new facility (additional traffic volume). Sensitive receptors were identified along the corridor and sound barriers were considered to reduce both exterior and

interior noise at locations that exceed acceptable noise standards. Measures N-1 through N-9 are standard Caltrans procedures and are provided to address the temporary construction noise impacts from earthmoving activities during grading and the construction activities using loud machinery as listed on Table 2.15.E. With these measures, noise impacts are considered less than significant. No substantial noise level increase of 12 A-weighted decibels (dBA) or more from the corresponding existing noise level would result from operation of the completed project under Alternatives 2 and 3 and noise impacts are considered less than significant.

3.2.2.10 Public Services

As discussed in Section 2.5.3, the construction of both Build Alternatives would have beneficial impacts for emergency service providers. The beneficial impacts would be the ability of fire, law enforcement, and emergency service providers to respond to emergency situations and move emergency equipment on the improved transportation network. The emergency service response times would be maintained or potentially improved. However, Alternative 3 would result in permanent impacts to the Castaic Commercial Vehicle Enforcement Facility (Castaic CVEF) ROW that would affect the facility's operations. Reconfiguration of this facility, as outlined in Mitigation Measure U-1, would be required to maintain the California Highway Patrol's existing operations at the Castaic CVEF. With Mitigation Measure U-1, potential impacts to the Castaic VIF would be reduced to less than significant. The impact of temporary construction-related disruptions to freeway access on the emergency service providers would be addressed through the Traffic Management Plan (TMP), as required by Measures T-1 and T-2. The TMP would contain detailed plans of access routes and detours during construction. With application of this measure, impacts to public services would be less than significant.

3.2.2.11 Recreation

As discussed in Section 2.1.3, there are five parks and six trails close enough to I-5 to have the potential to be directly impacted by the two Build Alternatives. However, the only recreational resource that would be directly impacted is Santa Clarita Woodlands State Park. Alternative 2 would impact approximately 0.02 ac of the park, while Alternative 3 would impact approximately 0.05 ac. As shown in Appendix B, the area of impacts is located in a densely vegetated portion of the park, immediately adjacent to I-5. It is not adjacent to the parking area, or entrance to the park, nor is it adjacent to any trails. Therefore, the project would not impact the recreational use of

the park or diminish the park experience. Construction impacts to the other parks and trails are temporary and intermittent and are considered less than significant.

The proposed project does not include recreational facilities and does not require the expansion or construction of recreational facilities.

3.2.2.12 Transportation and Traffic

As discussed in Section 1.4.1, the Santa Clarita Valley is a rapidly growing portion of the southern California area. This growth trend is likely to continue due to the ongoing new land use development that is anticipated to continue as the Valley builds out over the next 25 years. This growth would increase both truck and general automobile traffic on I-5. Table 1.D, shown earlier, summarizes land use and vehicle trip generation statistics for 2004 and buildout (2030) conditions. Table 1.D shows that Average Daily Traffic (ADT) generation within the Santa Clarita Valley is forecast to increase by 99 percent between the present day and Valley-wide buildout. The Level of Service (LOS) for the northbound direction ranges from C to E in the a.m. peak hour and from D to F in the p.m. peak hour. Similarly, the corresponding LOS for the southbound direction ranges from D to F in the a.m. peak hour and from E to F in the p.m. peak hour (with the exception of the Truck Route Bypass to the SR-14 ramp, which is projected to operate at LOS C in the a.m. peak hour and LOS D in the p.m. peak hour). With the Build Alternatives, the northbound LOS improves to LOS A to D during peak hours and the southbound LOS improves to LOS A to E during peak hours. Therefore, the project has a long-term benefit for traffic, as discussed in Sections 1 and 2.6.3.2.

The project will be required to minimize construction impacts to traffic, as discussed in Section 2.6.3.1, through the TMP required in Measures T-1 and T-2. The TMP would contain detailed plans of access routes and detours during construction. With application of this measure, temporary construction traffic impacts are considered less than significant.

The proposed project would have no impact on air traffic or parking capacity, would not include hazardous design features, and would not affect planning for alternative transportation (e.g., bus turnouts, bicycle racks). The Build Alternatives would have a beneficial effect on emergency access and response, as they would improve the operation of the mainline freeway.

3.2.3 Significant Impacts of the Proposed Project

The following project impacts have been determined to be significant under CEQA. The majority of these significant impacts can be mitigated to below the level of significance. Where they cannot be mitigated, they have been identified as such, and the specific impacts that remain significant are summarized in Section 3.2.4.

3.2.3.1 Biological Resources

Based on impacts discussions in Sections 2.17 through 2.22, the two Build Alternatives would have potentially significant impacts on biological resources. These include impacts to natural communities, wetlands, plant species, animal species, threatened and endangered species, and invasive species. However, the majority of these impacts are addressed through Measures TE-1 through TE-7, W-1, W-2, NC-1 through NC-6, AS-1 through AS-3, and IS-1 through IS-3. In addition, a Section 404 permit, and Section 1602 Streambed Alteration Agreement would be required to mitigate impacts to threatened and endangered, riverine, and wetland species. These measures would reduce impacts to less than significant levels.

However, impacts to the oak woodlands would be a long-term impact of the project and would result in either the loss or long-term cumulative loss based on the regrowth rate of these species. This temporal loss of oak woodlands is considered significant and would require findings pursuant to CEQA Guidelines Section 15091, requiring overriding considerations.

As described in Section 2.17, the Build Alternative's impacts to wildlife movement are considered less than significant given that those proposed improvements have limited opportunities to impede existing wildlife movement.

There are no approved HCPs or NCCPs in the project area. Please refer to Section 3.2.2.8 for a discussion of the County of Los Angeles designated SEAs.

3.2.4 Unavoidable Significant Impacts of the Proposed Project

Pursuant to CEQA Guidelines Section 15091, the following impacts will remain significant and will require overriding considerations.

- Biological Resources: Temporal and cumulative loss of oak woodlands for both Build Alternatives.

3.2.5 Mandatory Findings

The discussion below is based on the Mandatory Findings enumerated in CEQA Guidelines Section 15065.

3.2.5.1 Wildlife and History

Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

No impacts would occur to examples of California history or prehistory. Temporary impacts would occur to biological resources, including: natural communities, threatened and endangered species, and wetlands. However, Measures TE-1 through TE-7, WQ-1, WQ-2, NC-2, NC-3, NC-4, and NC-6 have been identified to avoid or minimize temporary and permanent impacts to threatened and endangered species, natural communities, and wetlands are less than significant. In addition, a Section 404 permit, and Section 1602 Streambed Alteration Agreement will be required to mitigate impacts to threatened and endangered, riverine, and wetland species. With these measures, impacts to biological resources are considered less than significant.

However, temporal loss of oak woodlands would be a long-term impact of the project and would result in either the permanent loss or long-term construction impact of the project based on the regrowth rate of these species. This impact is accounted for in Section 3.2.4 above.

3.2.5.2 Cumulative Impacts

Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental impacts of a project are considerable when viewed in connection with the impacts of past projects, the impacts of other current projects, and the impacts of probable future projects)?

Impacts to the oak woodlands would be a long-term cumulative impact of the project and would result in either the permanent loss or long-term construction impact of the project based on the regrowth rate of these species. This temporal loss of oak

woodlands is considered cumulatively considerable and would require findings pursuant to CEQA Guidelines Section 15091, requiring overriding considerations.

3.2.5.3 Adverse Impacts on Human Beings

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

The proposed Build Alternatives would not have adverse impacts on human beings because the project would improve transportation in an area that is currently congested. The operational improvement of the traffic flow in the project area would benefit both regional traffic and local traffic in the Santa Clarita area. This is a beneficial impact of the project. In addition, most of the project's impacts will be mitigated to below a level of significance. The unavoidable adverse impacts of the project are either temporary or would not have direct or indirect adverse impacts on human beings.

3.3 Mitigation Measures for Significant Impacts Under CEQA

No mitigation measures have been identified for the significant impacts identified. Avoidance or minimization measures have been identified to reduce potential effects as follows:

- Biological Resources: Temporal and cumulative loss of oak woodlands for both Build Alternatives (Measures NC-3 and NC-4)

3.4 Climate Change

3.4.1 Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to

greenhouse gas[1] (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations will apply to automobiles and light trucks beginning with the 2009 model year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms and implement rules to achieve "real, quantifiable, cost-effective reductions of GHGs." Executive Order S-20-06 further directs State agencies to begin implementing AB 32, including the recommendations made by the State's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low-carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. However, California, in conjunction with several environmental organizations and several other states, sued to force the United States Environmental Protection Agency (EPA) to regulate GHGs as a pollutant under the Clean Air Act (CAA) (*Massachusetts vs. Environmental Protection Agency et al.,* U.S. Supreme Court No. 05–1120. 549 U.S. Argued November 29, 2006—Decided April 2, 2007). The court ruled that GHGs do fit within the CAA's definition of a pollutant, and that the EPA does have the authority to regulate GHGs. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

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[1] Greenhouse gases related to human activity include: carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23, HFC-134a*, and HFC-152a*.

3.4.2 Affected Environment

According to a recent white paper by the Association of Environmental Professionals,[1] "an individual project does not generate enough GHG emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs."

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans (December 2006).

One of the main strategies in the Caltrans Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 miles per hour [mph]) and speeds over 55 mph. Relieving congestion by enhancing operations and improving travel times in high-congestion travel corridors would lead to an overall reduction in GHG emissions.

3.4.3 Environmental Consequences

Assessment of the project's impacts on localized ambient air quality is based on analysis of carbon monoxide (CO) and PM_{10}[2] emissions, with the focus on CO. CO is used as an indicator of a project's direct and indirect impact on local air quality because CO does not readily disperse in the local environment in cool weather when the wind is fairly still.

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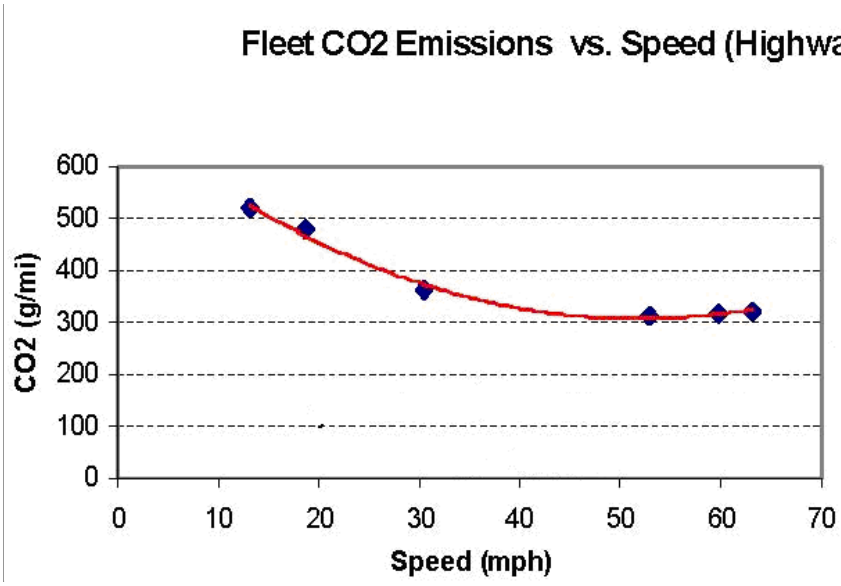
1 Hendrix, Micheal and Wilson, Cori. Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents (March 5, 2007), p. 2.

2 Particulate matter less than 10 microns in size (PM_{10}).



Source: Center for Clean Air Policy—http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf

The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 and EMFAC2007 are used to predict emissions at a regional level, they have limited applicability at the project level.

Based on the *Traffic Study* (Austin-Foust Associates, Inc., May 2008) for the proposed project, the Build Alternatives would not increase the daily traffic volumes along I-5. This is due to there being few alternative north/south routes to I-5 within the project vicinity. The project would not increase the traffic volumes along I-5 and is expected to improve traffic flow and reduce delay and congestion. No significant hot spots for CO, $PM_{2.5}$[1], or PM_{10} would occur as a result of the project.

The purpose of the proposed project is to alleviate existing and future traffic congestion during peak hours. As shown in Tables 3.4.3.A and 3.4.3.B, the proposed Build Alternatives would not substantially change the regional vehicles miles traveled (VMT). Therefore, the project would not contribute to global warming.

[1] Particulate matter less than 2.5 microns in size ($PM_{2.5}$).

Table 3.4.3.A Existing and No Build Peak-Hour Traffic Volumes (AM/PM Daily Volumes)

Roadway Link	Existing (2006)	2015 No Build	2030 No Build Conditions
North of Parker Road	7,300 (14,800)	15,800 (30,300)	26,700 (50,300)
Between Parker Road & Hasley Canyon Road	9,900 (19,700)	20,600 (37,200)	33,300 (59,600)
Between Hasley Canyon Road & SR-126	13,900 (22,900)	26,500 (44,500)	39,500 (65,300)
Between SR-126 & Rye Canyon Road	17,800 (28,400)	27,600 (43,400)	40,300 (60,200)
Between Rye Canyon Road & Magic Mountain Parkway	19,900 (32,500)	28,100 (47,900)	40,900 (63,300)
Between Magic Mountain Parkway & Valencia Boulevard	23,600 (37,500)	30,500 (48,300)	41,800 (63,100)
Between Valencia Boulevard & McBean Parkway	28,300 (41,600)	34,500 (51,700)	45,800 (66,400)
Between McBean Parkway & Lyons Avenue/Pico Canyon Road	29,500 (42,800)	33,700 (51,700)	45,000 (66,600)
Between Lyons Avenue/Pico Canyon Road & Calgrove Boulevard	29,800 (43,400)	34,500 (50,700)	42,100 (64,100)
Between Calgrove Boulevard & SR-14	29,800 (41,800)	33,700 (50,300)	40,600 (62,900)

Source: Austin-Foust Associates, Inc., October 2007.

Table 3.4.3.B With Project Peak-Hour Traffic Volumes (AM/PM Volumes)

Roadway Link	2015 Build[1]	Change from No Build	2030 Build Conditions[1]	Change from No Build
North of Parker Road	15,800 (30,300)	0 (0)	26,700 (50,300)	0 (0)
Between Parker Road & Hasley Canyon Road	20,600 (37,200)	0 (0)	33,300 (59,600)	0 (0)
Between Hasley Canyon Road & SR-126	26,500 (44,500)	0 (0)	39,500 (65,300)	0 (0)
Between SR-126 & Rye Canyon Road	27,600 (43,400)	0 (0)	40,300 (60,200)	0 (0)
Between Rye Canyon Road & Magic Mountain Parkway	28,100 (47,900)	0 (0)	40,900 (63,300)	0 (0)
Between Magic Mountain Parkway & Valencia Boulevard	30,500 (48,300)	0 (0)	41,800 (63,100)	0 (0)
Between Valencia Boulevard & McBean Parkway	34,500 (51,700)	0 (0)	45,800 (66,400)	0 (0)
Between McBean Parkway & Lyons Avenue/Pico Canyon Road	33,700 (51,700)	0 (0)	45,000 (66,600)	0 (0)
Between Lyons Avenue/Pico Canyon Road & Calgrove Boulevard	34,500 (50,700)	0 (0)	42,100 (64,100)	0 (0)
Between Calgrove Boulevard & SR-14	33,700 (50,300)	0 (0)	40,600 (62,900)	0 (0)

Source: Austin-Foust Associates, Inc., October 2007.
[1] Traffic volumes apply to both Alternative 2 and Alternative 3.

Caltrans recognizes the concern that carbon dioxide emissions raise for climate change. However, accurate modeling of GHG emission levels, including carbon dioxide at the project level, is not currently possible. No federal, State, or regional regulatory agency has provided methodology or criteria for GHG emission and climate change impact analysis. Therefore, Caltrans is unable to provide a scientific or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the *Climate Action Program at Caltrans* (December 2006), Caltrans is supporting efforts to reduce VMT by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, and light and heavy-duty trucks. However it is important to note that the control of the fuel economy standards is held by the EPA and ARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California, Davis.

3.4.4 Avoidance, Minimization and/or Mitigation Measures

The following project features and standard conditions would help to reduce the GHG emissions from projects:

- **Use of Reclaimed Water:** New irrigation systems would be designed to use reclaimed water (if available). Currently, 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production.

- **Landscaping:** Landscaping would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or mitigation planting for the project. Landscaping reduces surface warming and through photosynthesis decreases CO_2.

- **Portland Cement:** Portland cement for pavement would be allowable by Caltrans. Use of lighter-color surfaces such as Portland cement helps to reduce the albedo effect and cool the surface; in addition, Caltrans has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the GHG emissions associated with cement production and can also make the pavement stronger.

- **Lighting:** Efficient lighting would be used to the extent feasible. Use of energy-efficient lighting, such as LED traffic signals, helps conserve electricity.

- **Idling Restrictions:** Title 13, California Code of Regulations §2449(d)(3) was adopted by the California Air Resources Board on June 15, 2008. This regulation restricts idling of construction vehicles to no longer than five consecutive minutes. Compliance with this regulation reduces harmful emissions from diesel-powered construction vehicles.

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Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies involved in the Interstate 5 (I-5) High-Occupancy Vehicle (HOV)/Truck Lanes project (project) is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: monthly project development team (PDT) meetings, interagency coordination meetings, and consultation with interested parties. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

4.1 Consultation and Coordination with Cooperating/ Participating Agencies

4.1.1 Cooperating/Participating Agencies

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Act: a Legacy for Users (SAFETEA-LU) which has been codified as 23 United States Code (USC) 139, requires a coordination plan to be prepared for the proposed project. A Coordination Plan was prepared, which established the coordination of public and agency participation and comments during the environmental review process. It is the responsibility of the lead agencies to develop the Coordination Plan to facilitate and document the interaction between the lead agencies and participating and cooperating agencies and the public.

Caltrans sent letters inviting agencies to be Cooperating and/or Participating Agencies in the environmental process for the proposed project in May and July, 2007. A project EIS Advisory Committee, consisting of representatives from each of the Cooperating and Participating Agencies, was formed to guide and oversee the process. The EIS Advisory Committee made recommendations to the Lead Agency based on their roles and responsibilities as outlined.

Cooperating Agencies are Federal agencies who have jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or

project alternative. Cooperating Agencies are also Participating Agencies. The United States Fish and Wildlife Service (USFWS) and the United States Army Corps of Engineers (ACOE) accepted the invitation to be Cooperating Agencies.

Participating Agencies are Federal, state, regional or local agencies that may have an interest in the project. The following agencies accepted the invitation to become Participating Agencies:

- United States Environmental Protection Agency
- California Highway Patrol
- County of Los Angeles Department of Public Works
- Los Angeles County Department of Regional Planning
- City of Santa Clarita
- Office of Environmental Policy and Compliance, U.S. Department of the Interior*
- United States Department of Agriculture, Forest Service*
- National Park Service, U.S. Department of the Interior*

* The federal agency did not respond to the letter of invitation to become a Participating Agency. Per SAFETEA-LU, a federal agency invited shall be designated as a Participating Agency unless the agency declines the invitation by the deadline specified, and states that the agency (1) has no jurisdiction or authority with respect to the project, (2) has no expertise or information relevant to the project, and (3) does not intend to submit comments on the project.

Caltrans, as the Lead Agency, requested the Participating and Cooperating Agencies provide comments and input on the following:

- Review of the project purpose and need.
- Review of pertinent information about environmental and socioeconomic resources in the area. This information includes identification of resources located within the project area and general location of alternatives.
- Review of proposed range of alternatives.
- Proposed methodologies for analyzing project effects.
- Review of the Pre-Draft Environmental Impact Statement (EIS).

As discussed in Section 4.2.2 below, Caltrans determined that an EIS was no longer required for the proposed project. Consequently, Caltrans contacted the Cooperating and Participating Agencies on January 8, 2009, to offically terminate the SAFETEA-LU Section 6002 process, which required a new environmental review process for

transportation projects developed as EISs. However, Caltrans reviewed the comments received during the Section 6002 process and made the necessary changes to the project and the environmental document where appropriate. The USFWS and the ACOE remain Cooperating Agencies, as they have jurisdiction by law over biological resources and wetlands and waters of the United States.

4.2 The Scoping Process

4.2.1 Notice of Preparation

The Notice of Preparation (NOP) for the project under the California Environmental Quality Act (CEQA) was distributed to federal, tribal, State, regional, County, and local agencies; elected officials; special districts; groups; businesses, major property owners, and organizations; and property owners within 300 feet of the project segment of Interstate 5 (I-5).

The State Clearinghouse (SCH) distributed the NOP and the Notice of Completion (NOC), on May 7, 2007.

The Notice of Scoping/Initiation of Studies letters were sent in July 2007 to elected and City officials, agencies and other interested parties. These letters included a project location map and the attachment to the NOP form.

Written comments received in response to the NOP and the Notice of Scoping/ Initiation of Studies letters are summarized as follows:

- Additional capacity is needed to accommodate current and future traffic growth and that adding truck and carpool lanes to I-5 will mitigate traffic congestion and provide economic, environmental, and public safety benefits.
- Alternatives 2 and 3 are preferred over Alternative 4, which requires additional cost and right-of-way acquisitions.
- Improving and expanding I-5 is essential for transportation and commerce in northern Los Angeles County. The additional capacity on this section of I-5 is urgently needed to alleviate traffic congestion, accommodate traffic growth, and promote unrestricted commerce through the state.
- Project will have an impact on operations of the California Highway Patrol.
- Recommendations to adequately assess project-related impacts on historical resources within the area of potential effect (APE).

- Provided recommendations for assessing potential impacts to sensitive species and habitats and identification of mitigation.
- Recommendations to the analysis of potential air quality impacts from the proposed project to be included in the Environmental Impact Report (EIR).
- The proposed project may impact the following facilities: Castaic Sports Complex, Proposed County Trail #69–Gavin Canyon Trail, Proposed County Trail #71–Santa Clara River Trail, and Proposed County Trail #74–Castaic Creek Trail.
- Efforts to add HOV and truck lanes to I-5 are consistent with the North County Combined Highway Corridors Study (NCCHCS), which the City Council approved and adopted. Improvements to this corridor will relieve congestion and improve mobility, facilitate goods movement, promote economic development, and accommodate the projected growth in population and commerce.
- The proposed project may impact the Los Angeles County Sanitation Districts' existing or proposed trunk sewers because the project is located directly over and/or across the sewers lines.
- ExxonMobile Oil Corporation maintains active, idle and abandoned petroleum pipelines within the vicinity of the project. It requests that Caltrans design the freeway improvements to eliminate or minimize impact to the pipeline facilities throughout the improvement area. If it is determined that an ExxonMobile facility potentially interferes with the project, the Cerritos regional office must be notified immediately for review to identify necessary actions and resolve any conflicts.
- Concerned about right-of-way being acquired from property.

All other letters received were in support of the project. Copies of the comment letters are provided in the Scoping Summary Report.

4.2.2 Notice of Intent

The FHWA arranged for the publication of the Notice of Intent (NOI) for the project on May 10, 2007, under the National Environmental Policy Act (NEPA).

Written comments received in response to the NOI were provided from the United States Environmental Protection Agency (EPA), which gave recommendations and criteria for jurisdictional wetlands and waterways, air quality analysis, cumulative impact analysis, and environmental justice analysis.

During the environmental review conducted for the technical studies, the proposed project's potential environmental impacts were analyzed. Based on the results of these technical studies, Caltrans concluded that the proposed project would not significally affect the quality of the human environment. As such, Caltrans determined that an EIS was no longer required for compliance under NEPA, and that an Environmental Assessment (EA) was the proper environmental document. FHWA was contacted and the previously published NOI (Federal Register Vol.72 Number 90, May 10, 2007) for preparation of an EIS was withdrawn. The Notice of Withdrawal was published in the Federal Register on November 10, 2008 (Volume 73, Number 218, Pages 66687 and 66688).

4.2.3 Scoping Meetings

Caltrans hosted two public scoping meetings for the proposed project at the City of Santa Clarita City Council Chambers, 23920 Valencia Boulevard, Santa Clarita, on June 4, 2007.

- The first meeting was held for agencies and elected officials from 2:00 p.m. to 4:30 p.m.
- A second scoping meeting was held for the general public from 6:00 p.m. to 8:00 p.m.

The scoping meetings sign-in sheets showed 11 agencies and elected officials as well as two property owners attended the afternoon meeting, and over 17 people attended the evening meeting.

The scoping meeting included a presentation by Caltrans and consultant staff regarding the project, the project alternatives, and the environmental process for the project. After the presentation, the attendees were invited to ask questions of Caltrans staff and consultants and provide comments. Comment cards were collected at the scoping meeting and verbal comments were taken by a court reporter and summarized as follows:

- Supports for improvements to I-5. Truck lanes and HOV lanes must be built. Travel times are excessive and getting worse.
- Existing noise and increased noise and pollution during and after construction.
- Particularly at the Calgrove/Weldon Canyon area, decreased safety when exiting to or entering from Calgrove across proposed truck lane(s).

- Two HOV lanes southbound if they feed only onto one lane on the SR-14.
- Reduction of developed and developable area of property, located on the east side of I-5, just above Rye Canyon Road. Consider retaining walls to reduce property acquisitions.
- Consider cumulative projects, including Las Lomas.
- Consider alternative that takes truck traffic off of the I-5 before Calgrove, route it down Old Road, and then tie it back into the truck lanes below the intersection to feed back onto I-5 below the I-5 and SR-14 merger.

4.3 Consultation and Coordination with Resource Agencies

Consultation with participating/cooperating agencies is discussed above in Section 4.1. Other consultation and coordination with public agencies is discussed below.

4.3.1 U.S. Fish and Wildlife Service

The USFWS was consulted for its recommendations of animal species, and threatened and endangered species in 2006. A second request letter was sent in October 2008 to update the previous list and check if any additions or changes have been made to the species list. The lists provided by the United States Fish and Wildlife Service in July 2006 and November 2008 are provided in Appendix I.

Caltrans, under its assumption of responsibility pursuant to 23 USC 327, submitted a Request for Concurrence of Determination, dated May 18, 2009, to the USFWS for the Natural Environment Study (NES) regarding the proposed project's impacts to federally listed species. The USFWS determined that the project is not likely to adversely affect least Bell's vireo and unarmored threespine stickleback and would have no effect on arroyo toad, southwestern willow flycatcher, slender-horned spineflower, and San Fernando Valley spineflower. The concurrence is provided in Appendix I.

4.3.2 Army Corps of Engineers

A Request for Concurrence with Jurisdictional Delineation was submitted to ACOE on August 13, 2008. After submittal of the Jurisdictional Delineation to ACOE for review and approval, a field meeting with ACOE was conducted on October 7, 2008. The purpose of the meeting was to discuss the wetland and other water resources in the project area and the findings of the Jurisdictional Delineation. Consultation with

ACOE continued in November and December 2008. On August 10, 2009, ACOE issued a Preliminary Wetland Determination. This determination considers all drainage features to be juridictional. During the permitting process, pursuant to Section 404 of the Clean Water Act, this determination could be refined and an Approved Wetland Delineation pursued to refine the limits of jurisdictional areas based on ACOE criteria.

4.4 Native American Consultation and Coordination

On October 22, 2007, the Native American Heritage Commission (NAHC) was requested to review its sacred land files for the project APE. On October 25, 2007, the NAHC indicated that there were no sacred sites within the project APE.

The most-likely descendants of the Tataviam were contacted to elicit general concerns regarding the project and to identify specific sites that may hold special concerns for them. Letter contacts were made and follow-up telephone calls were placed with messages left where possible. The individuals contacted indicated that no sites or areas of concern exist in the project area, including Traditional Cultural Properties.

4.5 Public Circulation of Draft EIR/EA

The Draft EIR/EA was circulated for public review from December 17, 2008, to February 17, 2009, a total of 63 days. Letters announcing the availability of the Draft EIR/EA and public hearing, along with a copy of the Draft EIR/EA, were sent to elected officials and federal, State, and local agencies affected by the proposed project. A Notice of Public Hearing and Availability of the Draft EIR/EA was sent to individuals within the project study area who had expressed interest in receiving information regarding the project. The Notice included a description of the project, locations where the document could be reviewed in person or electronically, the date of the public hearing and the date of the end of the public comment period.

Copies of the Draft EIR/EA were also made available at the Caltrans District 7 office, the City of San Clarita Community Development Department, and the following local libraries:

- Los Angeles County Library – Newhall Branch, 22704 West 9th Street, Newhall

- Los Angeles County Library – Valencia Branch, 23743 West Valencia Boulevard, Santa Clarita
- Los Angeles County Library – Canyon Country Branch, 18601 Soledad Canyon Road, Santa Clarita

The Draft EIR/EA was also available for review electronically on the Caltrans District 7 website at :www.dot.ca.gov/dist07/resources/envdocs/docs/I-5%20 HOV_Truck_%20Lanes%20EIR_EA.pdf.

To further expand the reach of the public hearing notice, the Notice of Public Hearing and Availability of Draft EIR/EA was published in three newspapers: *Los Angeles Daily News* (December 17, 2008), *Santa Clarita Signal* (December 17, 2008) and *L.A. Watts* (December 25, 2008).

4.5.1 Draft EIR/EA Submittal to California Transportation Commission

The California Transportation Commission (CTC) is responsible for programming and allocating funds for the construction of highway, passenger rail, and transit improvements throughout California (Chapter 1106, Statutes of 1977). In accordance with Public Resources Code Section 21102, an allocation will not be made by the CTC for any project that may have a significant effect on the environment, other than a project involving only feasibility or planning studies, unless a final environmental document is submitted to the CTC and the CTC has adopted a resolution to consider the project for future funding, route adoption, and/or public road connections. Pursuant to CEQA, the CTC is a responsible agency because it participates in the CEQA process by reviewing the lead agency's CEQA document and has the discretionary authority with respect to the funding and programming of Caltrans projects.

The Draft EIR/EA was submitted to the CTC on January 29, 2009, for its review and comments. The I-5 HOV/Truck Lanes project was placed on the CTC agenda for the March 11–12, 2009, meeting. The CTC Draft Meeting Summary-Action Taken Report for the March 11–12, 2009, meeting (dated March 18, 2009) stated that the CTC did not have any comments on the alternatives or the environmental impacts to be addressed, but directed the staff to send a letter to the project sponsors recommending that the funding necessary to complete the project be secured. This Final EIR/EA will be submitted to the CTC.

4.5.2 Correspondence for Proposed Sound Barriers

Based on the environmental analysis for the Draft EIR/EA, noise abatement measures for the construction of sound barriers were recommended in certain locations in the project area.

Caltrans staff sent letters on January 21, 2009, to property owners who may be affected by the construction of the sound barriers. Letters were sent to 131 property owners who would be directly affected by the construction of the proposed sound barriers for Alternative 2 and Alternative 3. In addition, 78 property owners who would be indirectly affected by both Alternative 2 and Alternative 3 were also sent letters. The letters provided the notice of the public hearing so that if the property owners had any questions, Caltrans staff would be available to answer them and the property owners could provide their input.

4.5.3 Public Hearing

The public hearing for the project was held on February 5, 2009, from 5:00 p.m. to 9:00 p.m., at the George A. Caravalho Activities Center, located at 20880 Centre Pointe Parkway, Santa Clarita. The public hearing was preceded by a project map display and stations set up for project-related informational boards. The sign-in sheets reflect 38 individuals in attendance. The map viewing area provided the public with an opportunity to view the maps of the Build Alternatives of the project area, and to discuss questions and concerns with Caltrans technical staff and project consultants. The formal portion of the public hearing consisted of a presentation by Caltrans and project consultants, followed by an opportunity to provide verbal comments. Based on the demographic composition of the community, it was determined that a translator was not necessary.

4.5.3.1 Handouts

In an effort to disseminate complete project information and to encourage public comments on the Draft EIR/EA document, Caltrans and the consultant team made available to the public a comprehensive set of public information materials. Those materials included a meeting agenda, a project information sheet, a question/ comment/speaker card, and an electronic copy of the Draft EIR/EA (available upon request).

4.5.3.2 Public Hearing Comments

Each public hearing attendee was provided with a question/comment/speaker card at the sign-in area. Question/comment/speaker cards provided the public with the opportunity to indicate that they had a question, wished to enter a comment into the public record, or requested an opportunity to speak. All three categories could be selected. A total of 17 cards were submitted at the meeting. Cards identified as speakers were organized by receipt and speakers were provided the opportunity to speak. Cards requesting statements that were to be read into the public record were identified by the public hearing officer. Specific questions were received and the public hearing officer advised that questions would be responded to in the final environmental document.

All verbal public comments and questions were recorded by a certified court reporter. All substantive issues raised in these comments, as well as in the written comments received during the public comment period, have been addressed in the revised Final EIR/EA text or in the Comments and Responses section below. Table 4.1 provides an index of speakers from the hearing, a brief synopsis of their comments, and the transcript page number for reference. Comments in their entirety may be found in the Public Hearing Transcript (Appendix N).

4.5.4 Comments and Responses

The following section contains comment letters received during the public circulation of the Draft EIR/EA and corresponding responses to those comments. A total of 67 comment letters were received. Table 4.2 identifies all agencies, organizations and citizens who provided written comments on the Draft EIR/EA. Each of the comment letters has been provided a reference code that is used when referring to individual comments within each letter. The comments and responses have been categorized in the following order: federal, State, and regional/local agencies; institutions; community organizations; and public citizens.

Table 4.1 Summary of Public Comments from the Public Hearing

Speaker	Synopsis of Comment	Transcript Page No.
Jackie Bick – Field Representative for the Santa Clarita Valley for Senator George Runner	Senator Runner has expressed his support for this project. He supports the infrastructure repair and improvement that this (project) represents and wants to see this improvement here to the I-5 corridor through the Santa Clarita Valley.	13
Victor Lindenheim – Representative for the Golden State Gateway Coalition	We endorse the completion of this process, the environmental studies and moving forward with design and construction on Alternative 2. The benefits of the project we think are huge. Congestion, traffic congestion relief, obviously, improved safety, cleaner air, much needed economic opportunities will be created with the construction of this project.	15
Merhad Malig – Resident	Is there any effective alternative sound wall other than the one built in the backyard of the property line? **Arnold Parmar from Noise and Vibration Branch of Caltrans response**- The only effective location for the sound wall in your community is (on) a private property. The wall will be contingent upon 100 percent agreement from all homeowners for us to be able to go forward with the construction of the wall at that point.	16
Ann Kerman – Representative for the Los Angeles County Metropolitan Transportation Authority, Metro and resident	This project is listed in our long-range transportation plan. It's one that we hope to see someday. As a resident of Santa Clarita and one who transverses the I-5 on a regular basis, I do hope in my lifetime to see this project.	17
Giovanni Dorin	How is the project going to be funded? What are the funding sources? And are any of these sources a rush towards funding- are they at risk? **Ashraf Habbak Project Manager from Caltrans response-** We are fully funded for this process, for the environmental document and the project report. The next phase will be design; there is good potential for getting funding for design and then construction. (project is included in Measure R funding)	18
Ian Pari – Senior Traffic Engineer with the City of Santa Clarita, speaking on behalf of the City	The City is in full support of the project. We appreciate the fact that it is consistent with Metro's North County Combined Highway Corridor Study and (the project) actually goes a little bit farther than the short-range plan in that document. Our comment is whatever is done as part of this project doesn't preclude the long-range plan in that document from being done at some point in the future.	19
Annie Bogdan – Representative for the Henry Mayo Newhall	We're in definite support of this plan. We appreciate the safety features that are in this project, and also in terms of congestion relief. It is very important because we're a trauma center. Ground	20

Table 4.1 Summary of Public Comments from the Public Hearing

Speaker	Synopsis of Comment	Transcript Page No.
Memorial Hospital	transportation is very important to our trauma victims. Time is of great importance to them. And as a benefit to the community, this is a major artery for supply to all health care facilities in our valley. This is a definite improvement to health care for the community.	
Luis Bernal – Resident	I think this project is a long time coming because the valley as a whole is just so impacted with traffic. The neighbors on the south will get a sound wall right on the freeway. I don't understand why we can not get a sound wall going north. Most neighbors do not want to be jailed behind a big block wall that's 14 feet tall. We would really like to see sound walls down at the freeway level. See General Response below.	21
Candy Johnson – Resident of Vista Ridge, in the Vista Hills Association	Requested sound walls along I-5 on both sides, the north and the south between Lyons and McBean for 20 years. We paid a premium for our view lot. So we don't want to put sounds walls to block our lots. Everyone in our association is in the same boat. Response: See General Response below.	22
Larry Mankin – President and CEO of the Santa Clarita Valley Chamber of Commerce	The Chamber has and continues to support the I-5 improvement project. The valley has become a significant job center to L.A. County, and this improvement project is imperative to the long-term business health of the region. Our organization supports Alternative 2. The additional HOV lane and truck lane will do much to allow for freer movement of goods and services into and out of Santa Clarita Valley.	23
Tom Surak – Resident	We disagree on the conclusion that the proposed project will not generate traffic. (The document states that) "wall treatments will be evaluated for aesthetics treatments during the final design." The wall treatments should be more of an upfront commitment for all walls, both retaining and sound walls. There is a requirement that excavation and grading activities be suspended when winds exceed 20 miles per hour. How will that be enforced? There's a statement that construction trucks or equipment emit roughly 90 decibels of noise at 50 feet. Nighttime construction should be limited to the evening hours and not overnight. There is no mention of park and ride facilities. We have made comments two years ago regarding the sound wall. We have a very serious issue with respect to trucks on the decline going northbound into the valley, using Jake brakes and the lack of enforcement and it is a major source of noise. Response: See response to written comments from Calgrove Corridor Coalition below.	24

Table 4.1 Summary of Public Comments from the Public Hearing

Speaker	Synopsis of Comment	Transcript Page No.
Bob Haueter – Representative for Congressman Buck McKeon	The Congressman has been working very long and hard to try and advance this project through federal government assistance funds. We understand the importance of this. The I-5 is not just a freeway that runs through our district. It connects the state and the nation with goods and services from the allocated corridor. And it's very important. This project would alleviate a lot of problems that we have that our constituents have brought to us. And we urge that it be moved forward with all due haste.	27
Flo Lawrence – Resident of Castaic	The addition of a lane, whether it be an HOV lane is the most exciting news, because it will help alleviate (traffic). If you work on the west side (of L.A.), Beverly Hills, Santa Monica, Culver City, there's no public transportation. The trains go downtown, not to the west side. And so unfortunately, we're forced to use the 5 and 405. On holiday weekends we are held hostage because the 5 freeway is just jammed with cars with people coming back after Christmas, Thanksgiving, Fourth of July, Memorial Day, or Labor Day. Any relief we can get and as soon as we can get that relief is absolutely great news. I understand there are noise issues. I understand there are environmental issues, but I hope that Caltrans and the state and the federal government will work quickly as possible to get this thing going and to get it completed.	29
Mr. and Mrs. Valindo – Residents of Castaic	I will not sign for this sound wall. No to soundwalls.	31
Nickie Parchit – Resident	No to soundwalls and no to the project.	32
David Perry – field deputy for L.A. County Supervisor Michael Antonovich	Supervisor Antonovich is in support of the project as this is a vital corridor for goods and services for all of the country.	32
Timothy Trotter – resident of North Bluffs Community in Castaic	They want to put the soundwall in the hillside where people on Saguaro on the hill (live). And I think it's going to be ugly. I don't think it's going to look good. I don't think it's going to stop the sound. What we have really been pushing for is to have a K-rail put on the southbound lane, emergency lane of The Old Road from Parker all the way down past Live Oak tract. We have seen many vehicles go through there, fatalities over 20 years. And we would like a sound wall built on top of that. Put the soundwall at that point eight or ten feet up. Response: Please refer to General Response below.	33

Source: Interstate 5 High Occupancy Vehicle/Truck Lanes Project Public Hearing Transcript, February 5, 2009.

Table 4.2 Comments Received During the Public Review Period

Commenter	Date	Reference
Federal Agencies		
U.S. Department of Homeland Security, FEMA	01-08-09	FEMA
United States Environmental Protection Agency, Region IX	02-17-09	EPA
United States Department of Commerce, National Oceanic and Atmospheric Administration	Undated	NMFS
State Agencies		
Native American Heritage Commission	02-05-09	NAHC
Santa Monica Mountains Conservancy	02-23-09	SMMC
Regional and Local Agencies		
County of Los Angeles Department of Parks and Recreation	01-28-09	LADPR
City of Santa Clarita	02-17-09	CSC
County of Los Angeles Department of Public Works	02-25-09	LADPW
County of Los Angeles Fire Department	02-24-09	LAFD
Institutions		
College of the Canyons	02-05-09	COTC
College of the Canyons	02-18-09	COTC
Organizations		
Castaic Area Town Council	02-05-09	CATC
Calgrove Corridor Coalition	02-16-09	CCC
Citizens		
Mark & Marianne	01-09-09	MME
Eric L. Moody	01-27-09	EM
Luie Bernal	02-05-09	LB
Donna Davis	02-08-09	DD
Timothy G. Trotter	02-08-09	TT
Janet L. Trotter	02-08-09	JT
Surjeet Singh Sahota	02-09-09	SS
Olga Ramirez	02-09-09	OR
Teresa Reynolds	02-11-09	TR
Candace M. Johnson	02-08-09	CMJ
Steven Blain	02-11-09	SB
Sally Coss	02-09-09	SC
Linda & Domenico Celi	02-09-09	LDC
Craig Leener	02-09-09	CL
David Alcantara	02-08-09	DA
Patrick Herles	02-08-09	PH
Charles & Barbara Gassner	02-08-09	CBG
Michael & Elizabeth Geis	02-10-09	MEG
Heather Lucchese	02-10-09	HL
Hans-Dieter Klink	02-09-09	HDK
Dr. & Mrs. Harold Quan	02-10-09	HQ
Wayne Chadwick	02-10-09	WC
Jim & Linda Keltner	undated	JLK
Robert & Marilyn Rainey	02-10-09	RMR
William & Belinda Everitt	02-11-09	WBE
Tracy Miller	02-11-09	TM

Table 4.2 Comments Received During the Public Review Period

Commenter	Date	Reference
Jean-Paul Lovera & Carole Boucherel	02-11-09	JLCB
Patti & Roger Paglia	02-11-09	PRP
Eileen & Derek McNally	02-10-09	EDM
Alan & Gina Boring	02-11-09	AGB
Wanda Kummer	02-10-09	WK
Dick & Linda Pearson	02-11-09	DLP
Jack Hulse	02-12-09	JH
Mimi B. Swart	02-10-09	MS
Angelo Pascolla	02-16-09	AP
John Bechtold	02-15-09	JB
Gary & Nelly Bertz	02-16-09	GNB
Larry R. Mintun	02-12-09	LM
Howard & Pauline Schulman	02-16-09	HPS
Fred Buxton	02-16-09	FB
Robert & Ann Clarke	02-10-09	RAC
Dolanda Schurmann	02-10-09	DS
John & Virginia Pecel	02-12-09	JVP
Clark Jolley	02-11-09	CJ
Craig & Joy Kugler	02-11-09	CJK
Roy Ladd	02-13-09	RL
Nora Mainland	02-17-09	NM
Lisa & John Warten	03-26-09	LJW
Kenneth & Donna Keller	03-30-09	KDK
Anthony Carelli	01-27-09	AC
Jeff Ford	02-10-09	JF
Marsha McLean	02-13-09	MM
Raizy Goffman	02-14-09	RG
Kathryn Davis	02-20-09	KD

4.5.4.1 General Response

Many comments were received during the public review period regarding noise impacts and provision of noise abatement. The following general response has been prepared to comprehensively respond to comments raised regarding noise impacts and proposed abatement.

General Response – Noise Impacts and Abatement

Traffic noise impacts and noise abatement measures in the noise impact analysis were evaluated pursuant to the guidelines and requirements of the NEPA. The noise impact analysis was also evaluated in accordance to 23 CFR 772 and the Caltrans Traffic Noise Analysis Protocol (Protocol). Noise-sensitive land uses within the project limits were identified through land use maps, aerial photography, and site inspection. Noise-sensitive land uses for each activity category are listed in 23 CFR 772 and in the

Protocol. A traffic noise impact would occur if noise-sensitive land uses would experience noise levels that approach or exceed the Noise Abatement Criteria (NAC) or when the predicted noise level would substantially exceed their corresponding existing noise level by 12 dBA or more. Feasible (reducing noise level by 5 dBA or more) and reasonable (estimated sound barrier construction cost) noise abatement measures in the form of sound barrier were considered for noise-sensitive land uses that are predicted to have a traffic noise impact.

During the public review period for the Draft EIR/EA, many public comments were received requesting additional noise measurements and provision of sound barriers, primarily at the Caltrans right of way. Commenters were generally located in three areas: (1) residents in the northeastern quadrant at the Pico Canyon Road/Lyons Avenue interchange with I-5; (2) residents along the northbound side of I-5 between Pico Canyon Road/Lyons Avenue and McBean Parkway; and (3) residents along the southbound I-5 north of Hasley Canyon Road. Additional noise analysis was conducted to reconsider the reasonableness of sound barriers along these portions of the freeway right of way (Noise Study Addendum, June 2009). As part of the Addendum, additional noise level measurement locations were selected by Caltrans staff from a pool of addresses provided by the community requesting noise level measurements on their property. The additional long-term and short-term noise level measurements were conducted to re-check the noise model calibration in the area of concern and re-evaluate traffic noise impacts in the area and associated feasible and reasonable noise abatement measures. Below is a brief summary of the results from the noise study addendum at each of the three locations.

Northeastern Corner of I-5 and Pico Canyon Road/Lyons Avenue

The Draft EIR/EA identified a recommended sound barrier along private property at this location (SB No. 2-6). Residents requested additional noise monitoring and extension of the sound barrier at the proposed locations or construction of the sound barrier at the Caltrans right of way. As part of this effort, the length of SB No. 2-6 would be extended to shield Receptors R-296, R-297, R-300 and R-301. A sound barrier at the Caltrans right of way (SB No.2-9) was previously evaluated in the Noise Study Report and was determined to be feasible but not reasonable per the Caltrans Traffic Noise Analysis Protocol (Protocol). In response to public comments, four short-term noise level measurements were conducted to determine whether additional noise attenuation could be provided and one long-term noise level measurement was conducted to identify the peak traffic noise hour. Based on the additional noise level measurements SB No. 2-9 was re-evaluated for increased reasonableness by adding

more modeled receptors locations and increasing barrier length along the edge of shoulder on northbound side of the I-5. The noise study addendum determined SB No. 2-9 to be feasible, but not reasonable, similar to the recommendations made in the Draft EIR/EA and Noise Study Report.

Northbound Side between Pico Canyon Road/Lyons Avenue and McBean Parkway

The Draft EIR/EA did not identify recommended sound barriers near these residents. SB No. 2-5 was evaluated in the Noise Study Report and determined not be reasonable per the Protocol. Residents requested additional noise monitoring and construction of a sound barrier at the State right of way. In response to public comments, one short-term noise level measurement was conducted to determine whether additional noise attenuation could be provided. Based on the additional noise level measurement, SB No. 2-5 was re-evaluated for increased reasonableness by increasing barrier length along the edge of shoulder on northbound side of the I-5. The noise study addendum determined SB No. 2-5 to be feasible and reasonable per the Protocol. SB No. 2-5 has been added to the list of recommended sound walls in the Final EIR/EA.

Southbound Side of I-5 North of Hasley Canyon Road

The Draft EIR/EA identified recommended sound barriers along private property at this location (SB Nos. 3-4, 3-5, 3-7, 3-8 and 3-9). Property owners along the proposed sound barrierexpressed concern regarding the barrier on their property. Residents beyond the front line properties were concerned that the barrier would not be build to the lack of support from those residents where the barrier would be located and asked for a sound barrier at the Caltrans right of way. A sound barrier at the Caltrans right of way (SB No. 3-11) was previously evaluated in the Noise Study Report and was determined to be feasible but not reasonable per the Protocol. In response to public comments, SB No. 3-11 was re-evaluated for increased reasonableness by reducing the length of the sound barrier in areas with the highest concentration of benefited residences. Two separate segments of SB No.3-11 were evaluated at various lengths. The first sound barrier segment (SB No. 3-11a) is located along Caltrans right of way near Hillcrest Parkway and Wedgewood Court. The second sound barrier segment (SB No. 3-11b) is located along the State right of way near Sedona Way and The Old Road. SB Nos. 3-11a and 3-11b are both determined feasible at various lengths and heights but only SB No. 3-11a is determined to be reasonable (at a height of 14 feet and length of 1,273 feet). SB No. 3-11a with a barrier length of 1,273 feet has been added to the list of recommended sound barriers in the Final EIR/EA.

As stated in Section 2.15.4.1 of the Final EIR/EA, the recommended sound barrier locations, heights and lengths are preliminary based on current project alignments and profiles, which may be subject to change. If pertinent parameters change substantially during the final project design, the preliminary noise abatement decision may be changed or eliminated from the final project design. A final decision to construct noise abatement will be made up on completion of the project design and public input.

4.5.4.2 Specific Response to Comments

Responses to each of the comment letters received during the public review period for the Draft EIR/EA are provided below. Reference to the General Response is provided in the specific responses, as appropriate.

Letter from Federal Emergency Management Agency dated 01/08/09

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

January 8, 2009

Ronald J. Kosinski, Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 7
100 South Main Street, MS-16A
Los Angeles, California 90012

Dear Mr. Kosinski:

This is in response to your request for comments on the Notice of Public Hearing and Availability of Draft Environmental Impact Report/Environmental Assessment for the I-5 HOV and Truck Lane Widening (SR-14 to Parker Road) EA 2332E0.

Please review the current effective Countywide Flood Insurance Rate Maps for Los Angeles County (FIRMs) for the City of Santa Clarita (Community Number 060729), Map revised September 26, 2008. Please note that the City of Santa Clarita, Los Angeles County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65. FEMA-1

A summary of these NFIP floodplain management building requirements are as follows: FEMA-2

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.
- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any *development* must not increase base flood elevation levels. The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

www.fema.gov

FEMA-1 A review of the current effective countywide flood insurance rate maps and floodplain management building requirements (44 CFR, Sections 59 through 65) was conducted. The new maps do not affect the floodplain analysis conducted for the proposed project.

FEMA-2 These comments do not apply since the project is not proposing any buildings and is not located within regulatory floodways or a coastal high-hazard area.

A flood map revision is not necessary since there will not be a substantial increase (as defined by the Federal Emergency Management Agency [FEMA]) in the floodplain as a result of the project.

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

FEMA-2

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The City of Santa Clarita floodplain manager can be reached by calling Christina Monde at (661) 255-4942.

FEMA-3

If you have any questions or concerns, please do not hesitate to call Cynthia McKenzie, Senior Floodplanner of the Mitigation staff at (510) 627-7190.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Carlos Montez, California Department of Transportation, District 7, Division of Environmental Planning
George De La O, Floodplain Manager, Sr. Civil Engineer, Los Angeles County Public Works Department, Watershed Management Division
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern District
Cynthia McKenzie, Senior Floodplanner, CFM, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

FEMA-2 cont. As part of the final design process, if such a change to the floodplain is discovered, the map will be revised in accordance with FEMA guidelines.

FEMA-3 The contact information for the City of Santa Clarita's Floodplain Manager is acknowledged.

Letter from United States Environmental Protection Agency, Region IX, dated 02/17/09

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

February 17, 2009

Ronald J. Kosinski
Deputy District Director
California Department of Transportation, District 7
100 South Main Street, MS-16A
Los Angeles, CA 90012

Subject: US EPA Comments on Draft Environmental Assessment for the Interstate 5 High Occupancy Vehicle / Truck Lanes Project, City of Santa Clarita and Los Angeles County, California

Dear Mr. Kosinski:

The U.S. Environmental Protection Agency (EPA) has reviewed the December 2008 Draft Environmental Assessment (Draft EA) for the Interstate 5 (I-5) High Occupancy Vehicle (HOV) / Truck Lanes Project, City of Santa Clarita and Los Angeles County, California (Project). Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and Section 309 of the Clean Air Act.

The State of California has assumed responsibilities under NEPA for this Project pursuant to the *Memorandum of Understanding Between the Federal Highway Administration and the California Department of Transportation (Caltrans) Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.*

Per the November 10, 2008 Federal Register Notice of Withdrawal, it is our understanding that Caltrans has made the decision to prepare an EA for this Project instead of an Environmental Impact Statement (EIS) and, as a consequence, has terminated early coordination activities under SAFETEA-LU 6002. Prior to Caltrans' decision to prepare an EA for this Project, EPA participated as a Participating Agency (as defined in SAFETEA-LU) in EIS advisory committee meetings on November 7, 2007 and January 8, 2008. On July 16, 2007, EPA provided comments on the Notice of Intent (NOI) for the Project after it was published in the Federal Register (May 2007). EPA has also provided comments on the Purpose and Need (submitted December 7, 2007), the Alternatives to be analyzed (submitted January 28, 2008) and the Technical Studies Methodologies (submitted February 7, 2008).

EPA's above referenced comments provided detailed recommendations for analyses pertaining to mobile source air toxics, water resources, cumulative impacts and environmental justice, among others. These comments were meant to address any significant impacts that may have been identified through preparation of the EIS. Despite the decision to prepare an EA

instead of an EIS, many of our previous recommendations still apply. If Caltrans decides to pursue a Finding of No Significant Impact (FONSI) for this Project, we strongly recommend clearly identifying mitigation measures to avoid and minimize any operational and construction-related impacts from the proposed Project. These measures should be included as commitments in the Final EA and FONSI. EPA-1

EPA's primary concerns focus on the Project scope and need, the alternatives analysis, the lack of analysis for mobile source air toxics (MSATs) hotspots, and the lack of air quality cumulative impacts analysis. EPA's concerns, and recommendations, are further discussed in the attachment. Our primary recommendations regarding MSATs include: 1) quantifying the construction and operational emissions for MSATs across all alternatives for all build out years, 2) conducting dispersion modeling of the most significant MSATs, and 3) identifying hotspots and appropriate avoidance, minimization, and/or mitigation opportunities.

Thank you for the opportunity to comment on the Draft EA. We look forward to working with you to resolve the issues raised in our detailed comments. When the Final Environmental Assessment is released for public review, please send one hard copy and one electronic copy to the address above (mail code: CED-2). If you have any questions, please feel free to contact Connell Dunning, Transportation Team Leader, at 415-947-4161, or Tom Plenys, the lead reviewer for this project. Tom can be reached at 415-972-3238 or plenys.thomas@epa.gov.

Sincerely,

Tom Plenys
Environmental Review Office

Enclosures: EPA's Detailed Comments

CC: Mark Cohen, U.S. Army Corps of Engineers

2

EPA-1 EPA's request for identification of measures to avoid, minimize, or mitigate the potential impacts of the proposed project is acknowledged. The Final Environmental Impact Report (FEIR/EA) includes such measures and has summarized them in the Environmental Commitments Record (ECR) located in Appendix E. The ECR is brought forward into the design phase to ensure that all measures have been implemented and incorporated into the project design and specifications.

EPA-2 The limits of this project were determined with specific consideration concerning logical termini and independent utility. The project is located in Los Angeles County on I-5, from SR-14 on the south to Parker Road on the north, and covers a distance of approximately 13.6 miles (mi). The purpose of the project is to extend the HOV lanes from their current termini at the SR-14/I-5 interchange and incorporate truck climbing lanes from the SR-14 interchange to Pico Canyon Road/Lyons Avenue. The traffic study evaluated the segment of I-5 north of the project limits and determined that that segment operates comparably to the project segments with the proposed improvements. In other words, congestion does not worsen north of the project limits.

South of the project area, traffic volumes are constrained by the capacity of the I-5/SR-14 interchange, which was taken into consideration by the project's traffic study. The project's traffic study includes traffic forecasts for two long-range cumulative condition scenarios, the Demand scenario and Constrained Flow scenario. The Constrained Flow scenario reflects the actual flow of traffic volumes south of the

US ENVIRONMENTAL PROTECTION AGENCY'S DETAILED COMMENTS ON THE INTERSTATE 5 HIGH OCCUPANCY VEHICLE / TRUCK LANES PROJECT, CITY OF SANTA CLARITA AND LOS ANGELES COUNTY, CALIFORNIA, FEBRUARY 17, 2009

Project Scope and Need

The Draft Environmental Assessment (Draft EA) for the Interstate 5 High Occupancy Vehicle / Truck Lanes Project (Project) presents the proposed alternatives for the I-5 corridor located between State Route 14 and Parker Road in the City of Santa Clarita, a distance of approximately 13.6 miles. In addition to the No-Build Alternative (Alternative 1), the two build alternatives (Alternatives 2 and 3) include transportation improvements such as high occupancy vehicle (HOV) lanes, dedicated truck lanes and auxiliary lanes.

If the completion of the proposed action from SR 14 to Parker Road triggers the need to improve additional stretches of I-5, such as a shift of this segment's congestion bottleneck to north of Parker Road, then the project scope may need to be expanded. As a result, the National Environmental Policy Act (NEPA) evaluation should include the full extent of the planned HOV and truck lane corridors, and how it will operate. The proposed improvements from SR 14 to Parker Road would have independent utility if the intended benefit of congestion reduction and the intended need of the project could be met independent of any future planned HOV or truck lane expansion on I-5 south of SR 14 or north of the project area.

EPA-2

Recommendation:

- *Clearly demonstrate the independent utility of the project within its current geographic limits as it relates to the need for the project. If the project need cannot be met without future planned improvements, the scope of the project should be expanded accordingly, such as including an analysis of future improvements to I-5 or future improvements south of SR 14 or north of Parker Road, since these would be considered connected and similar actions (40 CFR 1508.25). EPA believes this is the most effective way to address indirect and cumulative environmental impacts. This also ensures that a broader scope is applied in the identification and evaluation of project alternatives that may be less environmentally damaging. Generally, funding or constraints of project staging and construction should not be used as a basis for segmenting the evaluation of environmental impacts under NEPA.*

The Need for the Project is stated as follows: "I-5 is experiencing greater automobile and truck congestion as a result of population growth in north Los Angeles County and goods movement into and out of the Ports of Los Angeles and Long Beach. Freeway traffic volumes are expected to approximately double by 2030, which will continue to cause substantial delays." (at page 1-3)

The current growth discussion in Section 2.2 is based, in part, on the Southern California Association of Governments, 2004 Regional Transportation Plan/Growth Vision: Socio-Economic Forecast Report, June 2004; the Southern California Association of Governments, *The State of the Region 2007*, December 2007 and a Community Impact Assessment analysis conducted by Caltrans in September 2008. The growth projections highlighted by these sources

EPA-3

1

I-5/SR-14 confluence, which is constrained by the available (existing and planned) capacity for that heavily traveled section of freeway. The purpose of the Constrained Flow model is to provide a realistic peak-hour volume for the freeway segments north of the I-5/SR-14 confluence by taking into account the geometric constraints that will determine the flow rates south of the interchange. New HOV lanes have recently been completed just south of the I-5/ SR-14 confluence. Currently under construction are direct HOV lane connectors between the SR-14 HOV lanes and the new I-5 HOV lanes. The proposed project improves the HOV options for residents of the Santa Clarita Valley by providing an additional connection to the existing HOV network that can be used by residents of the western portion of the valley.

The proposed project as a stand-alone project is the basis of the traffic study. Even though the proposed project is one part of a broader concept for I-5, the "independent utility of the project" has been demonstrated by the project's traffic study. Completion of this project will bring improvement to congestion in the corridor without any other planned or unplanned project construction, which demonstrates independent utility.

EPA-3 Your comments regarding the need to consider recent economic factors and trade volumes through the Ports of Los Angeles and Long Beach, as well as their relevance to the project need, are noted. Growth-related projections regarding this project are based on the planning assumptions in the Southern California Association of Governments' (SCAG) current Regional Transportation Plan (RTP). The RTP is a long-range (20+ years) transportation plan that represents an assessment of overall

forecast growth and economic conditions in the region. It is the primary transportation planning document for the southern California region. The I-5 HOV/Truck Lanes project is consistent with the adopted goals of the 2008 RTP, and is included in the list of projects in the 2008 RTIP.

The text of the Environmental Impact Report (EIR)/EA has not been modified. The listing of future projects identifies development that is expected to occur regardless of the current economic conditions. This level of development represents a worst-case condition for cumulative analysis purposes.

EPA-4 SCAG maintains a comprehensive multimodal travel demand model that forecasts both transit and vehicle trips. A comprehensive multimodal study was prepared by MTA (North County Combined Highway Corridors Study) using the SCAG model, which concluded that both highway and transit improvements are needed to serve future demand. The improvements proposed by the I-5 HOV/Truck Lanes project are part of the overall menu of recommended improvements identified by the MTA study. Many of the short-range transit improvements recommended by the study have already been implemented, and the remaining improvements continue to be high-priority projects.

Transit Opportunities in the Project Area

Various rail and bus services currently serve the North County area, and many improvements are planned and programmed. The transit infrastructure includes transit centers, maintenance facilities, park-and-ride facilities, and transportation coordination. Many improvements to facilities and the services are proposed.

could be significantly impacted by recent economic factors, such as the continued downturn in the housing market, the more recent credit crisis, and the sustained economic recession, which will likely have a slowing impact on growth in these areas. Similarly, with respect to goods movement, trade volumes through the Ports of Los Angeles and Long Beach significantly decreased in 2008. The impact of these recent events on previous growth projections should be considered, and their relevance to the Project Need should be discussed in a revised Purpose and Need section of the Final EA. Each of the Alternatives should be considered in light of the latest revised forecasts.

EPA-3

Recommendations:

- *Update all growth related projections to reflect the latest development and goods movement forecasts and update the evaluation of alternatives, as appropriate*
- *Include an update on the status of the proposed development projects listed as 'pending' in Figure 2.1.6 and incorporate any revised estimates into the Final EA*

Alternatives Analysis

Both build alternatives would add one HOV lane in each direction from the I-5/SR-14 interchange (southern project limit) to south of the Parker Road interchange (northern project limit). The build alternatives would also extend one northbound truck lane from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 interchange to the Calgrove Boulevard/I-5 interchange. Both build alternatives include a southbound truck lane between Pico Canyon/Road and Calgrove Boulevard and two southbound truck lanes from Calgrove Boulevard to just south of Weldon Canyon Road.

The two build alternatives appear to differ primarily by their proposed median and inside shoulder widths. Alternative 2 (constrained alternative) proposes median and inside shoulder widths that are less than the Caltrans standard (48 foot median and less than 10 foot inside shoulders at median structure columns). Alternative 3 (standard alternative) proposes median and inside shoulder widths that are consistent with Caltrans standards (includes 12 foot travel lanes, 10 foot outside shoulder, and a continuous California Highway Patrol (CHP) enforcement area in the median). While allowing for CHP enforcement areas, Alternative 3 appears to have a more significant impact on property acquisition and a larger impact on the soil balance.

Based on our review of the Draft EA, we have highlighted our two primary concerns regarding the alternatives analysis below. We understand that the information necessary to address those concerns may exist in prior evaluations or studies; however, EPA suggests that this information be included in future iterations of this Project's environmental review.

1) The Draft EA has not integrated the highlighted transit projects nor fully described the potential impacts of these options on future traffic volumes and their potential impact on the presentation and selection of alternatives.

EPA-4

2

Existing Passenger Rail
The Southern California Regional Rail Authority (SCRRA) operates Metrolink, a five-county commuter rail network spanning over 400 miles. In the vicinity of the project, Metrolink operates the Antelope Valley Line, which connects Palmdale/Lancaster and Santa Clarita to the Los Angeles Union Station and points in between, including San Fernando Valley, Burbank, and Glendale. Twelve weekday trains operate in each direction on the Antelope Valley Line.

Passenger Rail Proposed/Planned Improvements.
Metrolink's Short-Range Plan includes improvements to the Antelope Valley line, which will allow more trains to serve the Newhall Metrolink Station and will also allow faster train travel. The Santa Clarita Transportation Development Plan indicates Metrolink anticipates increasing the 24-train weekday schedule to 28 trains by 2010 and 32 trains by 2015. In addition, the number of cars and seats per trip will also expand. Track and facility improvements are proposed at the Sylmar, Santa Clarita, Vincent Grade, and Lancaster stations. Signal upgrades are also proposed for the Antelope Valley Line. SCAG's 2008 RTP includes funding for the right of way procurement for land at the Santa Clarita Metrolink station.

Existing Regional/Commuter Bus Service
The City of Santa Clarita operates 10 regional express routes between Santa Clarita and the San Fernando Valley, West Los Angeles, and downtown Los Angeles.

The McBean Transfer Station (MTS) was recently developed to provide a transfer point. Antelope Valley Transit operates three commuter routes and a commuter service to LAX.

Existing Local Bus Service
Santa Clarita operates seven local routes connecting various attractors in the City.

Metrolink Station Link Series 500 Feeder buses operate between the Metrolink stations and Magic Mountain, central Valencia, the Valencia Industrial Center, and the Valencia Commerce Center.

Bus Service Proposed/Planned Improvements.
Transit use has greatly increased in the north County area; thus, a number of improvements are planned. Several buses will be purchased for Santa Clarita. Additions to the UCLA/ Century City and Downtown service are proposed. Additionally, the City will be adding a new service to the North Hollywood Red Line/Orange Line Station and consolidating some of the commuter routes. New routes between Canyon Country and Castaic and Downtown Los Angeles are also proposed.

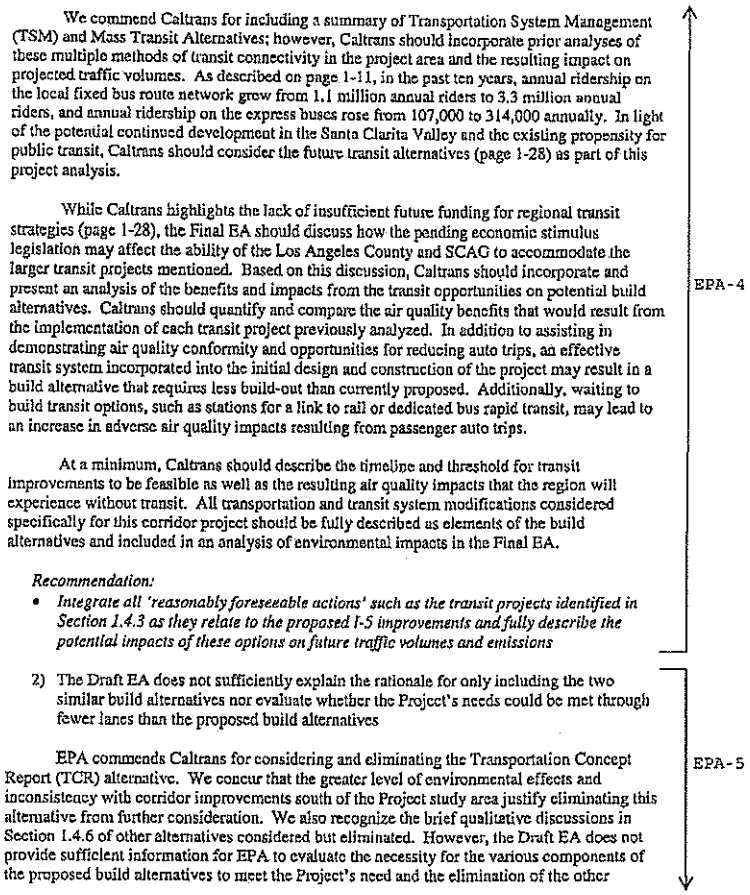
In Antelope Valley, there are proposals to expand the existing passenger service as well as add new routes to Universal City, where riders could connect to the Metro Red Line or Metro Rapid, and to Pasadena, where riders could connect to the Metro Gold Line. An additional route is proposed to serve Westwood and Wilshire only and reserve the existing route to serve only Century City and West Hollywood.

In addition to providing additional service and coaches, a number of system improvements are planned, including bus maintenance facilities, advanced communications and monitoring systems, a Universal Fare System, Intelligent Transportation System enhancements, transit priority strategies, and computer-aided dispatching.

Incorporating the I-5 HOV/Truck Lanes Project
The proposed HOV lane will enhance transit service. Upon completion of the project, a continuous HOV lane in each direction would extend from Parker Road to State Route 118 (SR-118), and upon final completion of the southern portion, the HOV lanes would extend to State Route 134 (SR-134). Commuter buses will be able to access these lanes, speeding their commute and reducing automobile trips as they continue to attract more riders. In addition, the City of Santa Clarita is considering a park-and-ride in the Castaic area, which would further encourage use of a commuter bus connection between Castaic and downtown Los Angeles.

HOV lanes enhance the commuter bus experience by reducing travel time and providing more reliability in buses meeting their schedules. The transit providers are proposing transit enhancements to the service by improving the access to and from the freeway.

Stimulus Funds for Transit
City of Santa Clarita.
The City of Santa Clarita has been notified by the federal government that they will be receiving $5,126,000 in transit capital assistance from the American Recovery and Reinvestment Act of 2009 and plans to spend it on the McBean Transit Center Park and Ride, a transit information network, paratransit, on-board camera upgrade program, and solar canopies at the transit maintenance center. These investments, particularly the expanded park-and-ride facility,



We commend Caltrans for including a summary of Transportation System Management (TSM) and Mass Transit Alternatives; however, Caltrans should incorporate prior analyses of these multiple methods of transit connectivity in the project area and the resulting impact on projected traffic volumes. As described on page 1-11, in the past ten years, annual ridership on the local fixed bus route network grew from 1.1 million annual riders to 3.3 million annual riders, and annual ridership on the express buses rose from 107,000 to 314,000 annually. In light of the potential continued development in the Santa Clarita Valley and the existing propensity for public transit, Caltrans should consider the future transit alternatives (page 1-28) as part of this project analysis.

While Caltrans highlights the lack of insufficient future funding for regional transit strategies (page 1-28), the Final EA should discuss how the pending economic stimulus legislation may affect the ability of the Los Angeles County and SCAG to accommodate the larger transit projects mentioned. Based on this discussion, Caltrans should incorporate and present an analysis of the benefits and impacts from the transit opportunities on potential build alternatives. Caltrans should quantify and compare the air quality benefits that would result from the implementation of each transit project previously analyzed. In addition to assisting in demonstrating air quality conformity and opportunities for reducing auto trips, an effective transit system incorporated into the initial design and construction of the project may result in a build alternative that requires less build-out than currently proposed. Additionally, waiting to build transit options, such as stations for a link to rail or dedicated bus rapid transit, may lead to an increase in adverse air quality impacts resulting from passenger auto trips.

EPA-4

At a minimum, Caltrans should describe the timeline and threshold for transit improvements to be feasible as well as the resulting air quality impacts that the region will experience without transit. All transportation and transit system modifications considered specifically for this corridor project should be fully described as elements of the build alternatives and included in an analysis of environmental impacts in the Final EA.

Recommendation:

- *Integrate all 'reasonably foreseeable actions' such as the transit projects identified in Section 1.4.3 as they relate to the proposed I-5 improvements and fully describe the potential impacts of these options on future traffic volumes and emissions*

2) The Draft EA does not sufficiently explain the rationale for only including the two similar build alternatives nor evaluate whether the Project's needs could be met through fewer lanes than the proposed build alternatives

EPA commends Caltrans for considering and eliminating the Transportation Concept Report (TCR) alternative. We concur that the greater level of environmental effects and inconsistency with corridor improvements south of the Project study area justify eliminating this alternative from further consideration. We also recognize the brief qualitative discussions in Section 1.4.6 of other alternatives considered but eliminated. However, the Draft EA does not provide sufficient information for EPA to evaluate the necessity for the various components of the proposed build alternatives to meet the Project's need and the elimination of the other

EPA-5

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will be enhanced by the proposed project's expansion of the existing HOV network into the western portion of the Santa Clarita Valley.

An expanded commuter rail service functions independent of the proposed project. The rail line that serves the project corridor is physically removed from the freeway right of way. Therefore, actions taken within the freeway right of way do not affect the rail service. Note that the comprehensive multimodel transportation study undertaken by the Metropolitan Transit Authority (MTA) did not recommend adding commuter rail within the freeway right of way.

Antelope Valley Transit Authority (AVTA).
The AVTA is anticipating $10,900,000 in transit capital assistance from the pending economic stimulus legislation for equipment and facilities upgrades.

EPA-5 An alternative with fewer additional lanes than are proposed would not operate effectively. Where more than one new lane in each direction is proposed (i.e., the segment with truck lanes), eliminating the HOV lanes is not feasible since that would result in a gap in the HOV network. Eliminating all of the truck lanes is not desirable from an operations perspective. In addition, the right of way requirements, both acquisition and temporary construction easements, have been reduced due to an additional evaluation conducted since the circulation of the draft environmental document. This will further reduce the potential impacts of the project.

alternatives briefly mentioned. If these analyses have been previously performed, they should be adequately summarized in the Final EA.

Further, Caltrans' two build alternatives propose an identical number of additional HOV, truck and auxiliary lanes. Caltrans should fully consider an alternative that evaluates a 'hybrid' option of the No Build and Build Alternatives that could still meet the Project's needs. For example, in conjunction with future transit projects, the needs of the Project could perhaps be met with an alternative that requires only one southbound truck lane and no acquisition of property. Caltrans must consider the long-term sustainability of proposed alternatives which may do little to encourage a mode change to HOV or transit options which, over time, will allow congestion in the corridor to return. EPA-5

Finally, Caltrans should describe the potential benefits and pitfalls of Alternative 2 which includes lane widths that are less than what Caltrans recommends.

Recommendations:

- *Include additional rationale for the transportation improvement components of the two specific build alternatives and evaluate whether the Project needs can be met with fewer additional lanes or a hybrid alternative*
- *Describe the potential benefits and pitfalls of Alternative 2 which includes lane widths that are less than what Caltrans recommends.*

Mobile Source Air Toxics

EPA is concerned that the Draft EA does not sufficiently analyze and disclose the potential mobile source air toxics (MSAT) impacts that may result from the proposed Project. The absence of this analysis is of concern to EPA because 1) the project is a potentially large expansion of an already major freeway with considerable truck traffic; 2) the proposed Project may be in close proximity to residences and other sensitive receptors, such as schools and hospitals; 3) there is an increasing public awareness of air quality impacts associated with transportation projects, as reflected in the passage of Proposition 1B, which includes $1 billion in air quality mitigation measures; and 4) there will likely be further expansions along the I-5 corridor, so it is important to establish an appropriate level of analysis.

As you know, EPA is a Cooperating Agency and member of the Agency Air Technical Working Group (AATWG) for the proposed Interstate 710 expansion project. As a part of that group, EPA is working with Caltrans and other partners to identify appropriate MSAT and Health Risk Assessment methodology for transportation projects under NEPA. The technical discussions and consensus reached within the AATWG may be directly applicable to future analyses similar to those conducted for this Project.

The Draft EA for this Project follows the February 2006 Federal Highway Administration (FHWA) MSAT interim guidance which describes how to assess MSAT impacts for transportation projects during the National Environmental Policy Act (NEPA) process. While there are positive elements to this guidance, especially the willingness to acknowledge potential MSAT concerns, EPA continues to disagree with major elements of this approach nationally.

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The essential benefit of Alternative 2 is that it would provide the same operational benefits as Alternative 3 with fewer impacts. This alternative achieves this by providing a reduced median width. The lane widths are the same for both alternatives and meet the standards. The reduced median width would eliminate impacts such as the widening at the Santa Clara River Bridge and the Commercial Vehicle Enforcement Facility (CVEF).

The comment states the following: "Caltrans must consider the long-term sustainability of proposed alternatives *which may do little to encourage a mode change to HOV* or transit options which, over time, will allow congestion in the corridor to return."

The project proposes to build HOV lanes where none exist otherwise, which helps to encourage a mode change to HOV. Other modes of transit, such as express buses, will also become more attractive to commuters due to the new HOV lanes. The proposed HOV lanes are identified in the region's HOV system plan and the SCAG adopted RTP. Based upon the evaluation of the RTP, the completion of the HOV system is an important improvement.

For projects of this type, *i.e.* those with large potential impacts in an already impacted area, EPA generally recommends a higher level of analysis than what is found in the Draft EA. This is especially important given the awareness of air toxics impacts, the knowledge of background conditions, and the familiarity with tools to assess potential impacts is very high.

Documented Health Effects of Near-Roadway Mobile Source Air Toxics

Many studies have measured elevated concentrations of pollutants emitted directly by motor vehicles near large roadways. These elevated concentrations generally occur within approximately 200 meters of the road, although the distance may vary depending on traffic and environmental conditions. Pollutants measured with elevated concentrations include benzene, polycyclic aromatic hydrocarbons, carbon monoxide, nitrogen dioxide, black carbon, and coarse, fine, and ultrafine particles. For a thorough review of near-roadway monitoring studies, see Section 3.1.3 of EPA's "Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources" (February 2007, http://www.epa.gov/otaq/regs/toxics/fr-ria-sections.htm).

A large number of recent studies have examined the association between living near major roads and different adverse health endpoints. Several well-conducted epidemiologic studies have shown associations with cardiovascular effects, premature adult mortality, and adverse birth outcomes, including low birth weight and size. Traffic-related pollutants have been repeatedly associated with increased prevalence of asthma-related respiratory symptoms in children. Also, based on toxicological and occupational epidemiologic literature, several of the MSATs, including benzene, 1,3-butadiene, and diesel exhaust, are classified as known and likely human carcinogens. Thus, cancer risk, including childhood leukemia, is a potential concern in near roadway environments. For additional information on MSATs, please see EPA's MSAT website (http://www.epa.gov/otaq/toxics.htm).

Methodology and Reporting

The Draft EA lacks documentation and analyses related to MSATs as follows: 1) data, including inputs and detailed results, supporting the conclusion that MSAT emissions will decline for the proposed build scenarios versus the no-build conditions in 2015; 2) quantitative analysis of MSAT emissions from construction activities, which may lead to significant impacts, especially for diesel particulate matter (DPM); and 3) quantitative analysis, *i.e.* dispersion modeling, of potential changes in MSAT ambient concentrations that may result from the proposed project, preventing any meaningful comparison of changes in health outcomes, which are expected to be hotspot in nature and thus not sufficiently described by total project emissions. This latter analysis is especially important when examining the effect on sensitive populations (such as those in day care centers, hospitals, and nursing homes), potentially disproportionate impacts for minority and low-income populations, and impacts on proposed development projects such as described in Figure 2.1.6.

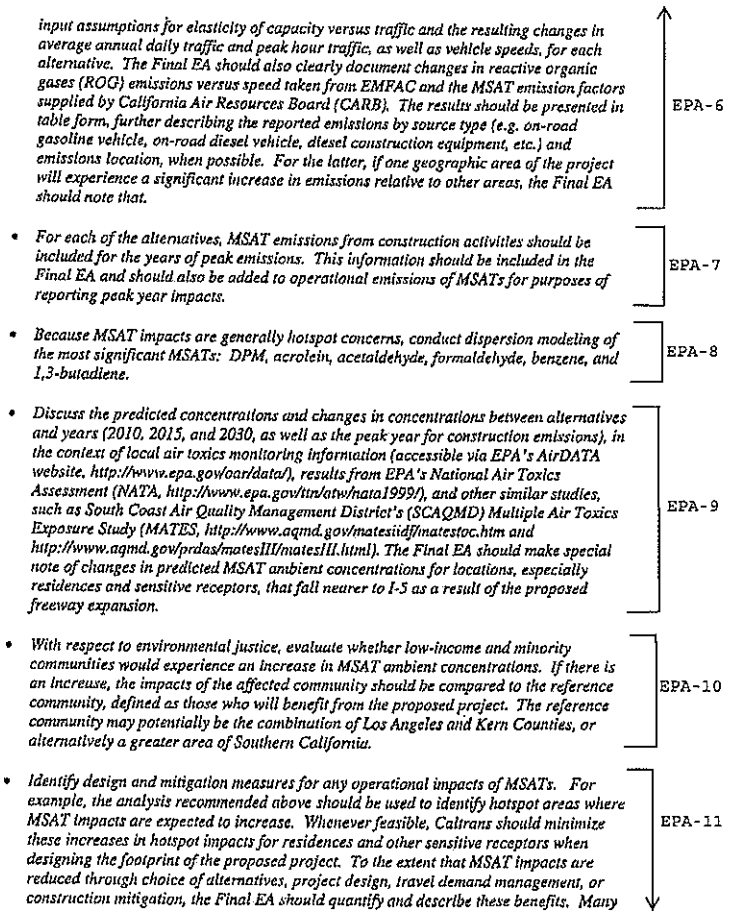
Recommendations:

- *Provide documentation in the Final EA on previous work supporting the assertion that MSAT emissions will decline for the proposed build scenarios versus no-build scenarios in 2015. The information provided on page 2.14-19 should be carefully documented with*

EPA-6

5

EPA-6 The Mobile-Source Air Toxics (MSAT) Analysis (July 2008) fully analyzes the MSAT impacts from all of the Build Alternatives compared to the No Build Alternative for both the opening year and build-out conditions. In addition, the MSAT analysis addresses the impact of the project-related increase along each highway segment. Section 4.4.3 of the Air Quality Analysis and Section 2.14 of the FEIR/EA include a summary of the MSAT analysis that was prepared for the proposed project. The analysis indicates that a substantial decrease in MSAT emissions can be expected for the proposed alternatives from the base year (2006) levels through the future year levels. This decrease is prevalent throughout the highest-priority MSATs and the analyzed alternatives (No Build and Build), regardless of the difference in mainline configurations. Implementation of the project alternatives would result in a slight increase in some of the MSAT emissions in 2015. However, the 2015 No Build and Build Alternatives emissions would be lower than the Existing (2006) emissions for all roadway segments and all MSAT pollutants. In addition, by 2030, the project alternatives would reduce the total MSAT emissions within the project area when compared to Existing (2006) and 2030 No Build Alternative conditions. In summary, while the project alternative would result in a small increase in localized MSAT emissions in 2015, the EPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that will cause region-wide MSAT levels to be substantially lower than they are today.



input assumptions for elasticity of capacity versus traffic and the resulting changes in average annual daily traffic and peak hour traffic, as well as vehicle speeds, for each alternative. The Final EA should also clearly document changes in reactive organic gases (ROG) emissions versus speed taken from EMFAC and the MSAT emission factors supplied by California Air Resources Board (CARB). The results should be presented in table form, further describing the reported emissions by source type (e.g. on-road gasoline vehicle, on-road diesel vehicle, diesel construction equipment, etc.) and emissions location, when possible. For the latter, if one geographic area of the project will experience a significant increase in emissions relative to other areas, the Final EA should note that.

EPA-6

- *For each of the alternatives, MSAT emissions from construction activities should be included for the years of peak emissions. This information should be included in the Final EA and should also be added to operational emissions of MSATs for purposes of reporting peak year impacts.*

EPA-7

- *Because MSAT impacts are generally hotspot concerns, conduct dispersion modeling of the most significant MSATs: DPM, acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene.*

EPA-8

- *Discuss the predicted concentrations and changes in concentrations between alternatives and years (2010, 2015, and 2030, as well as the peak year for construction emissions), in the context of local air toxics monitoring information (accessible via EPA's AirDATA website, http://www.epa.gov/oar/data/), results from EPA's National Air Toxics Assessment (NATA, http://www.epa.gov/ttn/atw/nata1999/), and other similar studies, such as South Coast Air Quality Management District's (SCAQMD) Multiple Air Toxics Exposure Study (MATES, http://www.aqmd.gov/matesiidf/matestoc.htm and http://www.aqmd.gov/prdas/matesIII/matesIII.html). The Final EA should make special note of changes in predicted MSAT ambient concentrations for locations, especially residences and sensitive receptors, that fall nearer to I-5 as a result of the proposed freeway expansion.*

EPA-9

- *With respect to environmental justice, evaluate whether low-income and minority communities would experience an increase in MSAT ambient concentrations. If there is an increase, the impacts of the affected community should be compared to the reference community, defined as those who will benefit from the proposed project. The reference community may potentially be the combination of Los Angeles and Kern Counties, or alternatively a greater area of Southern California.*

EPA-10

- *Identify design and mitigation measures for any operational impacts of MSATs. For example, the analysis recommended above should be used to identify hotspot areas where MSAT impacts are expected to increase. Whenever feasible, Caltrans should minimize these increases in hotspot impacts for residences and other sensitive receptors when designing the footprint of the proposed project. To the extent that MSAT impacts are reduced through choice of alternatives, project design, travel demand management, or construction mitigation, the Final EA should quantify and describe these benefits. Many*

EPA-11

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EPA-7 The MSAT Analysis includes an analysis of the No Build Alternative and all of the Build Alternatives. Due to the uncertainty of the construction schedule, equipment, and phasing and the short-term nature of the project construction, the air quality and MSAT analyses did not evaluate the short-term construction impacts of the proposed project.

EPA-8 The FHWA does not believe that quantitative analysis (i.e., dispersion modeling) can provide any meaningful comparison of alternatives, and believes that it may in fact provide misleading information as to the current understanding of MSATs and the capabilities of current tools. There are a number of reasons why FHWA does not support dispersion modeling at this time. First, as part of the development of the FHWA interim MSAT guidance, FHWA conducted a thorough review of the scientific information related to MSATs from transportation sources. As a result of that review, FHWA concluded that the available technical tools do not enable us to reliably estimate pollutant exposure concentrations or predict the project-specific health impacts of the emissions changes associated with transportation project alternatives.

EPA-9 The comment requests that predicted concentrations and changes in concentrations be added to the final environmental document. Please refer to the response to Comment EPA-8 for a discussion of why FHWA does not support dispersion modeling.

EPA's Guidance on Air Quality Models includes the following conclusions regarding the accuracy and precision of air quality models.

of the recommendations under Construction Mitigation Measures of this letter below will result in decreased impacts for both criteria pollutants and air toxics. EPA-11

Limitations of Dispersion Models

The discussion of limitations in the dispersion models, CALINE3 and CAL3QHC, is outdated (p. 2.14-15). While it is true that the CALINE and CAL3QHC were developed and validated a number of years ago, as stated in the Draft EA, they continue to undergo validation. A number of recent studies have determined that CALINE, especially "CALINE4," accurately predicts ambient concentrations in near-roadway environments for both gaseous and particulate pollutants (see, for example, Gramatnev *et al.*, Atmospheric Environment, volume 37, pages 465-474, 2003; Zhang *et al.*, Atmospheric Environment, volume 39, pages 4155-4166, 2005). The joint UC Davis - Caltrans report, entitled "A Survey of Air Quality Dispersion Models for Project-Level Conformity Analysis" (June 19, 2006), concluded that available models are appropriate for modeling project-level dispersion of on-road and construction emissions, contradicting the language in the DEIS. Based on these recent studies and report, CALINE4 would be an appropriate tool for dispersion analysis of MSATs within the Draft EA. While air toxics monitoring data is always limited, there are sufficient studies, including existing fixed site air toxics monitors, EPA's NATA, and SCAQMD's MATES noted above, that report both monitored and modeled ambient air toxics concentrations in Southern California. Accordingly, it would be straightforward to determine MSAT background concentrations, providing context for the dispersion analysis recommended above.

Recommendation:

- *Remove the discussion of uncertainties in "Dispersion" and replace it with an updated discussion of the use of CALINE4 in situations similar to the proposed project. The concern about establishing project-specific MSAT background concentrations should be amended to note that Federal Highway Administration (FHWA) and Caltrans could work with EPA and SCAQMD to determine relevant background concentrations.* EPA-12

Exposure Levels and Health Effects

The discussion of "Exposure Levels and Health Effects" is also inaccurate. Both EPA and California Office of Environmental Health Hazard Assessment (OEHHA) have long standing experience and published, peer-reviewed guidance for evaluating long-term health effects, including cancer risk. The concerns raised about estimating exposure over a 70-year lifetime have been addressed extensively by our agencies. Recently, EPA has published an Air Toxics Risk Assessment Reference Library (http://www.epa.gov/ttn/fera/risk_atra_main.html) that addresses the precise concerns raised in this section of the Draft EA – namely how to develop appropriate exposure scenarios in a risk assessment. Similarly, California OEHHA has hot spot risk assessment guidance published in support of California's Air Toxics "Hot Spots" Information and Assessment Act of 1987 (a.k.a. AB2588, http://www.oehha.ca.gov/air/hot_spots/pdf/HRAguidefinal.pdf). While EPA agrees that there are always uncertainties associated with such an analysis, in this case most of the uncertainties would be consistent across alternatives, and such an analysis would still be sufficient for distinguishing between the impacts among scenarios and informing mitigation.

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The models are reasonably reliable in estimating the magnitude of the highest concentrations occurring sometime, somewhere within an area; errors of 10–40 are typical. Estimates of concentrations that occur at a specific time and site are poorly correlated with actual observed concentrations and are much less reliable.

The EPA comment letter references a number of studies that, in EPA's opinion, demonstrate that these models are accurate for dispersion modeling. However, these studies were designed to investigate particulate matter emissions factors and were not meant to be comprehensive validation studies for particulate matter (PM). FHWA does not believe that these isolated studies invalidate its current interim guidance for MSAT analysis.

Second, since FHWA's interim guidance was developed, EPA has promulgated the final transportation regulations for project-level particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and particulate matter less than 10 microns in diameter (PM_{10}) hot-spot analyses. For a number of reasons, as described in the preamble to the regulations, those regulations require only a qualitative assessment of PM hot spots at this time. One of the factors included in the EPA decision for qualitative assessment was the insensitivity of the PM emissions to speed in the MOBILE emissions model. While the EMFAC model does contain speed correction factors for PM, at the time the regulations were promulgated, EPA had not yet reviewed those factors. Furthermore, EPA has not yet incorporated those factors into the MOBILE model. EPA also concluded that, in order to ensure a credible hot-spot analysis, quantitative modeling guidance must first be developed by EPA. Quantitative modeling guidance has not yet been developed by EPA for MSATs.

EPA-10 The MSAT analysis discloses the potential for MSAT impacts to the extent that current scientific information allows. Sensitive receptors are identified and a qualitative assessment of the impacts to the sensitive receptors, including low-income and minority communities, was performed. As described in Section 2.4.33 of the FEIR/EA, the Build Alternatives would not cause disproportionately high and adverse impacts on any minority or low-income populations.

EPA-11 The emissions of MSATs are from vehicles and are controlled by EPA and ARB, so they are outside the control of this project. The MSAT analysis concludes that the overall emissions of MSATs will be significantly lower in the future than now regardless of which alternative is implemented. These reductions are principally due to improved technologies controlling and/or eliminating these emissions, such as better emissions controls, cleaner burning fuels, and increased percentages of low- and zero-emission vehicles in the fleet.

EPA-12 The comment requests that the dispersion section of the MSAT analysis be updated to include a discussion of the use of CALINE4. FHWA believes that the current interim guidance is still valid and that the studies identified by EPA do not represent comprehensive validation studies. FHWA, in cooperation with EPA, is currently completing studies on MSATs in near-roadway environments. One goal of the study is to evaluate the analytical tools for MSAT analysis compared to real-world data. FHWA's guidance will be updated as the science on air toxics analysis continues to evolve. However, the discussion in "Dispersion" has not been revised in the MSAT analysis.

Recommendation:

- *Remove the discussion of uncertainties in "Exposure Levels and Health Effects" and replace it with a discussion of possible exposure scenarios typically used by EPA and California OEHHA in air toxics risk assessments. EPA is not recommending that Caltrans perform a human health risk assessment. EPA does, however, acknowledge that such an assessment is possible.*

EPA-13

Air Quality

As you are aware, the City of Santa Clarita has historically experienced some of the worst air quality in the South Coast Air Basin (SCAB). The project corridor is currently located in non-attainment areas for multiple pollutant National Ambient Air Quality Standards (NAAQS). The current SCAB nonattainment designations under the Federal Clean Air Act (CAA) are as follows: eight-hour ozone – severe nonattainment; particulate matter with a diameter of 10 microns or less (PM_{10}) – serious nonattainment; particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$) – nonattainment; and carbon monoxide – serious nonattainment. As a major freight and commuter artery, adding additional HOV, truck and auxiliary lanes to the specified project area of I-5 has the potential to significantly increase levels of particulate and ozone pollution in the region. Further, if the City of Santa Clarita continues to develop at a significant rate, additional residents will be subject to the air pollution increases that may result from this project.

Construction Mitigation Measures

The Draft EA includes the South Coast Air Quality Management District's (SCAQMD) requirements to reduce emissions as well as the Caltrans Standard Construction Specifications. In addition to these measures, Caltrans should include a Construction Emissions Mitigation Plan for fugitive dust and diesel particulate matter (DPM) in the Final EA and adopt this plan in the Finding of No Significant Impact (FONSI). Due to the serious nature of the PM_{10} and $PM_{2.5}$ conditions in the SCAB, EPA recommends that the best available control measures (BACM) for these pollutants be implemented at all times. We recommend that all applicable requirements under SCAQMD Rules, the Caltrans Standard Construction Specifications and the following additional measures be incorporated into a Construction Emissions Mitigation Plan:

Recommendations:

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

EPA-14

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EPA-13 EPA and the California OEHHA have developed guidance for health risk assessments, but they do not eliminate the uncertainties inherent in health risk assessments. The uncertainties associated with performing risk assessments are acknowledged in the introduction of the OEHHA report. The concern with performing these kinds of assessments for highway projects is that the calculated difference in health impacts due to implementation of the project is likely to be much smaller than the uncertainties associated with calculating them; therefore, these assessments would not result in any meaningful project conclusions.

EPA-14 The Air Quality Analysis and Draft EIR/EA specified that all construction equipment incorporate Best Available Control Measures (BACM) technologies and that all fugitive dust control measures specified in SCAQMD Rule 403 be implemented. The additional measures listed in the comment will be implemented by complying with Caltrans Standard Specification 7-1.01F. Therefore, no changes to the documents have been made in response to this comment.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. The California Air Resources Board has a number of mobile source anti-idling requirements which could be employed. See their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations.
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards. In general, use equipment meeting Tier 3 or greater engine standards and commit to the best available emissions control technology. Tier 3 engine standards are currently available; Tier 4 will be available in the 2009-model year and should be used for project construction equipment to the maximum extent feasible. Lacking availability of non-road construction equipment that meets Tier 3 or greater engine standards, Caltrans should commit to using the best available emissions control technologies on all equipment.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of DPM and other pollutants at the construction site.

EPA-14

Administrative controls:

- Identify all commitments to reduce construction emissions and update the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet EPA diesel fuel requirements for off-road and on-highway, and where appropriate use alternative fuels such as natural gas and electric.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these

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populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners. EPA-14

Cumulative Impacts

The cumulative impacts section of the Draft EA for the Project identifies multiple current and future projects to be constructed in the study area. While the cumulative impacts section analyses a number of resources areas of concern, a cumulative impacts analysis of air quality is notably absent. The high volume of proposed projects combined with an increasingly urbanized setting, with low-income and minority communities in an already highly impacted area due to poor air quality, demands a thorough cumulative impacts assessment with proposed mitigation specific to air quality, Specifically, all feasible mitigation should be proposed and committed to along with timeframes for implementation. EPA recommends a more comprehensive analysis of cumulative impacts to air quality.

Recommendations:

- Include a more robust cumulative impact assessment specific to air quality that effectively discloses: 1) a defined study area for each resource; 2) the health or status of the resource and the historical extent of losses and/or impacts to the resource; 3) the trends associated with those losses and/or impacts; 4) how reasonably foreseeable actions may impact those resources; 5) the Project's contributions to these cumulative effects; and 6) a mitigation strategy and timeframe of implementation to reduce impacts. EPA recommends Caltrans follow the June 2005 *Guidance for Preparers of Cumulative Impact Analysis* prepared jointly by Caltrans, Federal Highway Administration, and the EPA for this additional analysis. The guidance is a useful reference and is available on-line at http://www.dot.ca.gov/ser/cumulative_guidance/approach.htm. EPA-15
- Include a mitigation strategy in the Final EA and FONSI to reduce impacts from the proposed Project and include timeframes for implementation of all proposed mitigation. EPA-16

EPA-15 EPA's request for additional cumulative analysis is acknowledged. The Draft EIR/EA included an evaluation of cumulative impacts, including air quality. The text in the Draft EIR/EA summarized the conclusion of the Cumulative Impact Analysis (September 2008), which was prepared utilizing the June 2005 guidance referenced by the commenter. The Air Quality Analysis for the project includes all traffic growth projected within the study area (including future and cumulative development) and assesses the proposed project's contribution to future air quality within the region and the local community.

EPA-16 All appropriate measures have been identified in the FEIR/EA to avoid, minimize, and/or mitigate potential cumulative impacts.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

In response please refer to
1/SWR/2008/08401:SCG

FEB 18 2009

Mr. Ronald Kosinski RK
Division of Environmental Planning
California Department of Transportation, District 7
100 South Main Street, MS-16A
Los Angeles, California 90012

Dear Mr. Goldman:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the California Department of Transportation's (Caltrans) December 2008 Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the Interstate-5 (I-5) High Occupancy Vehicle (HOV)/Truck Lanes Project (project) in Los Angeles County, California. The project involves the construction of HOV lanes and supplemental truck lanes on I-5 between State Route 14 and Parker Road in north Los Angeles County. As part of the project, several bridges would also be widened, including the bridge over the Santa Clara River. This project is of concern to NMFS because downstream of the project area, the Santa Clara River is within the endangered Distinct Population Segment (DPS) of southern California steelhead and is designated critical habitat for this species. In this regard, NMFS has the following comments.

Regarding the forthcoming final EIR/EA for the project, the EIR should clearly acknowledge that the endangered southern California steelhead DPS and critical habitat for this species lies downstream of the project area. Within the pertinent sections, the EIR/EA should identify and describe any anticipated changes to the hydrology of the Santa Clara River, how any changes would affect steelhead downstream, and any measures that are devised to minimize changes to the hydrology of the Santa Clara River. Additionally, the EIR/EA should identify and describe any unavoidable project impacts that would affect steelhead critical habitat downstream (i.e., water quality degradation, sedimentation), and any compensatory or impact minimization measures that would benefit steelhead downstream of the project area. NMFS-1

Letter from United Stated National Oceanic and Atmospheric Administration dated 02/18/09

NMFS-1 The National Marine Fisheries Service requested additional information relative to the southern California steelhead, including that identification of its designated critical habitat be identified, including any effects to steelhead and any minimization measures. Although steelhead is not specifically mentioned in the EIR/EA, this document fully considered the effects the proposed project would have on special-interest fish species within the Santa Clara River. In addition to steelhead located downstream from the project area, biological studies found the occurrence of the unarmored threespine stickleback (federally and State-listed as endangered), the Santa Ana sucker (a State Species of Special Concern, although the Santa Clara River population is excluded from federal listing), and the arroyo chub (State Species of Special Concern) within the Santa Clara River. Selection of Alternative 2 as the Preferred Alternative limits permanent disturbance within the Santa Clara River since it does not place additional columns within the drainage. Additionally, there would be no permanent alteration to the hydrology within the Santa Clara River. Permanent water quality Best Management Practices have been incorporated into the project design to improve the quality of existing and future runoff from the freeway, thus reducing indirect effects to these species. This will also further reduce any *de minimus* impacts to steelhead trout.

NMFS appreciates the opportunity to provide Caltrans with comments that will support preparation of the final EIR/EA for the project. Please contact Stan Glowacki at (562) 980-4061 or via email at Stan.Glowacki@noaa.gov if you have questions concerning this letter or if you would like additional information.

Sincerely,

for Rodney R. McInnis
Regional Administrator

cc: Jeff Humble, CDFG

STATE OF CALIFORNIA — Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

February 5, 2009

Mr. Carlos Montez, Environmental Planner
CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 7
100 S. Main Street, Suite 100, MS 16A
Los Angeles, CA 90012

Re: SCH#2007051028; CEQA Notice of Completion; draft Environmental Impact Report/Environmental Assessment (DEIR/EA) for the I-5 HOV/Truck Lans Project; SR 14 to Parker Road; Santa Clarita Valley; Los Angeles County, California

Dear Mr. Montez:

The Native American Heritage Commission (NAHC) is the state 'trustee agency' pursuant to Public Resources Code §21070 designated to protect California's Native American Cultural Resources. The Native American Heritage Commission (NAHC) has accepted the invitation of the California Department of Transportation (Caltrans) as a 'Participating Agency' on California State Highway System (SHS) and for federal-aid local streets and roads projects under FHWA's Surface Transportation Project Delivery Pilot Program, pursuant to 23 CFR 773, under authority of 23 U.S.C. 315 and 327, 49 CFR 1, 48, including FHWA Environmental Responsibilities that may be assigned under §6005, Appendix A to Par 773 of 23 U.S.C. 315 and 327.

The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action: NAHC-1

√ Contact the appropriate California Historic Resources Information Center (CHRIS) for possible 'recorded sites' in locations where the development will or might occur.. Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov. The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ The Native American Heritage Commission (NAHC) performed:

* A Sacred Lands File (SLF) search of the project 'area of potential effect (APE)': The results: No known Native American Cultural Resources were identified within one-half mile of the 'area of potential effect' (APE)...; However the NAHC SLF is not exhaustive and local tribal contacts

Letter from Native American Heritage Commission dated 02/05/09

NAHC-1 The NAHC's request for evaluation of known cultural resources and identification of appropriate mitigation measures for known and unknown resources and burials, pursuant to CEQA, is acknowledged. A Historic Property Survey Report was completed for the proposed project that did not identify any known cultural resources within the proposed project's Area of Potential Effect (APE). Measures were included in Section 2.8.4 that address the discovery of unknown cultural material or human remains during construction activities.

should be consulted from the attached list and the there are Native American cultural resources in close proximity..

- The NAHC advises the use of Native American Monitors, also, when professional archaeologists or the equivalent are employed by project proponents, in order to ensure proper identification and care given cultural resources that may be discovered. The NAHC, FURTHER, recommends that contact be made with Native American Contacts on the attached list to get their input on potential IMPACT of the project (APE) on cultural resources.. In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s) or Native American individuals or elders.
- √ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Again, a culturally-affiliated Native American tribe may be the only source of information about a Sacred Site/Native American cultural resource.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

- CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. . Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.

√ Lead agencies should consider avoidance, as defined in §15370 of the California Code of Regulations (CEQA Guidelines), when significant cultural resources are discovered during the course of project planning and implementation

NAHC-1

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

Native American Contacts
Los Angeles County
February 5, 2009

Charles Cooke
32835 Santiago Road
Acton , CA 93510
(661) 733-1812 - cell
suscol@intox.net
Chumash
Fernandeno
Tataviam
Kitanemuk

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
805 492-7255
(805) 558-1154 - cell
folkes9@msn.com
Chumash
Tataviam
Fernandeño

Fernandeno Tataviam Band of Mission Indians
William Gonzalaes, Cultural/Environ Depart
601 South Brand Boulevard, Suite 102
San Fernando , CA 91340
ced@tataviam.org
(818) 837-0794 Office
(818) 581-9293 Cell
(818) 837-0796 Fax
Fernandeno
Tataviam

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez
981 N. Virginia
Covina , CA 91722
(626) 339-6785
Yowlumne
Kitanemuk

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall , CA 91322
tsen2u@live.com
(661) 753-9833 Office
(760) 885-0955 Cell
(760) 949-1604 Fax
Fernandeño
Tataviam
Serrano
Vanyume
Kitanemuk

Randy Guzman - Folkes
4577 Alamo Street, Unit C
Simi Valley , CA 93063
ndnrandy@hotmail.com
(805) 905-1675 - cell
Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2007051025; CEQA Notice of Completion; draft Environmental Impact Report/Environmental Assessment (DEIR/EAA) for the I-5 HOV/Truck Lane Project; SR 14 to Parker Road; Santa Clarita Valley; Los Angeles County, California.

STATE OF CALIFORNIA--THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

SANTA MONICA MOUNTAINS CONSERVANCY
RAMIREZ CANYON PARK
5750 RAMIREZ CANYON ROAD
MALIBU, CALIFORNIA 90265
PHONE (310) 589-3200
FAX (310) 589-3207

February 23, 2009

Ronald J. Kosinski, Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 7
100 South Main Street, MS-16A
Los Angeles, California 90012

I-5 HOV and Truck Widening (SR-14 to Parker Road)
DEIR/EA Comments (EA 2332E)

Dear Mr. Kosinski:

The Santa Monica Mountains Conservancy (Conservancy) appreciates your consideration of our NOP comments and meeting with our staff to discuss this agency's concerns. However, we are dismayed to see that the Draft Environmental Impact Report- Environmental Assessment (EIR-EA) includes none of the mitigation measures specifically recommended by staff as part of the both the CEQA-NEPA process and Section 4(f) analysis.

All of the project's development alternatives require a small taking of Conservancy property. Assuming the Section 4(f) conditions outlined in the attachment to your August 20, 2008 letter to Paul Edelman remain valid and irreducible, our concerns are partially mitigated. More specifically the letter calls for a $65,000 payment to the Conservancy through an in lieu fee program. We believe that mitigation measure should be included in the Final EIR-EA mitigation measures and that the measure must specifically require when the funding is to be transferred to the Conservancy or the Mountains Recreation and Conservation Authority (MRCA) through its in lieu fee program. SMMC-1

In general, the Draft EIR-EA categorically minimizes the present and potential value of the Castaic Creek, Gavin Canyon underpass, and Weldon Overpass freeway crossing structures. To the best of our knowledge, the Draft EIR-EA includes zero mitigation measures or specific design features to maximize the future value of these structures for connectivity across I-5. The Draft EIR-EA is deficient for not addressing the project's potential cumulative functional degradation of these three crossing structures and the substantial temporary habitat loss during an extended construction period. Nighttime does not automatically turn construction sites into wildlife-friendly zones. Lastly, the analysis rests on the assumption that Las Lomas is a project likely to be approved and thus there is no point in designing mitigation measures that will benefit multiple California mountain ranges for hundreds of years. Las Lomas is less likely to occur than to occur. SMMC-2

Letter from Santa Monica Mountains Conservancy dated 02/23/09

SMMC-1 Measure LU-1 has been revised to incorporate the commitments outlined in the De Minimis Impact Finding signed by the Conservancy and the California Department of Transportation (Caltrans) in Section 2.1.6.3 and Appendix E, Environmental Commitments Record.

SMMC-2 As documented in the Draft EIR/EA under Section 2.17.2.4, based on a Wildlife Corridor Assessment completed in October 2008, the proposed project's impacts to wildlife corridors would be minimal and not adverse. In addition, because of the existing barriers to wildlife movement in the project area and the relatively small scale of the proposed project improvements within the context of the Interstate 5 (I-5) corridor, the proposed widening of I-5 would not substantially contribute to the cumulative adverse effects that have occurred with respect to wildlife movement locally and between the Santa Susana and San Gabriel Mountains.

Caltrans recognizes that opportunities exist across I-5 for wildlife movement between the Santa Susana and San Gabriel Mountains. The Wildlife Corridor Assessment evaluated potential wildlife crossing (linkage) locations throughout the project limits. The I-5 bridged underpass for The Old Road at Gavin Canyon and the bridged overpass for Weldon Canyon Road were both identified as areas where some degree of wildlife movement likely occurs. There is no intent to diminish the value of these features for wildlife movement. It must be recognized that there are impediments to wildlife movement that are not related to the I-5 HOV/Truck Lanes project. Constraints to safe wildlife crossings include existing traffic speeds and volume on The Old Road, residential/commercial development, steep

Mr. Ron Kosinski
I-5 HOV and Truck Widening (SR-14 to Parker Road) DEIR/EA Comments (EA 2332E)
February 23, 2009
Page 2

Our staff had requested that Caltrans acquire, or fully fund another agency--such as the Conservancy or the MRCA--to acquire APN 2826-025-007. That parcel abuts the parcel where Caltrans would take a small piece of a Conservancy-owned and TEA 21-funded property, which is part of the Santa Clarita Woodlands Park. The parcel is shown on the aerial attached to your August 20, 2008 letter. The 6.62-acre parcel has no access except from I-5. The current owner (and three more prior) approached the Conservancy for an easement. He is a willing seller at less than $100,000. We will provide owner contact information under separate cover. This mitigation is justified to offset the loss of adjacent parkland, the narrowing of the Gavin Canyon under-crossing with new bridge pillars, and the expansion of the freeway into otherwise natural park-adjacent right-of-way for many miles. By removing the parcel from future development potential, it vouchsafes the scenic Newhall Pass I-5 viewshed and the function of adjacent animal staging area for the Gavin Canyon under-crossing for wildlife movement. SMMC-3

The Weldon Overpass will be completely replaced. The Draft EIR-EA must include a mitigation measure that devotes a ten-foot-wide section of the bridge for pedestrian, equestrian, bicycle and wildlife crossing. We recommend the exact same design parameters that our staffs have worked on for the Skirball Center Lane bridge over the 405 Freeway in the Sepulveda Pass. We are excited to see that the Caltrans-funded National Park Service (NPS) study has already shown mountain lion use of that bridge over the ten-lane freeway. In addition to augmenting the design of the Weldon Canyon Overpass, all of the potential construction areas shown on Figure 1.5 should be meticulously graded, light restricted, and landscaped to maximize wildlife use of the new bridge. In addition, the intersection design and grading should be adjusted to permit a trail along The Old Road to allow for future construction of the Rim of the Valley Trail from the eastern edge of the bridge into the open space located behind the large cut slope east of the bridge. SMMC-4

Caltrans frequently contacts the Conservancy about its riparian in lieu fee mitigation program for impacts created many years prior. We urge Caltrans to not defer riparian mitigation in the Final EIR-EA to some date uncertain and to require the transfer of an in lieu payment to some program prior the completion of construction when a project still has some budget. The lack of budget and the sustained temporal loss of habitat create a situation where riparian mitigation is delayed for years and becomes increasingly expensive as the available land base diminishes. Please address any questions to Paul Edelman, Deputy Director of Natural Resources and Planning, at the above address and by phone at (310) 589-3200 ext. 128. SMMC-5

Sincerely,

RONALD P. SCHAFER
Chairperson

topography, inaccessible man-made drainage structures and fencing.

Within the San Fernando Pass, The Old Road is a two-lane facility with a total roadway capacity of 3,200 vehicles per hour (vph). It is expected to be widened to four lanes by 2035, with a roadway capacity of 7,000 vph. Ultimately, The Old Road is designated to be widened to six lanes by the County of Los Angeles. Another potential significant obstacle to adequate wildlife movement in this area is the planned Las Lomas development project. As proposed, Las Lomas would extend along the east side of I-5 from just south of Calgrove Boulevard to SR-14. Even though some problems do exist with this planned development, it has not yet been ruled out, and the land still belongs to the developer.

As such, an effective effort to facilitate wildlife movement and increase connectivity between the Santa Susana and San Gabriel Mountains is beyond the purview of the I-5 project and will require cooperation and involvement of all affected entities, including the County of Los Angeles, the City of Santa Clarita, the Los Angeles County Flood Control District, the Conservancy, and adjacent landowners. Even though the proposed I-5 HOV/Truck Lanes project would not have a substantial impact on wildlife movement, Caltrans is willing to participate with the involved stakeholders in this effort.

SMMC-3 The Conservancy has offered to provide owner contact information. Caltrans is willing to discuss the possibility of acquisition with the owner of the parcel as soon as the contact information is obtained. Caltrans would also like to pursue opportunities to fulfill its mitigation requirements on this parcel.

SMMC-4 Please see the response to Comment SMMC-2 regarding the requested wildlife crossing. The potential staging areas identified on Figure 1.5 would be returned to their existing condition after construction ends. Replacement of the Weldon Canyon Bridge does not preclude the development of the Rim of the Valley Trail on The Old Road in the future.

SMMC-5 The in-lieu-fee payment will be transferred to the Conservancy prior to the start of construction.

COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

"Creating Community Through People, Parks and Programs"

Russ Guiney, Director

January 28, 2009

Mr. Carlos Montez
Division of Environmental Planning
California Department of Transportation, District 7
100 South Main Street, MS-16A
Los Angeles, CA 90012-3712

Dear Mr. Montez:

I-5 HOV AND TRUCK LANE WIDENING PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT

The Draft EIR/EA for the proposed widening project on Interstate 5 (I-5) in the Santa Clarita Valley has been reviewed for potential impacts on the facilities under the jurisdiction of this Department. We have determined that the proposed project would impact the Castaic Sports Complex located at 31230 North Castaic Road, Castaic, CA 91384, within the affected environment and directly adjacent to I-5.

Specifically, under Alternatives 2 and 3, construction activities would result in some temporary impacts to the sports complex, including (but not limited to) additional traffic, pollutant emissions from construction activities, and increased noise and vibration. These impacts are identified in Section 2.1.6.2 (page 2.1-18) of the Draft EIR/EA. However, no mitigation measures are provided under Section 2.1.6.3 (page 2.1-20) to address these impacts. (The only mitigation measure listed only deals with impacts to Santa Clarita Woodlands State Park.) Appropriate measures should be included in the Draft EIR/EA to mitigate impacts on the Castaic Sports Complex. LADPR-1

Thank you for including this Department in the environmental review process. If we may be of further assistance, please contact me at (213) 351-5127.

Sincerely,

Clement Lau, AICP
Park Planner

Planning and Development Agency • 510 Vermont Ave • Los Angeles, CA 90020 • (213) 351-5198

Letter from County of Los Angeles Department of Parks and Recreation dated 01/28/09

LADPR-1 Sections 2.1.6 and 2.4.1.4 of the Environmental Impact Report/Environmental Assessment (EIR/EA) have been revised to include references to the appropriate minimization measures in other sections of the EIR/EA to address construction impacts at the Castaic Sports Complex.

Letter from City of Santa Clarita dated 02/17/09

City of
SANTA CLARITA

23920 Valencia Boulevard • Suite 300 • Santa Clarita, California 91355-2196
Phone: (661) 259-2489 • FAX: (661) 259-8125
www.santa-clarita.com

February 17, 2009

Mr. Carlos Montez
California Department of Transportation, District 7
Division of Environmental Planning, MS 16A
100 South Main Street, Suite 100
Los Angeles, CA 90012-3712
(Sent via email – Carlos_Montez@dot.ca.gov)

Subject: Draft EIR/EA for I-5 HOV/Truck Lane Project; EA 2332EO

Dear Mr. Montez:

Thank you for the opportunity to comment on the above referenced environmental document. In 2004, the Los Angeles County Metropolitan Transportation Authority (Metro) adopted the North County Combined Highway Corridors Study (NCCHCS). This study was conducted by Metro in cooperation with the cities of Los Angeles, Santa Clarita, Palmdale, Lancaster, and the County of Los Angeles. The purpose of this study was to develop a multi-modal transportation plan for the northern portion of Los Angeles County. The NCCHCS contains both a short-term plan (2010) and a long-term plan (2025) for Interstate 5, State Route 14 and State Route 138.

The City of Santa Clarita is in agreement with the HOV and truck lane improvements proposed as part of this EIR and supports the fact that these improvements extend farther than the limits contained in the NCCHCS short-term plan. The City of Santa Clarita would like to emphasize, however, that the proposed I-5 HOV and truck lane improvements should not preclude the eventual construction of the full HOV and truck lane improvements contained in the NCCHCS long-term plan.

According to the most recent SCAG projections, the North Los Angeles County sub-region will continue to be the fastest growing sub-region in Los Angeles County. Vehicular delay on I-5 is substantial today and will continue to increase in the coming years. Given the rapid growth trends for traffic in North Los Angeles County, programmed capacity improvements on I-5 will be overwhelmed well before 2025. It is imperative that the full improvements contained in the NCCHCS long-term plan for I-5 be designed and constructed in a timely manner.
Additionally, the City also offers the following technical comments on the details of the proposed project and the environmental document:

Draft EIR/EA for I-5 HOV/Truck Lane
2-17-08
Page 2

1. Figures 1.4 and 1.5 (Project Features) depict construction of a water treatment basin within a heavily vegetated area between northbound Valencia Boulevard off-ramp and the travel lanes. As this area is currently a low lying sump, it is unclear whether construction of the basin would necessitate removal of the significant vegetation. It is recommended that the major trees be retained in place or transplanted to other locations within the project area. CSC-1
2. The City has received correspondence from approximately 35 residents of the residential area north of Lyons Avenue, east of I-5 and south of the golf course (Altos/Farrow/Vista Hills and surrounding neighborhood) concerning their perception of high freeway traffic noise levels within their neighborhood. The City would urge CALTRANS to organize a community meeting with these residents and monitor existing noise levels in appropriate locations based on community input. This should be done prior to making a final determination as to the height and length of the sound wall necessary to mitigate freeway traffic noise impacts to this neighborhood. If additional walls are determined to be necessary in locations outside of the freeway right-of-way to reduce noise impacts on this neighborhood, we recommend that CALTRANS provide the residents with information concerning the degree to which any proposed sound barriers might interfere with their views of the golf course. CSC-2
3. We recommend that all sound walls be constructed of decorative textured masonry materials rather than plain CMUs. A reasonable level of texture and wall articulation along with appropriate landscape treatment will make the walls more attractive for adjacent residents and help to minimize the "closed in" visual impact to motorists. CSC-3

Thank you for the opportunity to comment on this environmental document. If you have any questions, please feel free to contact me at 661-255-4330.

Sincerely,

David Koontz, AICP
Associate Planner.

S/CD/Current/IRP/IRP Files/Caltrans I-5 HOV Truck Lane/EIR Comments 2-17-09

CC: Paul Novak, 5th District
Rosalind Wayman, 5th District
Paul Brotzman
Robert Newman
Ian Pari
Andrew Yi
Sharon Sorensen

CSC-1 The City's concern regarding the loss of vegetation to construct a water treatment basin at the Valencia Boulevard northbound off-ramp is acknowledged. Not all of the area identified on Figures 1.4 and 1.5 will be used to construct the proposed detention basin and biofiltration swale. The California Department of Transportation (Caltrans) will work with the City during final design to minimize impacts to vegetation in this area and transplantation of existing trees to other locations in the project area to the extent feasible.

CSC-2 Please refer to General Response – Sound Barriers. Coordination with residents where sound walls are determined reasonable, as part of final design will be conducted and effects on golf course views addressed.

CSC-3 The Caltrans Landscape Architecture Department will apply the appropriate landscape treatment considering the existing architecture and visual resources within the project area. Only Caltrans-approved standard architecture treatment will be applied to the sound walls; any other treatment beyond the Caltrans standard treatment must be financed by the City of Santa Clarita.

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: LD-1

February 25, 2009

Mr. Ronald J. Kosinski, Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 7
100 South Main Street, MS-16A
Los Angeles, CA 90012

Dear Mr. Kosinski:

NOTICE OF AVAILABILITY OF
DRAFT ENVIRONMENTAL IMPACT REPORT
AND ENVIRONMENTAL ASSESSMENT
I-5 HOV AND TRUCK LANE WIDENING
FROM SR-14 TO PARKER ROAD

Thank you for the opportunity to review the Environmental Assessment for the subject project. The project proposes to widen Interstate 5 to include high-occupancy vehicle lanes and truck climbing lanes from State Route 14, in the south, to Parker Road, in the north, in the City of Santa Clarita and unincorporated Los Angeles County.

The following comments are for your consideration and relate to the environmental document only:

Hazards-Geotechnical/Solis/Geology

All or portion of the site is located within potentially liquefiable and earthquake-induced landslide areas per the State of California Seismic Hazard Zones Map-Newhall and Oat Mountain Quadrangles. The referenced geotechnical report by CH2M Hill, dated December 2007, and Addendum, dated September 2008, addressing the proposed development and recommending mitigation measures for geotechnical hazards, should be included as part of the Environmental Assessment. LADPW-1

For any questions regarding the geology comments above, please contact Mr. Jeremy Wan at (626) 458-4925.

Letter from County of Los Angeles Department of Public Works dated 02/25/09

LADPW-1 The analysis and conclusions in the Preliminary Geotechnical Report were summarized in the Environmental Impact Report/Environmental Assessment.

Mr. Ronald Kosinski
February 25, 2009
Page 2

Hazards-Flood Maintenance

This project will modify the Interstate 5 Freeway near and in City of Santa Clarita. The Los Angeles County Flood Control District maintains several channels and drains that will be affected by this project. We have no objection on this early stage of the project. However, please keep us informed when more project details are available. At that time, we will be able to evaluate the impact of this project on our operation. LADPW-2

If you have any questions regarding flood, please contact Chien-Hao Chen at (818) 896-0594.

Service-Traffic/Road Maintenance

- Temporary construction impacts to traffic such as closures and detours will need to be coordinated and approved by the County of Los Angeles Department of Public Works' Traffic and Lighting Division.
- Construction detour of traffic including trucks onto County roadways may have a detrimental affect on our existing pavement, which may affect our maintenance. The impact on County roadways' pavement should be evaluated to determine if any repairs should be included as a part of this project. LADPW-3

If you have any questions regarding maintenance comment, please call Glenn Tong at (661) 947-7173, Extension 230.

Other--Environment

Building and Safety Issues: The Los Angeles County Building Code, Section 110.4, requires that buildings or structures adjacent to or within 200 feet (60.96 m) of active, abandoned, or idle oil or gas well(s) be provided with methane gas protection systems. If the project site contains or lies within 200 feet of active, abandoned, or idle oil or gas wells, this issue should be addressed and mitigation measure provided, and Public Works' Environmental Programs Division must be contacted for issuance of necessary permits. LADPW-4

For any questions regarding the environmental comments above, please contact Mr. Corey Mayne at (626) 458-3524.

LADPW-2 Coordination with the Los Angeles County Flood Control District will be conducted as the project moves into final design. The District's statement that it has no objections to the proposed project is acknowledged.

LADPW-3 Coordination with County of Los Angeles Public Works Traffic and Lighting Division regarding temporary construction impacts will be conducted during final design and will consider impacts to local roadways.

LADPW-4 No buildings or structures will be acquired as part of the project, and no oil or gas wells have been identified. As the project proceeds, and if any wells are identified, the appropriate coordination with Los Angeles County will be conducted.

Mr. Ronald Kosinski
February 25, 2009
Page 3

If you have any other questions or require additional information, please contact Mr. Toan Duong at (626) 458-4921.

Very truly yours,

GAIL FARBER
Director of Public Works

for DENNIS HUNTER, PLS PE
Assistant Deputy Director
Land Development Division

MA:ca
P:\dpw\CEQA\CDM\I-5 HOV AND TRUCK LANES PROJECT- CALIFORNIA DEPARTMENT OF TRANSPORTATION-DEIR\EA.doc

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

February 24, 2009

Ronald J. Kosinski, Deputy District Director
California Department of Transportation, District 7
Division of Environmental Planning
100 South Main Street, Ms-16a
Los Angeles, CA 90012

Dear Mr. Kosinski:

DRAFT ENVIRONMENTAL IMPACT STATEMENT, I-5 HOV AND TRUCK LANE WIDENING (SR-14 TO PARKER ROAD), NOTICE OF PUBLIC HEARING AND AVAILABILITY OF DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT, SANTA CLARITA (FFER #200800343)

The Draft Environmental Impact Statement has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. We have no comments at this time.

LAND DEVELOPMENT UNIT:

1. We have no comments at this time.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. LAFD-1

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS	BRADBURY	CUDAHY	HAWTHORNE	LA MIRADA	MALIBU	POMONA	SIGNAL HILL
ARTESIA	CALABASAS	DIAMOND BAR	HIDDEN HILLS	LA PUENTE	MAYWOOD	RANCHO PALOS VERDES	SOUTH EL MONTE
AZUSA	CARSON	DUARTE	HUNTINGTON PARK	LAKEWOOD	NORWALK	ROLLING HILLS	SOUTH GATE
BALDWIN PARK	CERRITOS	EL MONTE	INDUSTRY	LANCASTER	PALMDALE	ROLLING HILLS ESTATES	TEMPLE CITY
BELL	CLAREMONT	GARDENA	INGLEWOOD	LAWNDALE	PALOS VERDES ESTATES	SAN MARINO	WALNUT
BELL GARDENS	COMMERCE	GLENDORA	IRWINDALE	LOMITA	PARAMOUNT	SAN DIMAS	WEST HOLLYWOOD
BELL FLOWER	COVINA	HAWAIIAN GARDENS	LA CANADA FLINTRIDGE	LYNWOOD	PICO RIVERA	SANTA CLARITA	WESTLAKE VILLAGE
			LA HABRA				WHITTIER

Letter from County of Los Angeles Fire Department dated 02/24/09

LAFD-1 The County of Los Angeles Fire Department's (LAFD) responsibility for enforcement of the County Oak Tree Ordinance is acknowledged. As described in Section 2.17.4 of the Environmental Impact Report/Environmental Assessment, where oak trees are impacted outside of the Caltrans right of way, local oak tree ordinances would be followed.

2. Under the Los Angeles County Oak tree Ordinance, a permit is required to cut, destroy, remove, relocate, inflict damage or encroach into the protected zone of any tree of the Oak genus which is 25 inches or more in circumference (eight inches in diameter), as measured 4 1/2 feet above mean natural grade.
3. The applicant should incorporate innovative design to reduce or eliminate the impact to the Oak resources.
4. The loss of Oak tree habitat should be mitigated for pursuant to the provisions of the City's Oak Tree Ordinance.
5. We have not received an Oak Tree Permit application or report for review. An Oak Tree Permit may be required for this project.

LAFD-1

HEALTH HAZARDOUS MATERIALS DIVISION:

1. We have no comments at this time.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

FRANK VIDALES, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

FV:lj

COLLEGE OF THE CANYONS

26455 Rockwell Canyon Road, Santa Clarita, California 91355 • (661) 259-7800 • www.canyons.edu

February 5, 2009

California Department of Transportation, District 7
Division of Environmental Planning, MS 16A
100 South Main Street, Suite 100
Los Angeles, CA 90012-3712

Attn.: Mr. Carlos Montez

Subject: 2008-12-01 I-5 HOV/Truck Lanes Project SR-14 to Parker Road

Mr. Montez:

We have reviewed the current EIR/EA and have found there to be no negative impacts to the College of the Canyons should this project move forward, in any/all of its optional iterations. Neither our property nor our access would be adversely affected in the current design. Should the design be revised, however, we would request another opportunity to review the plan. COTC-1

Should you have any questions please don't hesitate to contact me.

Sincerely,

Jim Schrage
Vice President, Facilities Planning, Operations and Construction

Cc: Chancellor Dianne G. Van Hook, SCCCD
Mr. Victor Lindenheim, Executive Director, Golden State Gateway Coalition

SANTA CLARITA COMMUNITY COLLEGE DISTRICT BOARD OF TRUSTEES
Bruce D. Fortine • Merrete R. Jenkins • Joan W. MacGregor • Ernest L. Behomer • Scott T. Wilk

Letter from College of the Canyons dated 02/05/09

COTC-1 The commenter's support of the project and their statement that no negative impacts to the College of the Canyons would result from the proposed project are acknowledged.

COLLEGE OF THE CANYONS

Dr. Dianne G. Van Hook, *Chancellor*
26455 Rockwell Canyon Road, Santa Clarita, California 91355 • (661) 362-3400 • www.canyons.edu

February 18, 2009

Mr. Carlos Montez
California Dept of Transportation, District 7
Division of Environmental Planning, MS 16A
100 South Main Street, Suite 100
LA, CA 90012-3712

Dear Mr. Montez,

At the February 17, 2009 Governing Board meeting, The Santa Clarita Community College District Board of Trustees approved a Resolution in Support of the Interstate 5 HOV/Truck Lane project. I have attached a copy for your records with this communication. COTC-2

Please let me know if we can be of further assistance.

Sincerely,

Dr. Dianne Van Hook
Chancellor

Enclosure

SANTA CLARITA COMMUNITY COLLEGE DISTRICT BOARD OF TRUSTEES
Bruce D. Fortine • Michele R. Jenkins • Joan W. MacGregor • Ernest L. Tichenor • Scott Wilk

Letter from College of the Canyons dated 2/18/09

COTC-2 The Santa Clarita Community College District Board of Trustees' support for the project is acknowledged.

RESOLUTION 2008/09-15

Santa Clarita Community College District Board of Trustees
Resolution in Support of the Interstate 5 HOV/Truck Lane Project

Whereas, the I-5 corridor is the backbone of the west coast Federal transportation system and the lifeline for commerce and sustained economic growth and development in our region and our state; and

Whereas, over 40 percent of all goods that are imported into the United States arrive via the ports of Long Beach and Los Angeles, with many traveling by truck up the I-5 and through the Newhall pass; and

Whereas, due to its topography the Newhall pass is a choke point for traffic coming from northern California, and the area is susceptible to wildfires and the occasional snow storm and these additional lanes are needed to mitigate these natural events that frequently close this vital transportation artery; and

Whereas, every California business, every resident, every consumer, every traveler depends on the safety and efficiency of this road; and

Whereas, the I-5 in northern Los Angeles County carries more than 200,000 vehicles every day, including more than 19,000 trucks. That is an astounding 73 million-plus vehicles a year, including at least 7 million trucks; and Whereas, the I-5 is near capacity today and Los Angeles County's population is projected to grow by 3 million people in the next 20 years; and

Whereas, the fastest growing sub-region in Los Angeles County is Northern Los Angeles County, including the Santa Clarita Valley; and

Whereas, traffic is projected to increase by 65 percent over the next 10 years, and by 114 percent over the next 20 years; and

Whereas, a proposal to help address congestion in the I-5 corridor was put forth by the Los Angeles County Metropolitan Transportation Authority; and

Whereas, specific project alternatives, environmental and other studies to move the project forward have been proposed by Caltrans; and

Whereas, the proposal would add northbound and southbound truck lanes and carpool (high occupancy vehicle) lanes to the I-5 corridor in northern Los Angeles County and would greatly improve passenger and commercial vehicle mobility and safety in this busy and important corridor; and

Whereas, the project is needed, is realistic and enjoys broad community support; and

Whereas, these improvements to I-5, California's main north-south thoroughfare, would yield benefits far exceeding its costs: mitigating traffic congestion, improving roadway safety, adding jobs, fostering economic development, alleviating air pollution, expediting goods movement and accommodating defense and homeland security transportation needs.

Therefore, Be It Resolved that the Board of Trustees of the Santa Clarita Community College District supports the development of truck and carpool lanes on Interstate 5 to alleviate traffic congestion and reduce the travel time needed for faculty, staff, students, and visitors to reach College of the Canyons.

Adopted and Signed this Seventeenth of February, Two Thousand and Nine.

Mrs. Joan W. MacGregor, President
Board of Trustees
Santa Clarita Community College District

Mr. Bruce Fortine, Clerk
Board of Trustees
Santa Clarita Community College District

10.2, Page 2
Feb. 17, 2009

Castaic Area Town Council
Post Office Box 926, Castaic, California 91310 (661) 295-1156 www.castaic.org

February 5, 2009

Carlos Montez, Senior Environmental Planner
California Department of Transportation, District 7
Division of Environmental Planning, MS16A
100 South Main Street
Los Angeles, CA 90012-3712

In regards to: Interstate 5 High Occupancy Vehicle/Truck Lanes Project

Dear Mr. Montez:

On January 21, 2009, the Castaic Area Town Council voted 9 to 1 in favor of this letter requesting the following:

> That a public meeting be held within the community of Castaic for the purpose of obtaining public comments on this project. The current and only location is across the Santa Clarita Valley and far removed from the residents most affected by this project. Our recommendation is the use of the Castaic Regional Sports Complex located at 31230 N. Castaic Road, Castaic, CA 91384 with proper notice.
>
> That copies of all documents related to this project be deposited at the Los Angeles County Library in Castaic located at 27971 Sloan Canyon Road, Castaic, CA 91384 for public review.
>
> That the comment period for this project be extended to accommodate the requests above.

CATC-1

This is a major project that may have significant impacts on our community of over 26,000 people. The terminus of this project is at the center of our community that, according to your Draft EIR, endures over 17,000 truck trips per day. The potential conflicts related to lane changes and merging traffic patterns are not insignificant, particularly during seasonal and emergency road closures.

Respectfully,
Castaic Area Town Council

Steven J. Teelman, President

Cc: Rosalind Wayman, Senior Deputy to Los Angeles County Supervisor Michael D. Antonovich

Letter from Castaic Area Town Council dated 02/05/09

CATC-1 On January 21, 2009, California Department of Transportation (Caltrans) staff attended the Castaic Town Council meeting to present the project and answer questions. Your concerns about the location of the public hearing are noted. The public hearing location was selected based on its proximity to the overall proposed project, the size of the facility, and its availability.

A hard copy of the Draft Environmental Impact Report/Environmental Assessment (EIR/EA) will be sent to the Los Angeles County Library in Castaic, located at 27971 Sloan Canyon Road. When the document is approved, the final environmental document will also be sent to this location. In addition, the entire document is available to view on the Internet through the Caltrans District 7 website at http://www.dot.ca.gov/dist07/resources/envdocs/.

The document was circulated for a total of 63 days, and the public comment period ended on February 17, 2009. The comment period cannot be extended beyond the 63 days provided. All comments submitted, regardless of attendance at the public hearing, will be incorporated and responded to in the final environmental document.

We are aware that the proposed project may have construction-related impacts in your community. These concerns were addressed in Chapter 2 of the Draft EIR/EA. We do not anticipate any road closures in your community. This area was selected as the appropriate location for the terminus of the HOV lanes because of the available distance to effectively make the transition. During development of the project, Caltrans reviewed the potential implications of ending the HOV lanes at other possible locations. These options were eliminated due to the operational challenges and conflicts they presented, in addition to substantial modifications and associated right of way impacts.

Calgrove Corridor Coalition

February 16, 2009

Mr. Carlos Montez
California Department of Transportation, District 7
Division of Environmental Planning
100 S. Main Street, Suite 100
Los Angeles, CA 90012
Email: Carlos_Montez@dot.ca.gov

Dear Mr. Montez:

On behalf of the Calgrove Corridor Coalition (CCC), I am providing comments on the draft EIR/EA for the I-5 HOV/Truck Lanes Project – SR-14 to Parker Road. The CCC represents several hundred residents who reside in the area just east of the Calgrove Ave. interchange with I-5, and who thus will be directly affected by the project alternatives being considered by Caltrans. I am writing to express my concerns about several identified impacts of the project, and believe several elements of the EIR/EA need to be further evaluated based on faulty assumptions.

As I am sure you are aware, the I-5 segment near Calgrove Ave. has been identified as having a greater volume of traffic, both during peak periods and on a daily basis, than any other segment of the project. Consequently, it is imperative that our residential area be given adequate consideration and provided sufficient mitigation with respect to all potential environmental impacts. Of most concern are the noise and air pollution impacts from the freeway. Our residents have suffered with the ever-increasing noise and pollution from I-5 freeway as its use has continuously escalated throughout the years without any mitigation by Caltrans. In fact, many of our area residents are original owners that moved into the neighborhood in the 1960s, and who have been detrimentally impacted by increasing freeway traffic over the years. Now that the expansion of I-5 may be imminent, the time has come for Caltrans to properly mitigate for both past and future nuisances caused by this freeway.

First, I wish to make some general comments about the EIR/EA document. It is not apparent how the projected increases in traffic heading south on I-5 will be handled once it reaches the intersection with I-14. A significant traffic bottleneck exists there today, and as traffic on I-14 continues to grow, it will further congest that bottleneck. Without enough matching lanes to accommodate southbound traffic from both I-5 and I-14, it seems that the proposed I-5 expansion project may only create what can best be described as additional "parking lanes" for southbound vehicles to crawl along in as they attempt to travel up to and through the I-5/I-14 interchange. Unfortunately, the majority of the impact from these additional "parked" vehicles will be in our neighborhood. Pollution and noise from vehicles which otherwise would be lined up north of the I-5/Valencia Ave. interchange during peak travel periods would, as a consequence of the I-5 expansion, freely travel to near the Calgrove Ave. exit, where they would then just bunch together in many more lanes than they currently do. As such, without sufficient I-5 take-away capacity south of the I-14 interchange, I believe all studies regarding noise and pollution from the proposed expansions need to specifically address the above-described traffic scenario. The EIR/EA cannot just ignore the fact that the widening of I-5 to I-14 does not widen I-5 beyond that interchange, and thus southbound traffic will continue to back up as it does today, just in more lanes. CCC-1

Another aspect of the EIR/EA which requires further analysis is the assumption that the proposed widening of I-5 would not generate increased traffic on the freeway. While this may be wishful thinking on the part of Caltrans, it has yet to be proven. Experience has shown that whenever new freeways are built and existing ones are expanded, they tend to immediately attract increased traffic. This is simply because when commute times are reduced through added freeway lanes, there is less incentive for drivers to join car and van pools, or to seek alternative modes of transportation such as bus or train. In other words, the increased convenience of travel in a single passenger vehicle from the reduced travel time offsets the benefits of other forms of transport. Consequently, current EIR/EA projections regarding traffic and resulting impacts are unrealistically low and the EIR/EA must be revised to reflect this reality. CCC-2

Before I address permanent noise concerns from the expansion of I-5, I would like to comment on construction-related noise. Table 2.15.E of the EIR/EA identifies typical noise levels for construction equipment. While these extreme noise levels may be necessary to perform the majority of construction activities, they are unacceptable during nighttime hours near residential areas. Consequently, the project must restrict construction work hours for all but the most quiet of activities to no later than 9 PM on weekdays and 6 PM CCC-3

Letter from Calgrove Corridor Coalition dated 02/16/09

CCC-1/ CCC-2 New Interstate 5 (I-5) high-occupancy vehicle (HOV) lanes recently opened south of State Route 14 (SR-14), and direct HOV-to-HOV connector ramps are also currently being constructed between the existing I-5 and SR-14 HOV lanes. The proposed project consists of HOV lanes that will connect to the new lanes south of SR-14. As such, HOVs within the project limits will gain access to the new HOV lanes while avoiding congestion in the general-purpose lanes. The project is consistent with the regional goals of reducing the number of single-occupant vehicles by providing a more comprehensive network of HOV lanes.

Also note that the traffic study analyzes a Constrained Flow scenario in which the volume of traffic within the project limits is constrained by the amount of traffic that can pass through the I-5/SR-14 interchange. The traffic study demonstrates that under this Constrained Flow scenario, traffic congestion within the project limits will be less with the proposed project than under a no-build scenario.

The traffic projections used in the analysis are based on traffic modeling that specifically includes the proposed increase in freeway capacity in order to capture the true traffic demand for the facility. The projections are therefore not unrealistically low in relation to the build scenario. By adding capacity, the duration of congestion is reduced even when congestion is not fully eliminated.

Traffic noise is proportional to the average vehicle speed and, to a certain limit, traffic volumes. A scenario with congestion on I-5 during the peak travel periods and additional traffic volumes due to the proposed project, as described by the commenter, would not generate the highest traffic noise level. The noise impact analysis was prepared by evaluating traffic noise impacts and noise abatement measures based on the worst-case traffic condition. The worst-case traffic condition occurs when traffic volumes are near capacity and traveling at free-flowing speeds of 65 miles per hour (mph) for automobiles and medium trucks and 60 mph for heavy trucks.

CCC-3 The comment regarding construction hours has been noted. As stated in Section 2.15.4 of the Environmental Impact Report/Environmental Assessment (EIR/EA), noise generated by construction activities will conform to Caltrans Standard Specifications in Section 7-1.01I, "Sound Control Requirements," and Caltrans Standard Provisions Section S5-300.

CCC-4 The noise impact analysis and the noise level measurements were conducted adequately. The purpose of conducting noise level measurements is to calibrate the noise model. Traffic noise impact and abatement measures were evaluated based on worst-case traffic conditions. Therefore, fluctuations in economic conditions would not change or affect the results of the noise study. Sound barriers or retaining walls are expected to generate noise reflections. However, reflected sound levels would attenuate with distance and would not measurably contribute to the overall noise level. Recognizing this, the Caltrans Traffic Noise Analysis Protocol (Protocol) does not require analysis of reflected noise.

on weekends, and to no sooner than 7:30 AM on weekdays and 9 AM on weekends. These restrictions must be incorporated into the EIR/EA and project construction requirements. CCC-3

Permanent noise from the project has been estimated based on a Noise Impact Analysis performed by LSA Associates, Inc. This analysis appears to be insufficient and requires further review. First, the Noise Impact Analysis performed by LSA Associates, Inc. apparently was performed this past summer, around the height of the gas price crisis. It is without doubt that many vehicle trips were eliminated during this period as many vehicle owners could no longer afford to travel as they had previously become accustomed. Any noise measurements performed during this period must be adjusted for increased traffic expected under normal economic conditions. Second, the project scope requires six to eighteen ft. tall retaining walls between the northbound and southbound lanes in the area just north of Calgrove Ave. due to the elevation differential between the lanes. Unfortunately, the southbound lanes have higher elevations than the northbound lanes, so these the retaining walls will reflect noise from northbound traffic (which currently is unobstructed as it moves away from us) directly into our residential area just east of the freeway. Noise measurements taken by LSA Associates of traffic, which obviously were taken with the existing highway configuration, do not capture the significant increases in noise which will be reflected by these retaining walls, and therefore must be revised. CCC-4

Lastly, the Noise Impact Analysis performed by LSA Associates was based on ten minute noise measurements taken during the middle of the day. With respect to the area east of the I-5 segment near Calgrove Ave., these measurements were taken primarily at locations which are below the existing freeway elevation and/or behind existing structures. The combination of these locations and timing of these measurements severely understates the existing noise problems resulting from vehicles travelling on the freeway. Due to a combination of microclimate changes and changing wind direction, existing freeway noise in this area can vary from barely perceptible to unbearable. Most noise concerns are during nights when colder, denser air carries the noise farther. I expect that any noise study performed over a 10 minute daytime interval is most likely to have under-recorded existing noise impacts to our neighborhood. Further analysis must be performed with full consideration of changes to the travel and movement of noise over various wind conditions and over all hours of the day and night. CCC-5

In addition, the majority of significant noise concerns can be attributed to truck traffic. As shown in Table 2.6.A of the EIR/EA, trucks travel on I-5 past the Calgrove Ave. exit at an average rate of once every 4.6 seconds, or roughly once every nine seconds in each direction. Much of the noise is caused by trucks travelling northbound down the Newhall grade that operate their vehicles using illegal "Jake brakes" as they descend. These vehicles seem to deliberately try to wake neighborhood residents in the middle of the night, and are usually quite successful. Trucks travelling southbound also create additional noise as they "gear down" to be able to transition from the mild decent towards Calgrove Ave. to the steep climb up Newhall Pass. CCC-6

We sympathize with other neighborhoods along the I-5 freeway which are designated to get sound walls as part of the I-5 widening project. However, we do not understand how our neighborhood, having the highest volume of traffic in the study area, which also is subject to particularly excessive truck noise due to truck acceleration and deceleration at the base of the steepest segment of the freeway project, and which will be further impacted due to high retaining walls reflecting more noise towards us, cannot have been designated as requiring sound walls to mitigate much greater freeway traffic. CCC-7

On behalf of the CCC and its hundreds of members, I thank you for your consideration of the above comments and look forward to your revised EIR/EA.

Respectfully,

Tom Surak
Glenda Bona

Tomas M. Surak and Glenda Bona, Core Group Members
Calgrove Corridor Coalition
cc:

Assemblyman Cameron Smyth	Senator Tony Strickland
23734 Valencia Blvd. 303	223 Thousand Oaks Blvd., Suite 400
Santa Clarita, CA 91355	Thousand Oaks, CA 91360
c/o jarrod.degonia@asm.ca.gov	c/o Jennifer.masterson@sen.ca.gov

CCC-5 Noise level measurements were conducted in frequent human use areas, such as backyards and patios, in accordance with the Protocol and the Caltrans Technical Noise Supplement (TeNS). Many frequent human use areas within the project area are shielded by existing barriers or structures. Changes in temperature, wind, and climate would potentially change the characteristics of noise. However, based on the TeNS and the traffic noise model, the noise impact analysis is not required to analyze changes in temperature, wind, or climate.

CCC-6 Noise generated by jake brakes on heavy trucks is intermittent and would not measurably contribute to the overall noise level. In addition, noise generated by vehicles traveling on I-5 is the major noise source and is not dominated by jake brakes on heavy trucks.

CCC-7 Traffic noise impacts and noise abatement measures in the noise impact analysis were evaluated pursuant to the guidelines and requirements of the National Environmental Policy Act and the California Environmental Quality Act. The noise impact analysis was also evaluated in accordance to 23 CFR 772 and the Protocol. Based upon the application of these regulations and procedures, evaluation of noise barriers at these residences is not required.

Letter from Mark and Marianne Ehlers dated 01/09/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: MARK & MARIANNE DATE: 1-9-09
ADDRESS: 29950 Saguaro ST PHONE: (661) 2574729
CITY, STATE, ZIP: Castaic, Ca 91384
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

THE wall won't benefit my House, I'd Lose my Mountain + Canyon views, I FEEL This is a Wrong Thing To do. + very against This. MME-1

M Ehlers

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

MME-1 The commenter's opposition to locating the sound barrier on their property is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

I-5 comment letter
----- Forwarded by Carlos Montez/D07/Caltrans/CAGov on 01/27/2009 03:10 PM -----

"Eric Moody" <eric.moody@lacity.org> To <Carlos_Montez@dot.ca.gov>
01/27/2009 11:26 AM cc
Subject
Notice of Public Hearing re: Castaic sound wall proposal

Sir:

Got your letter and notice of the hearing. I am a Castaic resident who has often thought that sound walls might benefit the community from Hasley Canyon Road north to Parker Road, if not Lake Hughes Road.

However, most of the homes along that stretch (at least from Hasley canyon) are elevated on mountainsides, etc., and I am unsure of the effectiveness of sound walls to combat noise from all the trucks for those of us with houses higher than the walls. Wouldn't sound walls funnel the noise upward in fact concentrating the sound further? We already have adjusted to the constant sounds of trucks all night...even with double pained glass windows! EM-1

And with those walls, would there be any greening of the freeway shoulders?
I work for the City of Los Angeles, and anytime we do something nice like install sound walls, our graffiti vandals always find them a new canvass to display their so-called art. Vines and or trees have proven effective.
You may be aware that Cal trans is currently completing a round about intersection improvement at Hasley Canyon road. It looks interesting but the only thing it is missing is greenery. There is no budget for landscaping. EM-1

The recently completed Hwy 126 improvement is evidence of their lack of caring in that regard. Nice cement work on the bridge and all, but only hydro seeding of weed grasses...now all we have is tumble weeds blowing around. They improved I-5 at Valencia Blvd and McBean blvd and seemed to landscape those...

It just adds to the attractiveness and helps with sound. Hope they can find some money to protect those walls once they go in...

thanks.

Eric L. Moody, MPA
Director of City Services
Office of Councilwoman Janice Hahn
Office: (213) 473-7015
Fax: (213) 626-5431

Letter from Eric L. Moody dated 01/27/09

EM-1 Please refer to the General Response – Sound Barriers regarding consideration of sound barriers at the freeway right of way north of the Hasley Canyon Road/Interstate 5 (I-5) interchange. Residences located on the west side of I-5 north of Hasley Canyon are situated at the top of the slope. A majority of these residences would only benefit if the sound barrier is located at the top of the slope, along the residential property line. However, a portion of the sound barrier would be effective along the State right of way.

EM-2 As described in Section 2.7.4 of the Environmental Impact Report/Environmental Assessment, a Landscape Plan will be prepared for the proposed project that includes revegetation of affected areas and identification of wall treatments. The design of all walls will consider materials/methods to deter graffiti.

Letter from Luis Bernal dated 02/05/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT -- PUBLIC HEARING
February 5, 2009

NAME: Luie Bernal DATE: 2-5-09
ADDRESS: 29844 SAGUARO ST PHONE: 661-295 5682
CITY, STATE, ZIP: CASTAIC CA 91384
E-MAIL ADDRESS: LBFIRE99@HOTMAIL.COM
☐ I wish to speak. ☐ I would like to have the following statement filed for the rec
☒ I would like to have the following question answered:

COMMENT:

I would like the sound wall along I5 extending From Hasley Cyn North To Parker Rd on Both sides of the Freeway
I am fearful that if we as residence, do not accept the proposed Sound wall in our backyard, we will get nothing. LB-1
I would also like to have trees planted on the Hill side above The old Road To dampen the Freeway noise

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation -- Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street,

LB-1 The commenter's statements support for a sound barrier at the California Department of Transportation right of way and planting of trees along The Old Road to reduce noise is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Donna Davis DATE: 2-8-09
ADDRESS: 29840 Saguaro str. PHONE: 661-295-3491
CITY, STATE, ZIP: Castaic, Calif 91384
E-MAIL ADDRESS: KITCHINA@SBCGLOBAL.NET
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

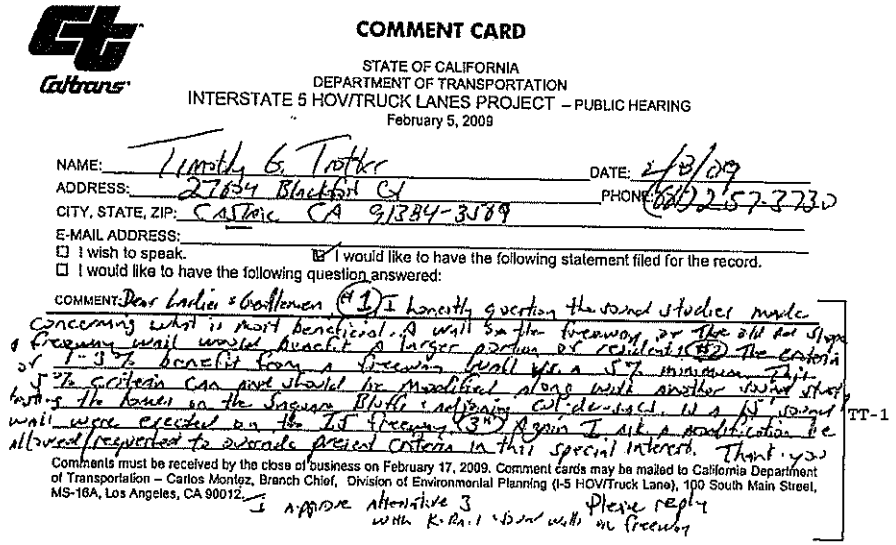
A sound wall directly next to the emergency lane on both freeway grade would both north & south would be the only acceptable solution that I would agree and accept.

DD-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Donna Davis dated 02/08/09

DD-1 The commenter's support for sound barriers only along the California Department of Transportation right of way is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Timothy G. Trotter DATE: 2/8/09
ADDRESS: 27654 Blackfoot Ct PHONE: (949) 257-7730
CITY, STATE, ZIP: Castaic CA 91384-3589
E-MAIL ADDRESS:
☐ I wish to speak. ☑ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT: Dear Ladies & Gentlemen (#1) I honestly question the sound studies made concerning what is most beneficial. A wall on the freeway or the old dirt slope & freeway wall would benefit a larger portion of residents (#2) The criteria of 1-3% benefit from a freeway wall for a 5% minimum. This criteria can and should be modified along with another sound study for the homes on the Ingram Bluff residential cul-de-sac. If a 15' sound wall were erected on the I-5 freeway (#3) Again I ask a modification be allowed/requested to overide present criteria in this special interest. Thank you

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

I approve Alternative 3 with R.P.M. sound wall on freeway Please reply

TT-1

Letter from Timothy G. Trotter dated 02/08/09

TT-1 The commenter's support for a noise barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location. The commenter's support for Alternative 3 is acknowledged.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Janet L Trotter DATE: 2/8/09
ADDRESS: 27604 Blackfoot Ct PHONE: 661-257-3730
CITY, STATE, ZIP: Castaic CA 91384
E-MAIL ADDRESS:
☐ I wish to speak. ☐ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I don't like the wall you want to put up. I think Castaic deserves better. I'd like to see a K-Rail along the fwy with a wall on top like Orange County has. It can keep noise down and keep the cars from flying off the fwy. It's a two for one. Thank you

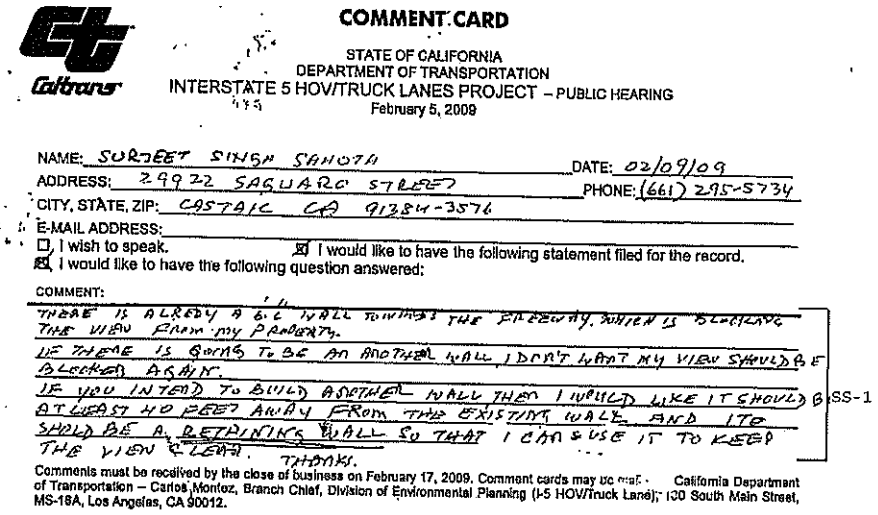
JT-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Janet L. Trotter dated 02/08/09

JT-1 The commenter's support for a noise barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location. The commenter's statements regarding reduction of accidents from cars traveling off of the freeway onto The Old Road is acknowledged.

Letter from Surjeet Singh Sahota dated 02/09/09



COMMENT CARD

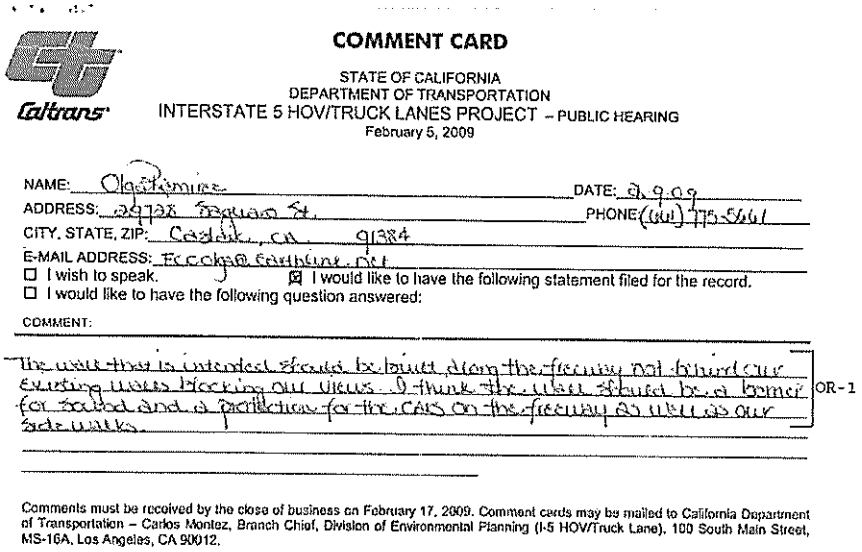
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: SURJEET SINGH SAHOTA DATE: 02/09/09
ADDRESS: 29922 SAGUARO STREET PHONE: (661) 295-5734
CITY, STATE, ZIP: CASTAIC CA 91384-3576
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☒ I would like to have the following question answered:

COMMENT:
THERE IS ALREDY A 6.6 WALL TOWARDS THE FREEWAY. WHICH IS BLOCKING THE VIEW FROM MY PROPERTY.
IF THERE IS GOING TO BE AN ANOTHER WALL I DON'T WANT MY VIEW SHOULD BE BLOCKED AGAIN. SS-1
IF YOU INTEND TO BUILD ANOTHER WALL THEN I WOULD LIKE IT SHOULD BE AT LEAST 40 FEET AWAY FROM THE EXISTING WALL AND IT SHOULD BE A RETAINING WALL SO THAT I CAN USE IT TO KEEP THE VIEW CLEAR. THANKS.

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to: California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane); 100 South Main Street, MS-16A, Los Angeles, CA 90012.

SS-1 The commenter's opposition to locating a sound barrier on their property is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Olga Ramirez DATE: 2.9.09
ADDRESS: 29728 Sequoia St. PHONE (661) 775-5661
CITY, STATE, ZIP: Castaic, CA 91384
E-MAIL ADDRESS: Eccolga@earthlink.net
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

The wall that is intended should be built along the freeway not behind our existing walls blocking our views. I think the wall should be a barrier for sound and a protection for the cars on the freeway as well as our side walks. OR-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Olga Ramirez dated 02/09/09

OR-1 The commenter's opposition to sound barriers behind existing walls blocking views and support for sound barriers along the State right of way is acknowledged.

Letter from Theresa Reynolds dated 02/11/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Teresa Reynolds DATE: 2-11-2009
ADDRESS: 29802 Saguaro St PHONE:
CITY, STATE, ZIP: Castaic CA
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT: I am not in favor of the soundwall on my property.
The last time a wall was proposed on our property, it was estimated that the sound reduction would be a mere 5 decibels, hardly worth the money and the loss of my very nice view. If a sound wall is built, it should be next to the freeway and tall enough to truly lower the freeway noise. TR-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

TR-1 The commenter's lack of support of a sound barrier on their property is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

California Department of Transportation
Attn.: Carlos Montez, Branch Chief
Division of Environmental Planning (I-5/HOV/Truck Lane)
100 South Main Street, MS-16A
Los Angeles, CA 90012

February 12, 2009

Dear Mr. Montez:

Attached please find a very short turn-around sampling from a few affected homeowners in response to a desired "sound-wall" between Lyons and McBean. I was first informed of this last Thursday late afternoon. These responses are just from one afternoon, talking to a few neighbors.

We would appreciate being notified in the future of any more meeting or milestone dates regarding this project. I am working with Mr. Parmar to put together a list of homeowners that should be contacted to have the current decibels measured in their backyards, where we spend our time, which is the affected area.

I am providing a copy package of these responses. I have been in communication with the individuals identified in the carbon copy (cc) list. Please ensure that these copy packages are provided to the following.

CMJ-1

Thank you in advance for your attention to this matter.

Most Sincerely,

Candace M. Johnson
24513 Farrow Drive
Valencia, CA 91355

cc: Ashraf Habbak
Ronald Kosinski
Arnold Parmar

Letter from Candace Johnson dated 02/12/09

CMJ-1 The commenter's support for additional noise measurements and a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Candy (Candace) Johnson
24513 Farrow Drive
Valencia, CA 91355

February 8, 2009

Ronald Kosinski, Deputy District Director
California Department of Transportation, District 7
Division of Environmental Planning
100 South Main Street, MS-16A
Los Angeles, CA 90012-3712

Dear Ron Kosinski:

It was a pleasure meeting you. I do not generally get involved in these meetings or issues but this particular issue is near and dear to my heart (and ears).

I live in a lovely neighborhood but the freeway noise is unbearable. It has grown worse in the ten years that I have lived here. The previous owner was an attorney that wrote countless letters to CalTrans begging for noise abatement and finally gave up and moved. I purchased from him in 1999.

I have included a few of the prior homeowner/attorney's comments as we are still in contact:

"I can only give you some history. Before Valencia Marketplace was constructed on The Old Road, there was very little if any noise – all the freeway noise just drifted out into the oak savanna on the west side of the freeway that has now been completely built over. The hard walls of all the buildings bordering the freeway bounce all the sound back across to the east side and up the golf course.

I tried to get the developer of the shopping center to put up a sound buffer (like trees or bushes) on their side of the freeway, but they said it would block all the signage. I was told by CalTrans that they had a ten to fifteen year waiting list for sound walls. I was also told by CalTrans that is was NOT high on their priority list."

CMJ-2

So in accordance with that time schedule, we are around the ten to fifteen years from when he was contacting CalTrans for the sound walls.

On November 13, 2007, Jason Lui from LSA (card attached) stood in the street in front of my home just after dusk recording sound measurements from the freeway. I offered him to come into my back yard because the freeway noise was muffled by the blockage of my residence. He said he could not do that. My backyard faces the freeway and is at the end of a small canyon above the Vista Golf Course which is below the freeway. The entire backside of my recently remodeled home is all dual-paned windows and sheer-walled construction with 5/8" drywall. I have not been able to open my windows for years because the freeway is so noisy even with the windows closed I awake in the night.

CMJ-3

Letter from Candace Johnson dated 02/08/09

CMJ-2 The commenter's statements regarding the existing noise levels and comments by the prior property owner are acknowledged. Hard surfaces such as structures, sound barriers, or retaining walls are expected to generate noise reflections. However, reflected sound levels would attenuate with distance and would not measurably contribute to the overall noise level. Recognizing this, the California Department of Transportation Traffic Noise Analysis Protocol does not require analysis of reflected noise.

CMJ-3 The commenter's statements regarding the existing noise level is acknowledged. The location of the receptors provides a representative sampling to establish existing noise conditions. Noise measurements in the commenter's backyard were not necessary since there were a sufficient number of noise level measurements conducted in areas closer to Interstate 5 (I-5) than the commenter's residence. In addition, based on the Technical Noise Supplement, the time of year, and climate conditions were considered acceptable when noise level measurements were conducted.

When I reviewed the studies with CalTrans DOT Arnold Parmar, Arnold went over the map with us and showed that the testing spots were at the end of Altos (Coss' home) and those studies were identified as M36 and 127, 128 (Herrera's home on the corner of Farrow and Altos), and M35 and 129 (near the Chadwick's home). All of these people are friends of mine. Interesting that the studies taken in front of my residence were not included in your studies' results yet testing was performed in front of my home. The results for M35 and M36 were unacceptable at 67 and 68 decibels. They are just down the street from my home. My backyard gets so loud at times that I cannot hear myself think. I took readings at 7pm and 6am from my back door and bedroom window and they ranged between 64 and 70. Also it would interesting to note that the time of the year that CalTrans has chosen to perform their sound studies are in the winter months when the air is generally heavier and the traffic sound is muffled. If these studies currently show 67 and 68 decibels it is apparent they will be louder with the HOV and truck lanes, therefore even more reason to include the sound walls. CMJ-3

Arnold promised that someone will come out and do a 24 hour noise measurement again. I suggested that you consider building a tall sound wall on each outside of the freeway, north and south, between Lyons and McBean to channel the noises upwards. On the southbound 15 just south of the McBean overpass, it might be prudent to put the high sound on the fast lane side for two reasons: to divert the sound since it is an elevated lane and to preclude more head deadly car accidents. We have a few terrible accidents there in the past few years where they went down the embankment and head-on into northbound traffic. Now is the time to do it if you are doing freeway work, as you explained. To stop the sound wave at its beginning is the proper method of implementation. Vista Ridge, Vista Hills, Valencia Hills, to name a few, are lovely neighborhoods. Many of us paid a premium for view lots and it would greatly affect property values to have to build a 15 foot wall behind our homes to cut out freeway noise because the DOT deems building a wall between Lyons and McBean too little benefit for too much money. A sound wall would greatly enhance our home values and more importantly our enjoyment. Sound walls to dissipate the noise and shoot it upwards versus off of the Stevenson Ranch marketplace shopping center would the best method. And if the shopping center fights a wall due to their signage then CalTrans should make them put sound absorption material on the backs of their buildings at their expense for the goodwill of our community. CMJ-4 CMJ-5

A wall on the northbound Lyons on-ramp would also have an added benefit by keeping car fires and discarded light cigarettes from traveling up our vegetation-laden hillside into our neighborhood. CMJ-6

I love my home but I cannot stand the noise pollution. The freeway project will only add noise to our beautiful neighborhoods. I will be pleased to provide a petition from our affected homeowners if that will provide any added clout. It would be wonderful to know that the system is working for us for a change. There are several affected Home Owners that would be interested in responding to your plans to build the HOV and truck lanes AND A SOUND WALL. Most of us are hearing about this for the first time. CMJ-7

Thank you for taking the time to read my letter and consider our pleas.

Most Sincerely,

Candy Johnson

Candy Johnson
On behalf of the affected Vista Ridge and Vista Hills neighbors

CMJ-4 Please refer to the General Response – Sound Barriers regarding additional noise measurements and sound barriers at this location.

CMJ-5 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

CMJ-6 The commenter's statements regarding additional benefits of the sound barrier are acknowledged.

CMJ-7 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

To: "'Mine Struhl'" <mine_struhl@dot.ca.gov>
From: "Candy" <candy@augustafinancial.com>
Date: 02/25/2009 03:04PM
cc: "'Candace Johnson'" <candyono@aol.com>, "'Candy'" <candy@augustafinancial.com>
Subject: I-5 Sound Walls between Lyons and McBean ... here are the 17 addresses

Dear Sirs/ Madams:

I believe that everyone in our neighborhoods would gladly volunteer to have Caltrans set up their sound testing in their backyard to impress how loud the freeway noise has become. And it will only increase "in our backyards" in the future since this is the main thoroughfare on the West Coast.

Following is an anxious list of neighbors that would appreciate your testing the levels as we desperately need a sound wall installed with the inclusion of the I-5 HOV lanes between Lyons and McBean:

CMJ-8

- **Marlo and Heather Lucchese, 24436 Vista Ridge Drive ,** [redacted]
- Robert and Ann Clarke, 25463 Via Acorde, [redacted]
- **John and Virginia Pecel, 25471 Via Acorde,** [redacted]
- Fred Buxton, 25449 Via Acorde, [redacted]
- **Russ Novak, 24811 Sandwedge Lane ,** [redacted]
- Alan and Gina Boring, 24232 Oak Vale, [redacted]
- Derek and Eileen McNally, 24206 Oak Vale, [redacted]
- **Vista Valencia Golf Course ,** [redacted]
- Jim and Linda Keltner, 25553 Via Paladar, [redacted]
- Roger and Patti Paglia, 25565 Via Paladar, ppaglia@sbcglobal.net
- **Charles and Barbara Gassner, 25573 Via Paladar,** [redacted]
- **Wayne and Susan Chadwick, 24651 Farrow Drive ,** [redacted]
- **Candy Johnson , 24513 Farrow Drive ,** [redacted]
- **Sally Coss, 25438 Altos,** [redacted]

6/19/2009

Letter from Candace Johnson dated 02/25/09

CMJ-8 The comment regarding increased traffic noise due to the proposed project, additional noise measurement locations, and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

- Bob and Marilyn Rainey, 25433 Altos, [redacted]
- **Jack Hulse, 25476 Cariz Drive ,** [redacted]
- **Jean-Paul Lovera and Carole Bouchebel, 25581 Via Velador,** [redacted]

The condominiums, homes, and the public golf course ALL need to be tested. I measured 65-70 decibels from these areas which are well below the freeway level. If the mobile-homes south of Lyons warranted a sound wall, then there better be a darned good explanation why we would not warrant a sound wall as well since there are so many affected homeowners in this stretch of freeway. And we have the Marketplace bouncing it into our yards and homes. CMJ-8

Thank you in advance for your attention to this concern. We look forward to hearing from you.

Sincerely,

Candy Johnson

Loan Consultant / Broker Associate

Augusta Financial, Inc.

24018 Lyons Avenue

Newhall , CA 913 2 1

☎ [redacted] *(Direct)*

☎ [redacted] or [redacted] *(Office)*

[redacted] or [redacted] *(Fax)*

[redacted] *(Cell)*

6/19/2009

February 11, 2009

Steven Blain
24527 Farrow Drive
Valencia, CA 91355-3143
424-188-1946
Steve.blain@Unisys.com

California Department of Transportation
Mr. Carlos Montez, Branch Chief
Division of Environmental Planning (I-5 HOV/Truck Lane)
100 South Main Street
MS-16A
Los Angeles, CA 90012

Dear Mr. Montez.

Thank you for the opportunity to comment regarding the proposed Caltrans Interstate 5 HOV/TRUCK LANES PROJECT.

As a 3rd generation native of Southern California, and resident at the above address for 19 years, I recognize the need for improved and widened freeways to address our growing traffic issues. As a commuter myself, I am a firm supporter of keeping our state moving, which benefits all of us.

But some residents are being asked to bear a significantly larger burden of this cost from the resulting increase in traffic noise that will directly affect their homes and community. In November of 2007, Caltrans recorded a measurement of 67 and 68 at 2 homes near the end of Altos, which are a few homes away from mine. The number of trucks traveling over this portion of Interstate 5 has increased drastically over the past several years and their noise is exceptionally loud. I can hear them in the evening and when I retire to go to bed as the noise travels through the golf course. The construction of the proposed HOV/TRUCK lanes will increase this noise level further and beyond a level that any resident should be asked to bear. SB-1

I would like to request that as a part of the proposed Interstate 5 HOV/TRUCK LANES PROJECT, that a Sound Wall be constructed on the East side of Interstate 5 (North Bound) between Lyons Avenue and McBean Parkway. As the Secretary of the Vista Ridge Homeowners Association, I am one of over 100 residents whose home, property value and live style will be adversely affected by the increase noise resulting from this expansion. Please do not place this burden upon our community and construct a sound wall that will mitigate as much of this added noise as possible.

Respectfully,

Steven Blain.

Letter from Steven Blain dated 02/11/09

SB-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Feb 9. 08

Mr Ronald Kocinski
Calif Dept of Transportation
District 7 L.A. Calif.

Dear Mr. Kocinski:

Due to a previous commitment, I was unable to attend the public hearing Feb. 5th, in regards to the I-5- HOV and Truck Lane project.

My treasured home is at- 25438 altos Dr., overlooking Vista Val. Golf Course. That means my entire back yard is exposed to all the freeway noise. SC-1

As General Contractors, my husband and I, built our 5900 sq. ft home in 1992. at that time there was very little freeway noise.

I understand that a noise measurement was conducted in our area, but that it was done at the front of our homes in the street, where the homes buffer the noise. I do not feel this was a realistic measurement.

My property is approx. an acre parcel, which we have landscaped down to the golf course, into a very wonderful garden.

I open my home every year for a High Tea and garden Tour. The proceeds go to- Project Open Wheels, St. Vincent DePaul SCV. Homeless shelter- two local churches and the SCV. Boys and girls club.

Letter from Sally Coss dated 02/09/09

SC-1 The commenter's statements regarding the existing noise environment and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location. Additional noise level measurements were conducted at this residence.

I also share my Garden in the SCV Memorial Garden tour for the support of TAPS and Wounded Warrior project.

With your proposal of new and Truck lanes to be added on I-5-, adjacent to my property, I feel you must include Sound Walls for the homeowners in the affected areas. We love our homes and area. Please help to see that we can continue to enjoy by keeping the noise level at a reasonable one.

I lost my husband about three years ago. He had Parkinsons and drowned in our pool.

I was only 15 feet away, working in my garden and was not able to to hear him. This should give you an idea of the noise level.

When the Marketplace along the freeway was built, noise increased about 85 %. The sound bounces off the buildings and travels to our homes.

I am Trusting that you will have the concern and do all possible to help us, all the residents that live in the areas along the freeway of your proposed changes. I know that installing Sound Walls will ensure our quality of life as much as your concerns for the people driving the freeway.

SC-1

Thank you for your Time

Sally Cors

661- 255-1416

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: LINDA + DOMENICO CELI DATE: 2/9/09
ADDRESS: 24434 VISTA HILLS DR PHONE: 661-255-6484
CITY, STATE, ZIP: VALENCIA
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

THE AMOUNT O NOISE WE GET FROM THE FREEWAY IS ENORMOUS - REALLY TO ADD MORE LANES FOR TRUCKS AN HOV WOULD CAUSE OUR NEIGHBORHOOD MORE HARM THAN GOOD AS FAR AS NOISE LEVELS ARE CONCERNED PLEASE RETHINK THE IDEA OF WALLS TO BLOCK NOISE THANK YOU

Mr Linda Celi Mr Domenico Celi

LDC-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Linda and Domenico Celi dated 02/09/09

LDC-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Craig Leener dated 02/09/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: CRAIG LEENER DATE: 2/9/09
ADDRESS: 27217 BLAKELY PLACE PHONE: (661) 296-8866
CITY, STATE, ZIP: VALENCIA, CA 91354
E-MAIL ADDRESS: CRAIG.LEENER@SBCGLOBAL.NET
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I'M A VALENCIA RESIDENT BUT DO NOT LIVE IN THE AREA DIRECTLY AFFECTED BY THE EXCESSIVE I-5 FREEWAY NOISE NEAR LYONS AVENUE AND McBEAN PARKWAY. HOWEVER, I HAVE FAMILY AND CLOSE FRIENDS WHO DO, AND I CAN TELL YOU THAT THIS PROBLEM HAS ADVERSELY AFFECTED THEIR LIVES IN A PROFOUND WAY. CONSEQUENTLY, I RESPECTFULLY REQUEST THAT CALTRANS CONSTRUCT A PROPER SOUND WALL AT THE TIME THAT HOV LANES ARE ADDED TO THE FREEWAY. CL-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

THANK YOU.

CL-1 The commenter's support for a sound barrier between Pico Canyon Road/Lyons Avenue and McBean Parkway is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from David Alcantara dated 02/08/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: David Alcantara DATE: 2-8-09
ADDRESS: 24516 Farrow, Dr PHONE: 661-253-4491
CITY, STATE, ZIP: Santa Clarita CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I understand that the 5 freeway needs to be expanded. However, the noise from the freeway is already a major concern and I am sure any expansion will only increase the noise. I believe a sound wall similar to others built along freeways would be necessary to disipate the increased noise. The noise is a quality of life issue. DA-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

DA-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Patrick Herles dated 02/08/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Patrick Herles DATE: 2/8/09
ADDRESS: 24521 Farrow Dr. PHONE: (661) 310-5611
CITY, STATE, ZIP: Valencia
E-MAIL ADDRESS: boysetsfire2904@yahoo.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I'd like a sound barrier built if there is to be two additional lanes along the 5 freeway. Even if the lanes are not built I am constantly awaken at 8 am due to the constant vehicle and truck traffic. Thank you for the consideration, have a nice day. PH-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

PH-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Charles and Barbara Gassner dated 02/08/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Charles and Barbara Gassner DATE: 2-08-2009
ADDRESS: 25573 VIA PALADAR PHONE: 661-254-3340
CITY, STATE, ZIP: VALENCIA, CALIFORNIA 91355
E-MAIL ADDRESS: barbgassner@gmail.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

Before ANY FWY Expansion is Done A SOUND WALL needs to be in place between Lyons/McBean. The noise from the fwy. has steadily increased over the 28 yrs. we have lived here to the point where ~~windows~~/doors/enjoying the back yard is impossible. Please BLOCK THE NOISE of the FWY! PLEASE BUILD A SOUND WALL - NO MORE NOISE - TRUCKS/CARS/=TRAFFIC=! CBG-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Please Please - STOP IT AT THE FWY - for future of Santa Clarita - Bikt. a Sandalar

CBG-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Michael and Elizabeth Geis dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Michael + Elizabeth Geis DATE: 2/10/2009
ADDRESS: 24231 Vista Hills Drive PHONE: 661-799-7596
CITY, STATE, ZIP: Valencia CA 91355
E-MAIL ADDRESS: lizgeis@sbcglobal.net
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

Due to the possible expansion involving HOV/Truck lanes added to the I-5 in Santa Clarita in the near future, I would like to request that a Sound Wall be included in this project to deflect the additional noise pollution that will take place. The area of concern is between Lyons and McBean Parkway on the Northbound side (Eastern side). Thank you. MEG-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

MEG-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Heather Lucchese dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Heather Lucchese DATE: 2.10.09
ADDRESS: 24436 Vista Ridge Dr. PHONE 661.714.8886
CITY, STATE, ZIP: Valencia CA. 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☐ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT: To Ronald Kosinski
Please see attached email sent to HOA. HL-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

HL-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location. Regarding the comment on night-time construction, the noise impact analysis states that noise generated by construction activities will conform to the California Department of Transportation's (Caltrans) Standard Specifications in Section 7-1.01I, "Sound Control Requirements," and Caltrans Standard Provisions Section S5-300.

Gmail by Google BETA

mario lucchese <hlucchese@gmail.com>

Request for Vista Ridge HOA to Petition/ Involve Local,Federal & State Council on Cal Trans Project.

1 message

mario lucchese <hlucchese@gmail.com> Tue, Feb 10, 2009 at 2:03 PM
To: lori@rossmorganco.com

Dear Lori,

Would you please forward this request to the Following Vista Ridge Board members: Nora Makland, Gary Bertz, Kent Fortin, Steve Blain, Bill Steck.

On 2/9/09 it was brought to my attention that Cal Trans has proposed and will be going forward with plans to the I-5 Freeway. As you Know this freeway
is close to and affects many if not all homeowners in this association. A Brief description of this plan is to add 2 HOV lanes, 2A truck lanes, climbing lanes
and all that comes with it. I'm not a fan of this project happening in our backyard but problems with traffic is what it is. However, what's got me miffed, to say politely is that :

1) In this proposal there are no plan's for "SOUND WALL'S" to be built, to protect us from"NOISE" that has been increasingly getting louder and louder
every year. Could you imagine when this project is complete what the noise of traffic would be like. Now, what about the increase possibility of a "FIRE THREAT" here again, more opportunity for a car fire or tossed cigarette. Another reason for a sound wall would be for "SECURITY" . The uneasiness of open freeway brings all kinds of people with an open area to roam, enhancing the possibilities of burglary,trash/home invasion, the homeless . People up to no good roaming the hills behind my house,not good! Now, last but not least how about the "POLLUTION" a sound wall would help filter it up instead of out, preventing some of the dirty dust and fumes around us.. HL-1

2) Cal Trans would like to do this construction at night, Oh my Goodness, I don't think so!! Jack hammering, bright night lights, for Lord only knows how many years. This can not happen!

3) I was assuming that the reason we have an HOA is to notify and help protect ourselves from things that will ultimately change the Real Estate Value of our Homes and effect the Quality of how we live.
I am stumped why this was not brought to our attention sooner, when we might have had more choices. What we do need now is your help, starting immediately with a petition from the Vista Ridge HOA demanding a "Sound wall" be built prior to the start of construction as part of the proposal. For this petition to be "effective "you will need to send a formal letter to Cal Trans with the endorsement of our Local/State/ and Federal council .

So , the request has been made on behalf of myself and the few neighbors that are struggling by themselves to fight this battle. I know we have a lot of little things going on in this HOA but this is
a big thing that needs immediate attention. I would also like to request that you notify our neighborhoodsof this Cal Trans project and our request for Sound walls.

My email hlucchese@gmail.com
Phone 661-714-8868

Sincerely Your Neighbor,

Heather Lucchese

http://mail.google.com/mail/?ui=2&ik=bd2afac03f&view=pt&search=sent&th=11f62378a... 2/10/2009

Letter from Hans-Dieter Klink dated 02/09/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Hans-Dieter Klink DATE: 2/09/2009
ADDRESS: 24121 Vista Hills Dr. PHONE: 661-288-2311
CITY, STATE, ZIP: Valencia, CA 91355
E-MAIL ADDRESS: klinkhd@sbcglobal.net
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT: It came to our attention that there is going to be a Freeway expansion involving HOV TRUCK lanes being added to I-5 in the near future. I would like to bring to your attention that the Noise coming from the Freeway currently is so high, I can no longer leave our windows open or sit in the backyard without the constant drone of high traffic. Please build a SOUND WALL between Lyons and Mc Bean Pkwy. prior to Fwy expansion. HDK-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Sincerely
Hans-D Klink

HDK-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Dr. and Mrs. Harold Quan dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Dr & Mrs Harold Quan DATE: 2-10-2009
ADDRESS: 24129 Vista Hills Dr PHONE: (661 255 8320
CITY, STATE, ZIP: Valencia CA 91355
E-MAIL ADDRESS: hquan@aol.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

We have lived at this location for 28 years. The noise level from the freeway keeps increasing. Because of the valley (where the golf course is located) the sound carries for long distances also. I have been at houses further from the freeway and the noise is very loud depending on the weather etc. HQ-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

HQ-1 The commenter's statements regarding the existing noise conditions are acknowledged. Changes to the temperature, wind, and climate would potentially change the characteristics of noise generated by traffic.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Wayne Chadwick DATE: 02/10/2009
ADDRESS: 24651 Farrow Drive PHONE 661-255-9820
CITY, STATE, ZIP: Valencia CA 91355
E-MAIL ADDRESS: WChadwick@SBCGlobal.NET
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

See other side

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Interstate 5 is in front of my house. The proposed lane additions will add more noise to an already intolerable level. Today, I cannot carry on a conversation in my front yard without yelling over the traffic noise, with the added lanes I will need a blow horn to communicate. On warm nights I cannot sleep with open windows due to the traffic noise. I believe I have experienced a loss of hearing due to the traffic noise. WC-1

What's needed is a sound wall on northbound Interstate 5 from Lyons Ave. to McBean Parkway. This is the only to re-direct the traffic noise upward.

Without a sound wall, I fear my quality of life will diminish.

I would like to receive notices of future meetings, so my voice can heard.

Letter from Wayne Chadwick dated 02/10/09

WC-1 The commenter's statements regarding existing noise conditions and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Jim and Linda Keltner (undated)

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Jim & LINDA KELTNER DATE:
ADDRESS: 25553 VIA PALADAR PHONE: 661-254-1598
CITY, STATE, ZIP: VALENCIA, CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

We are residents of Valencia and have a home where the back yard faces Interstate 5. The noise from the freeway has greatly increased over the yrs especially since the development of businesses on the west side of 5. We accept the expansion of 5 but feel it is necessary to include in the project the addition of a sound wall between Lyons Ave and Valencia Blvd. JLK-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

JLK-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: ROBERT W. & MARILYN D. RAINEY DATE: 2-10-09
ADDRESS: 25433 ALTOS DRIVE PHONE: (661) 255-2754
CITY, STATE, ZIP: VALENCIA, CA 91355-3137
E-MAIL ADDRESS: Dobrainey7@hotmail.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☒ I would like to have the following question answered:

COMMENT:

WE HOPE A SOUNDWALL WILL BE BUILT ON NORTHBOUND INTERSTATE 5 HOV/TRUCK LANES PROJECT FROM LYONS AVE ON RAMP NORTH TO MC BEAN PARKWAY. HOWEVER, WE DO NOT SUPPORT ITEMS 3, 4 & 5 OF PROPOSED PROPERTY OWNER CONTRACT WITH CALTRANS UNDER PARAGRAPH 2 OF MR. CARLOS MONTEZ'S NOTIFICATION LETTER OF JANUARY 21, 2009 RMR-1

Robert W. Rainey

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Robert W. and Marilyn D. Rainey dated 02/10/09

RMR-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location. The commenter's opposition to several items within the noise barrier survey distributed by the California Department of Transportation is acknowledged.

Letter from William and Belinda Everitt dated 02/11/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: William & Belinda Everitt DATE: 2/11/09
ADDRESS: 24633 Farmdale Dr PHONE: 661 259 7460
CITY, STATE, ZIP: Valencia, CA 91355
E-MAIL ADDRESS: bia everitt @ yahoo
☐ I wish to speak. ☐ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

While beautifying the freeway can you please add a sound barrier. The sound is atrocious with so much traffic that there is now- even with the double windows. Thank you so much

WBE-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

WBE-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Tracy Miller dated 02/11/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

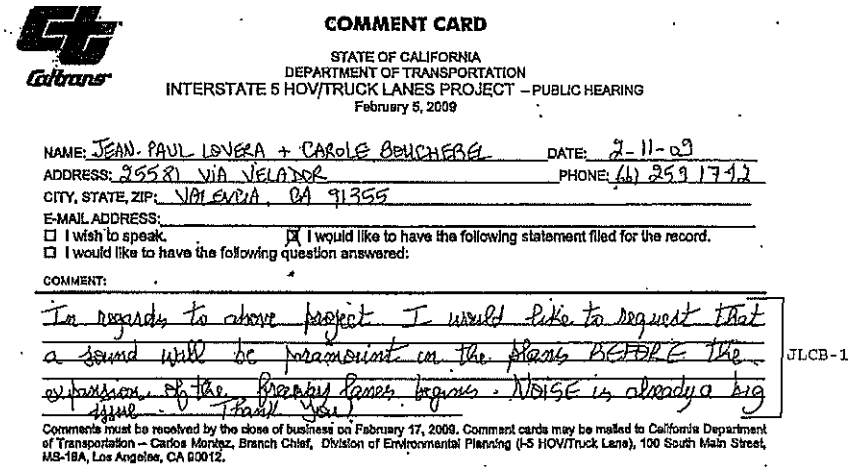
NAME: Tracy Miller DATE: 2/11/09
ADDRESS: 24645 Famow Dr. PHONE: 661 200-3174
CITY, STATE, ZIP: Valencia, CA 91355
E-MAIL ADDRESS: Sophiandarasmom@live.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

We need a sound wall DESperately. The sand is ~~already~~ deafening and we already have double windows. TM-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

TM-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: JEAN. PAUL LOVERA + CAROLE BOUCHEBEL DATE: 2-11-09
ADDRESS: 2558 VIA VELADOR PHONE: (6) 259 1792
CITY, STATE, ZIP: VALENCIA, CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

In regards to above project I would like to request that a sound will be paramount on the plans BEFORE the expansion of the Freeway Lanes begins. NOISE is already a big issue. Thank You!

JLCB-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Jean Paul Lovera and Carole Bouchebel dated 02/11/09

JLCB-1 The commenter's support for a sound barrier and its construction prior to initiation of construction activities is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Patti and Roger Paglia dated 02/11/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Patti & Roger Paglia DATE: 2/11/09
ADDRESS: 25805 Via Palacios PHONE:
CITY, STATE, ZIP: Valencia Ca 91355
E-MAIL ADDRESS: ppaglia@sbcglobal.net
☐ I wish to speak. ☐ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

As concerned homeowners, we understand that the freeway is being expanded. We enjoy our backyard and are always amazed by the freeway noise. We respectfully ask, plead, beg and request a Sound wall to be built!! PRP-1
Sincerely, Loyal tax payers !!

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

PRP-1 The commenter's statements regarding the existing noise conditions and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Eileen and Derek McNally dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Eileen and Derek McNALLY DATE: 2-10-09
ADDRESS: 24306 OAKVALE DRIVE PHONE: 661 255 6838
CITY, STATE, ZIP: VALENCIA : CA 91355
E-MAIL ADDRESS: DEREK@DJMELECTRONICS.Com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

PLEASE ENSURE THAT A "SOUND WALL" BE INCLUDED IN ANY PLANS RESULTING IN AN INCREASE OF TRAFFIC NOISE BETWEEN LYONS AVENUE AND MCBEAN PARKWAY ON I-5 FWY. THE NOISE FROM TRAFFIC HAS ALREADY INCREASED IN OUR AREA SINCE THE BUILDING OF BUSINESSES ALONG THE I-5 FWY IN STEVENSON RANCH. MORE NOISE WOULD BECOME INTOLERABLE. EDM-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

EDM-1 The commenter's statements regarding the existing noise conditions and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Alan + Gina Boring DATE: 2/11/09
ADDRESS: 24232 Oak Vale Drive PHONE: 661 254 4399
CITY, STATE, ZIP: Valencia CA 91355
E-MAIL ADDRESS: ginaba@dock.net
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I am STRONGLY in favor of a sound wall due to excessive noise from the freeway. My husband and I cannot open our bedroom windows at night due to noise factor. We've lived on the golf course for 17 years and the noise has progressively worse since the Stevenson Ranch shopping areas were constructed and the SCV population has grown. PLEASE DO SOMETHING ABOUT IT BEFOR you do the fwy. expansion. Thank ya

AGB-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Alan and Gina Boring dated 02/11/09

AGB-1 The commenter's statements regarding the existing noise conditions and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Wanda Kummer dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Wanda Kummer DATE: 2/10/09
ADDRESS: 25552 Via Palacios PHONE: 661 799-7955
CITY, STATE, ZIP: Valencia Ca 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I am concerned about the increased noise this will cause for my neighborhood. The freeway noise is already extremely loud. More lanes will make this problem worse. WK-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

WK-1 The commenter's statements regarding the existing noise conditions and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Dick and Linda Pearson dated 02/11/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: DICK & LINDA PEARSON DATE: 2/11/09
ADDRESS: 24535 FARROW DRIVE PHONE: 661-259-8157
CITY, STATE, ZIP: VALENCIA, CA. 91355
E-MAIL ADDRESS: RWP1102@YAHOO.COM
☐ I wish to speak. ☑ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:
COMMENT:

WE HAVE LIVED HERE FOR 21 YEARS. DURING THIS TIME WE HAVE TOLERATED THE FREEWAY NOISE/WHICH HAS INCREASED OVER THE YEARS), WE HAVE ALWAYS DESIRED A NOISE REDUCTION WALL. NOW WE HAVE BEEN INFORMED THAT THE LYONS ON-OFF RAMP IS TO BE WIDENED. THIS WILL GENERATE EVEN MORE NOISE. IN ADDITION TO A HARD TIME SLEEPING THE HOMES IN THIS AREA WILL BE DIFFICULT TO SELL AND THE PRICES WILL SURELY GO DOWN. A NO REDUCTION WALL WOULD GO A LONG WAYS IN PROTECTING OUR HEALTH AND THIS LOVELY NEIGHBORHOOD. DLP-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Departmen of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street MS-16A, Los Angeles, CA 90012.

DLP-1 The commenter's statements regarding the existing noise conditions and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Jack Hulse dated 02/12/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Jack Hulse DATE: 2/12/09
ADDRESS: 25476 Carl Dr. PHONE: 661-253-7655
CITY, STATE, ZIP: Valencia, Cal. 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☑ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I strongly support a sound wall between Via Oro Ave and McBean Pkwy due to the added noise in my back yard. The extra lanes will make the noise louder and adversely affect my property value. JH-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

JH-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Mimi B. Swart dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: MIMI B. SWART DATE: 2/10/09
ADDRESS: 25436 CAMP DR. PHONE:
CITY, STATE, ZIP: VALENCIA, CALIF 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

I BELIEVE THAT SOUND WALLS SHOULD BE PUT UP WHERE THE FREEWAY IS WIDENED. MS-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

MS-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Caltrans

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Angelo Pascolla DATE: 2-16-09
ADDRESS: 25460 Cariz Dr PHONE: 661-255-6226
CITY, STATE, ZIP: Valencia CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

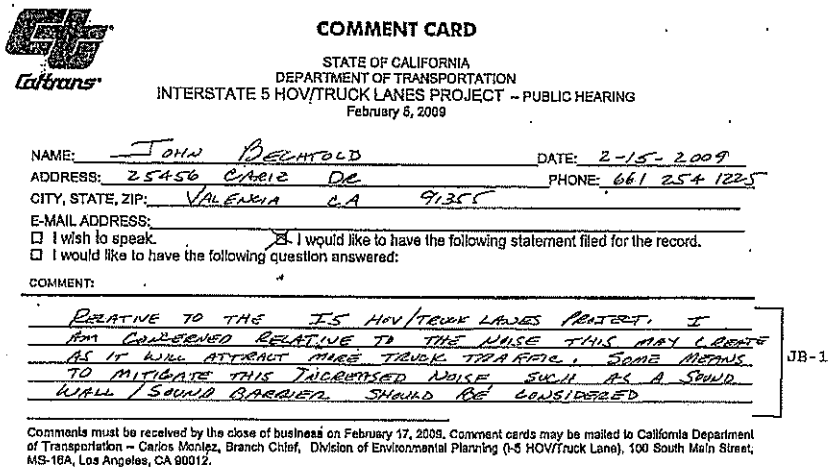
COMMENT:

Noise from trucks is deafening, especially early morn & evening AP-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Angelo Pascolla dated 02/16/09

AP-1 The commenter's statements regarding the existing noise level are acknowledged.



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: JOHN BECHTOLD DATE: 2-15-2009
ADDRESS: 25456 CARIZ DR PHONE: 661 254 1225
CITY, STATE, ZIP: VALENCIA C.A 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

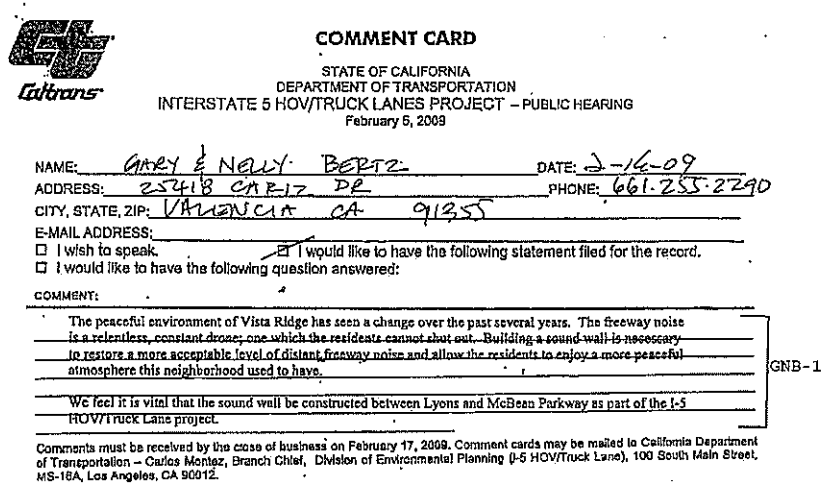
RELATIVE TO THE I5 HOV/TRUCK LANES PROJECT. I AM CONCERNED RELATIVE TO THE NOISE THIS MAY CREATE AS IT WILL ATTRACT MORE TRUCK TRAFFIC. SOME MEANS TO MITIGATE THIS INCREASED NOISE, SUCH AS A SOUND WALL / SOUND BARRIER SHOULD BE CONSIDERED

JB-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from John Bechtold dated 02/15/09

JB-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: GARY & NELLY BERTZ DATE: 2-16-09
ADDRESS: 25418 CAMRIN DR PHONE: 661.255.2290
CITY, STATE, ZIP: VALENCIA CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☑ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

The peaceful environment of Vista Ridge has seen a change over the past several years. The freeway noise is a relentless, constant drone; one which the residents cannot shut out. Building a sound wall is necessary to restore a more acceptable level of distant freeway noise and allow the residents to enjoy a more peaceful atmosphere this neighborhood used to have. GNB-1

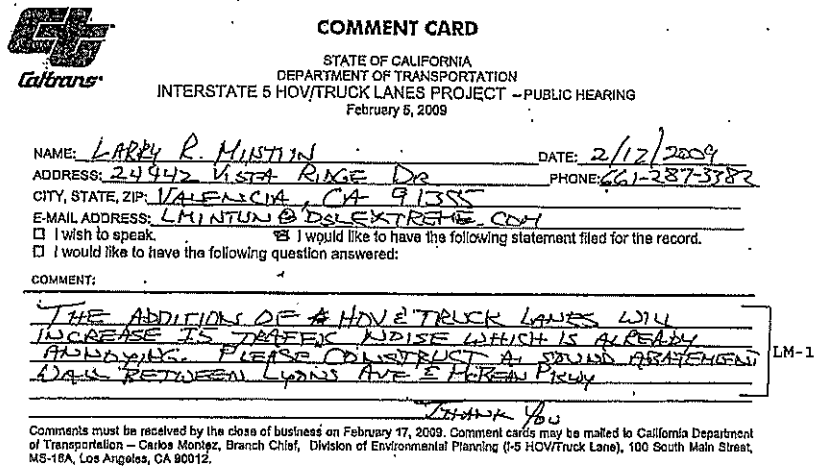
We feel it is vital that the sound wall be constructed between Lyons and McBean Parkway as part of the I-5 HOV/Truck Lane project.

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Gary and Nelly Bertz dated 02/16/09

GNB-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Larry R. Mintun dated 02/12/09



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: LARRY R. MINTUN DATE: 2/12/2009
ADDRESS: 24942 VISTA RIDGE DR PHONE: 661-287-3582
CITY, STATE, ZIP: VALENCIA, CA 91355
E-MAIL ADDRESS: LMINTUN@DSLEXTREME.COM
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

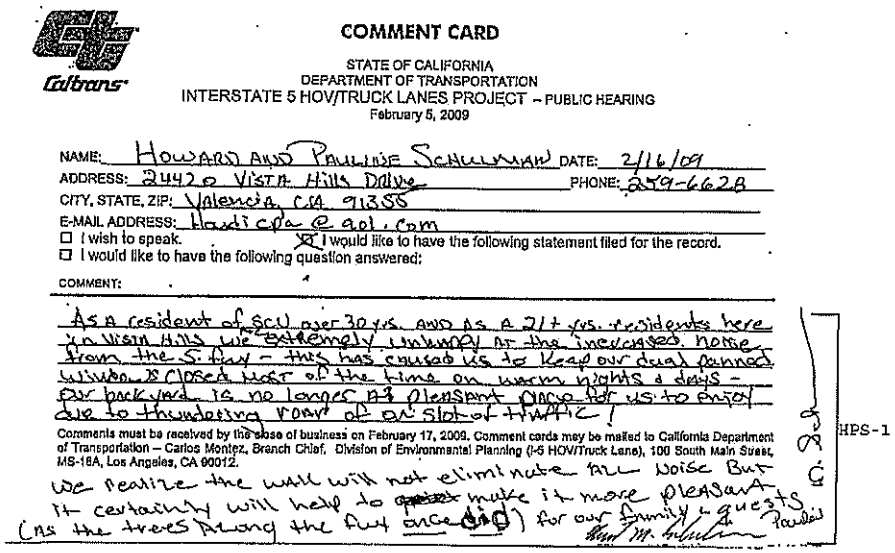
THE ADDITION OF 4 HOV & TRUCK LANES WILL INCREASE IS TRAFFIC NOISE WHICH IS ALREADY ANNOYING. PLEASE CONSTRUCT A SOUND ABATEMENT WALL BETWEEN LYONS AVE & HERITAGE PKWY

THANK YOU

LM-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

LM-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.



Caltrans

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Howard and Pauline Schulman DATE: 2/16/09
ADDRESS: 24420 Vista Hills Drive PHONE: 259-6628
CITY, STATE, ZIP: Valencia, CA 91355
E-MAIL ADDRESS: Hardcpa@aol.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

As a resident of SCV over 30 yrs. and as a 21+ yrs. residents here in Vista Hills we extremely unhappy at the increased noise from the 5 fwy – this has caused us to keep our dual pannes windows closed most of the time on warm nights & days – our backyard is no longer as pleasant place for us to enjoy due to thundering roar of on slot of traffic!

HPS-1

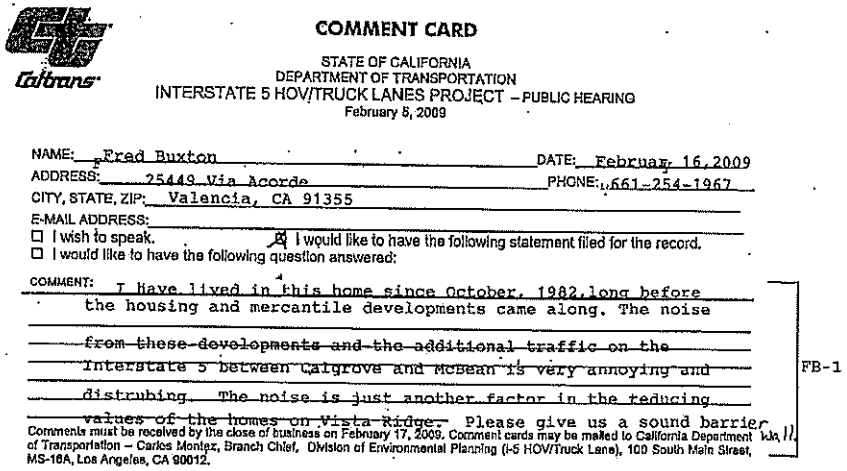
Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

We realize the wall will not eliminate ALL noise But it certainly will help to make it more pleasant (as the trees along the fwy once did) for our family & guests

Pauline M. Schulman

Letter from Howard and Pauline Schulman dated 02/16/09

HPS-1 The commenter's statements regarding existing noise levels and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Fred Buxton DATE: February 16, 2009
ADDRESS: 25449 Via Acorde PHONE: 661-254-1967
CITY, STATE, ZIP: Valencia, CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT: I have lived in this home since October, 1982, long before the housing and mercantile developments came along. The noise from these developments and the additional traffic on the Interstate 5 between Calgrove and McBean is very annoying and distrubing. The noise is just another factor in the reducing values of the homes on Vista Ridge. Please give us a sound barrier.

FB-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Fred Buxton dated 02/16/09

FB-1 The commenter's statements regarding existing noise levels and support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Robert and Ann Clarke dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: Robert & Ann Clarke DATE: Feb 10, 2009
ADDRESS: 25463 Via Acorde PHONE: 253-3631
CITY, STATE, ZIP: Valencia, CA. 91355
E-MAIL ADDRESS: aurdais1@yahoo.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

It is imperative to have a soundwall installed on the east side of the northbound lanes of interstate 5 between Lyons and McBean Parkway. A soundwall is long overdue, as the noise that resonates through Vista Ridge is too much, increasing with commercial & residential construction in Stevenson Ranch, and this road project will be no exception. RAC-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

RAC-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Dolanda Schurmann dated 02/10/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: DOLANDA SCHURMANN DATE: 02/10/2009
ADDRESS: 25414 ALTA DRIVE PHONE: (661) 259-9616
CITY, STATE, ZIP: VALENCIA CA 91355
E-MAIL ADDRESS: DSCHURMANN@SBCGLOBAL.NET
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

MUST HAVE SOUND WALLS!! DS-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

DS-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from John and Virginia Pecel dated 02/12/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: John & Virginia Pecel DATE: 2-12-09
ADDRESS: 25471 Via Acorde PHONE: 661-254-1528
CITY, STATE, ZIP: Valencia Ca 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☐ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

COMMENT:

If you put extra lanes on I-5 that's fine. As long as you put a sound wall up too.

We do not want more noise to interfere with our daily living. Thank you for your [illegible]

JVP-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Thoughtfully

JVP-1 The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: CLARK JOLLEY DATE: 2-11-2009
ADDRESS: 25419 ALTOS DR PHONE: 661 259 8548
CITY, STATE, ZIP: VALENCIA CA 91355-3137
E-MAIL ADDRESS: uclarski@aol.com
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

We live on a cul-de-sac, 25419 Altos Drive, that abuts next to the East side of I-5 between Lyons Avenue and McBean Parkway in Valencia CA. There presently is a substantial amount of noise and nuisance as a result of the proximity to this major highway.

I understand that the I-5 HOV/TRUCK LANES PROJECT will widen the highway and bring the roadway even closer to our street. This increased proximity to our neighborhood will bring even more noise and pollution to our area. CJ-1

Therefore, I request that the construction project include abatement methods such as a wall, to mitigate the noise and nuisance of having the roadway even closer to our street!

Thank you, - Clark Jolley Clark Jolley + Family

...ment of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

Letter from Clark Jolley dated 02/11/09

CJ-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

"Craig & Joy Kugler" <cjkugler@gmail.com> 02/11/2009 08:15 PM

To <Carlos_Montez@dot.ca.gov>

cc

Subject I-5 Expansion

Hi - We would like to request that a sound wall be incorporated into your plans for the I-5 expansion project. Between Lyons and McBean would be the most needed area because of all the homes around there (which includes our home). We would appreciate your consideration. Thanks, Joy and Craig Kugler CJK-1

Letter from Craig and Joy Kugler dated 02/11/09

CJK-1 Please refer to the General Response – Sound Barriers regarding sound barriers at this location. The commenter's support for a noise barrier and Alternative 3 is acknowledged.

Letter from Roy Ladd dated 02/13/09

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT -- PUBLIC HEARING
February 5, 2009

NAME: Roy Ladd DATE: 2/13/09
ADDRESS: 25139 Alta Drive PHONE: (661) 254-0470
CITY, STATE, ZIP: Valencia, CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☒ I would like to have the following statement filed for the record.
☐ I would like to have the following question answered:

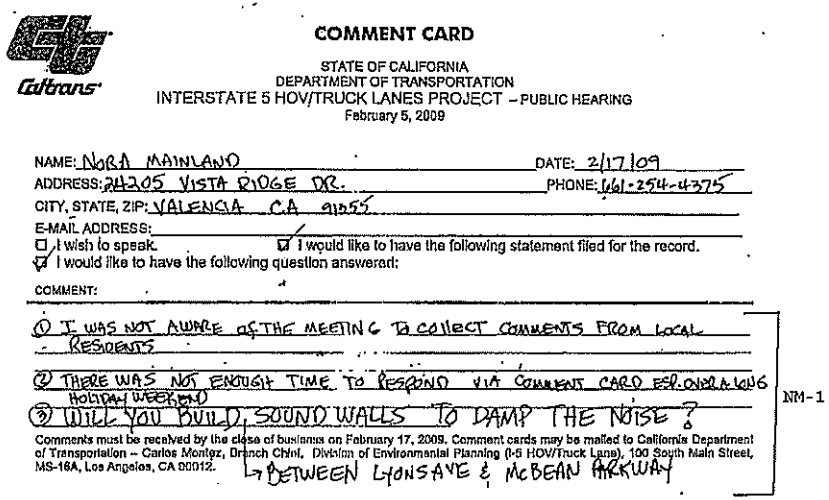
COMMENT:

I believe that a sound wall adjacent (next to/ alongside) the freeway is necessary to reduce the noise in our neighborhood created by increased freeway traffic. RL-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

RL-1 The commenter's request for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Nora Mainland dated 02/17/09



COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME: NORA MAINLAND DATE: 2/17/09
ADDRESS: 24205 VISTA RIDGE DR. PHONE: 661-254-4375
CITY, STATE, ZIP: VALENCIA CA 91355
E-MAIL ADDRESS:
☐ I wish to speak. ☑ I would like to have the following statement filed for the record.
☑ I would like to have the following question answered:

COMMENT:

① I WAS NOT AWARE OF THE MEETING TO COLLECT COMMENTS FROM LOCAL RESIDENTS

② THERE WAS NOT ENOUGH TIME TO RESPOND VIA COMMENT CARD ESP. OVER A LONG HOLIDAY WEEKEND

③ WILL YOU BUILD SOUND WALLS TO DAMP THE NOISE? → BETWEEN LYONS AVE & McBEAN PARKWAY

NM-1

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

NM-1 The commenter's concern regarding the noticing for the public hearing and length of public review process is acknowledged. The commenter's support for a sound barrier is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Lisa and John Warten dated 03/26/09

26 Mar 09

Dear Mr Kosinski

Re: Sound Wall Petition

We live close to Lyons Avenue and would request a sound wall to be constructed between Lyons and McBean. The noise of the proposed I-5 widening will without doubt impact on us. LJW-1

Yours Sincerely

Lisa & John Warten

25503 Via Dolarita, 91355

LJW-1 The commenter's request for construction of a sound barrier between Lyons Avenue and McBean Parkway is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Kenneth and Donna Keller dated 03/30/09

Kenneth and Donna Keller
25511 Via Dolarita
Valencia, California 91355

March 30, 2009

Mr. Ronald Kosinski
Deputy District Director
Caltrans, District 7
Division of Environmental Planning
100 South Main Street
MS – 16A
Los Angeles, California 90012-3712

Dear Mr. Kosinski:

My wife and I have lived in the Vista Ridge neighborhood since 1990. We've witnessed first hand the increase in the volume and associated noise levels with traffic on Interstate 5 and understand that Caltrans is now planning the expansion of truck lanes and an HOV lane near our neighborhood.

We're good citizens, taxpayers and voters. We understand the variables involved and the long length of the planning cycle for freeway expansion. We understand the need for freeway expansion.

To that end, we are requesting that you include in the planning of the expansion of I-5 the inclusion and construction of a sound wall on the east side of the freeway from Lyons Avenue to McBean Parkway. KDK-1

We are sending a copy of this letter to the members of the City Council of Santa Clarita and our local state elected official, Cameron Smyth. It is our hope that they will continue to press for the construction of the sound wall to maintain property values in the neighborhood we have called home for almost twenty years.

Respectfully,

Ken and Donna Keller

KDK-1 The commenter's support for a sound barrier on the east side of Interstate 5 (I-5) from Lyons Avenue to McBean Parkway is acknowledged. Please refer to the General Response – Sound Barriers regarding sound barriers at this location.

Letter from Anthony Carelli dated 01/27/09

anthony carelli <carelli2@earthlink.net>
To carlos_montez@dot.ca.gov
cc
Subject I5 truck lanes project sr14 to parker road concerns

01/27/2009 06:02 PM

Carlos,

I am a Newhall resident that lives next to interstate 5. The only thing that is between me and interstate 5 is the field at Smiser Mule Ranch just east of the freeway. I have reviewed the 800 page Environmental Report and have some serious concerns. Page 1-17 of the report adresses the SOUND WALLS to be built as part of this plan. There is NO mention of a wall between the calgrove exit and Pico Cyn/Lyons ave exit on the North bound side of i5 . There is already a wall half way between these exits on the east side of the freeway. The noise from the freeway is extremely loud and how this area of the freeway could be left out of the master plan is unexplainable. Please review this in the report. WE NEED AT LEAST A 10 FOOT TALL WALL AT THIS PORTION OF THE FREEWAY. I WILL BE INFORMING THE NEIGHBORHOOD OF THIS ISSUE SO WE CAN ALL VOICE OUR CONCERNS. AC-1

I look forward to your correspondance in the future.

Anthony Carelli

a.carelli
carelli2@earthlink.net

AC-1 Based on the noise impact analysis, residences located east of Wiley Canyon Road would not experience a traffic noise impact that requires consideration of noise abatement. Therefore, no noise abatement measures were evaluated.

Letter from Jeff Ford dated 02/10/09

February 10, 2009

Mr. Carlos Montez
California Department of Transportation, District 7
Division of Environmental Planning, MS 16A
100 South Main Street, Suite 100
Los Angeles, CA 90012-3712

Re: Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the Widening of Interstate-5 for High Occupancy Vehicle (HOV) Lanes and Truck Climbing Lanes

Dear Mr. Montez:

The EIR/EA contains a flawed assumption which renders the analysis of a number of the impacts from the proposed alternatives in the EIR/EA too low. The EIR/EA contains a total vehicle count level that is similar in all alternatives including the "no project" alternative. This is overly optimistic and there is ample evidence from traffic engineering studies that congestion serves as negative feedback that results in commuters using other modes of transportation or other routes. Therefore, in the absence of any of the alternatives which increase the capacity of the Interstate, the total amount of vehicles through the project area would be reduced in the future relative to the traffic that the build alternatives would carry in no construction occurred. For this reason, the EIR/EA is remiss in assuming that the no project alternative would have similar vehicle trip totals as all the other alternatives analyzed. Because the comparison of the impacts for the project falsely assumes that the traffic levels would be the same in the build and no project alternatives, the impacts of the build alternatives are understated relative to those of the no project alternative. With fewer vehicles due to congestion, the build alternatives would have greater impact in the categories of noise, air quality and possibly traffic relative to the no project alternative as opposed to having beneficial impacts as shown in the EIR/EA. JF-1

This significant analytical flaw results in the impacts of the proposed project being significantly understated. The DEIR/EA should be corrected to reflect a realistic no project level of traffic and that should become the baseline against which the proposed project and the remaining alternatives' impacts should be measured. The corrected DEIR/EA should be recirculated for a full 45 days since the current flaws are so significant as to undermine any meaningful discussion of impacts.

Thank you for your consideration of these comments.

Sincerely,

Jeff Ford
24620 Ebelden Avenue
Newhall, CA 91321

JF-1 The project consists of adding new high-occupancy vehicle (HOV) lanes that will connect to existing HOV lanes south of the State Route 14 (SR-14) interchange. By expanding the current HOV network into the westerly side of the Santa Clarita Valley, the project is facilitating an increase in ridesharing for those who commute within the corridor.

The predominant effect of congestion when demand is not met is an increase in the duration of the periods of congestion. By adding capacity, the duration of congestion is reduced even when congestion is not fully eliminated. The traffic analysis is based on a consistent set of demand volumes for each scenario recognizing that if sufficient capacity is not provided for the peak demand volumes, the result will be the unmet demand spreading over a longer duration. Congestion will not result in an appreciably lower volume of vehicles overall, but will result in longer periods of congestion. As such, by utilizing a consistent set of demand volumes for the No Build and Build scenarios, an indication of the amount of unmet demand that would increase congestion duration can be ascertained.

marmclean@ca.rr.com
(Marsha McLean
(661-255-1259))
02/13/2009 06:07 PM

To yessica_jovel@dot.ca.gov
cc
Subject WWW Form Submission

Below is the result of your feedback form. It was submitted by
Marsha McLean (661-255-1259) (marmclean@ca.rr.com) on Friday, February 13,
2009 at 18:07:51

Subject: Sound Walls

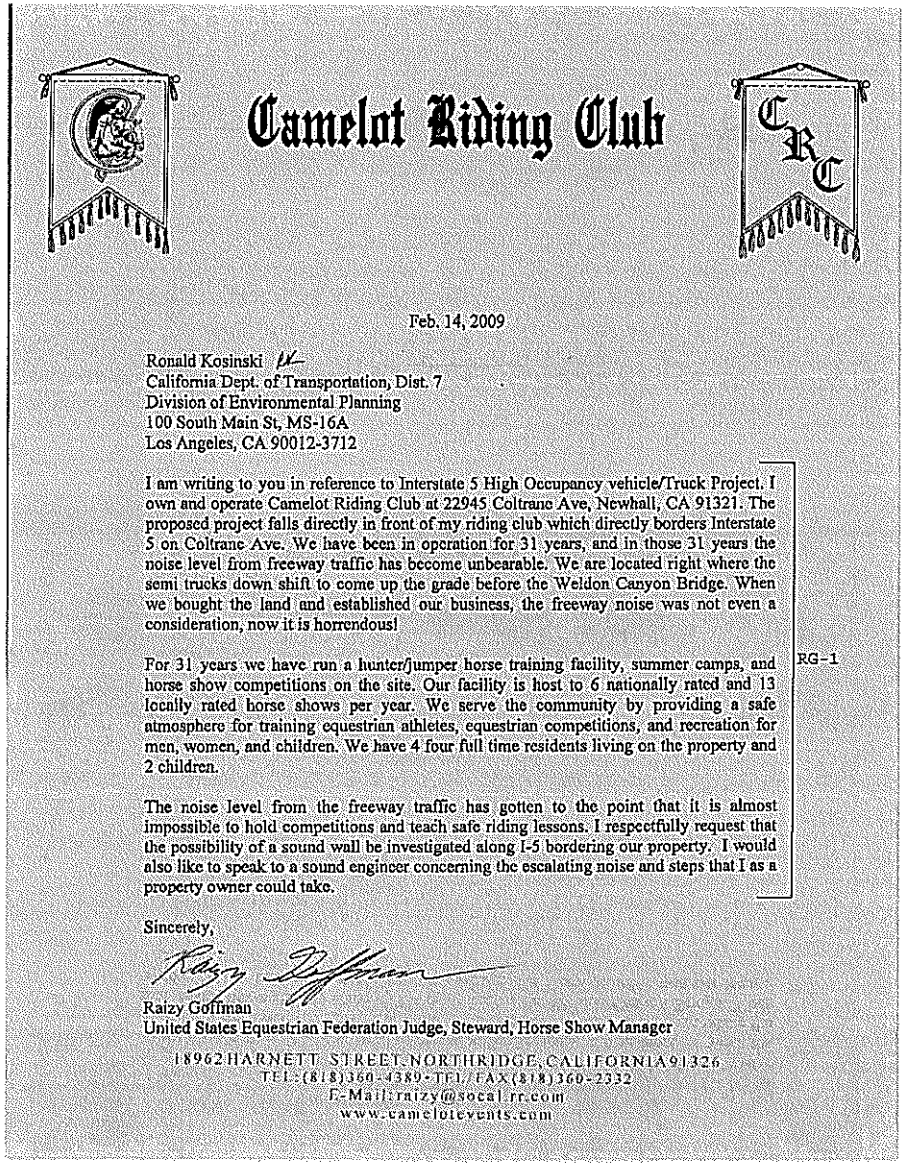
Message: Pertaining to the Draft EIR for the I-5 HOV Lanes. I-5 HOV/Truck
Lanes Project
SR-14 to Parker Road
LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 - LA-005, PM R45.4/R59.0
EA 2332E0
Draft Environmental Impact Report/
Environmental Assessment
I would object to the placing of Sound Walls adjacent to I-5 or Highway 14.
Trying to provide noise abatement for one neighborhood will only raise the
noise level for neighborhoods farther away. Those that choose to reside near
freeways should expect a certain amount of noise and should not expect a sound
wall be built that will impact other residents who were wise enough to live
farther away. I would request this e-mail be considered a comment to be placed
in the record.

MM-1

Submit: Send

Letter from Marsha McLean dated 02/13/09

MM-1 The commenter does not raise any concerns with the environmental analysis conducted for the Environmental Impact Report/Environmental Assessment and is the opinion of the commenter regarding placement of sound barriers in general.



Camelot Riding Club

Feb. 14, 2009

Ronald Kosinski
California Dept. of Transportation, Dist. 7
Division of Environmental Planning
100 South Main St, MS-16A
Los Angeles, CA 90012-3712

I am writing to you in reference to Interstate 5 High Occupancy vehicle/Truck Project. I own and operate Camelot Riding Club at 22945 Coltrane Ave, Newhall, CA 91321. The proposed project falls directly in front of my riding club which directly borders Interstate 5 on Coltrane Ave. We have been in operation for 31 years, and in those 31 years the noise level from freeway traffic has become unbearable. We are located right where the semi trucks down shift to come up the grade before the Weldon Canyon Bridge. When we bought the land and established our business, the freeway noise was not even a consideration, now it is horrendous!

For 31 years we have run a hunter/jumper horse training facility, summer camps, and horse show competitions on the site. Our facility is host to 6 nationally rated and 13 locally rated horse shows per year. We serve the community by providing a safe atmosphere for training equestrian athletes, equestrian competitions, and recreation for men, women, and children. We have 4 four full time residents living on the property and 2 children. RG-1

The noise level from the freeway traffic has gotten to the point that it is almost impossible to hold competitions and teach safe riding lessons. I respectfully request that the possibility of a sound wall be investigated along I-5 bordering our property. I would also like to speak to a sound engineer concerning the escalating noise and steps that I as a property owner could take.

Sincerely,

Raizy Goffman
United States Equestrian Federation Judge, Steward, Horse Show Manager

18962 HARNETT STREET NORTHRIDGE, CALIFORNIA 91326
TEL: (818) 360-4389 - TEL/FAX (818) 360-2332
E-Mail: raizy@socal.rr.com
www.camelotevents.com

Letter from Raizy Goffman, Camelot Riding Club dated 02/14/09

RG-1 Residential units associated with the Camelot Riding Club were evaluated in the noise impact analysis. Traffic noise impacts were identified and noise abatement measures (Sound Barrier Nos. 1-9 and 1-11) were evaluated. The noise impact analysis determined that the sound barriers were either not feasible (reducing noise levels by 5 A-weighted decibels [dBA]) or reasonable. Based on the California Department of Transportation (Caltrans) Traffic Noise Analysis Protocol, other areas located on the Camelot Riding Club property are not considered noise-sensitive. Therefore, no other noise abatement measures were considered.

"Davis, Kathryn"
<kathryn.davis@k
mdavislaw.com> To
<Carlos_Montez@dot.ca.gov.>
02/20/2009 12:37 cc
PM "mike davis"
<transcoastfinancial@hotmail.com>
Subject
Highway 5 Expansion

To Whom It May Concern:

Earlier we received the Notice of Public Hearing on 2/5/09 for the draft EIR of the I-5/HOV lane expansion project. We sent a representative to attend the meeting and found out that portions of our properties (APN#s: 2826-026-005, 2827-029-012) might be temporarily taken to build retaining walls and for a staging area.

The issue from our perspective is that we have an ongoing income-producing commercial concern located on the property that cannot be temporarily taken without potentially affecting a total taking. The tessee who runs the operation on our property may have to relocate entirely if the State interrupts operations significantly for an extended period of time, and/or has to relocate a retention basin he needs for his operation. Moreover, we incurred significant time and expense over a period of many years to develop our property and obtain a CUP, so that we could have a productive piece of income-producing property. For the State to come in and take advantage of that development by using the pad and disrupting the on-going use (perhaps permanently) would be to benefit at our great expense. Thus, we believe that the value of this property at the time of the taking must take into account the expense we incurred to obtain the CUP, and the damage we will suffer for losing a long-term income producing lease. The operation our CUP allows is highly specialized, and cannot be readily altered without great expense. And the property is zoned to allow few other incoming producing uses. Thus, if the use is disrupted to such an extent that the lessee abandons the lease, we should be compensated for the remaining term. KD-1

The compensation process was explained in general to our representative at the meeting, and we were told we would get some feedback from Caltrans staff. But we have not heard back yet. Nonetheless, we would like to express in writing that no plans should be made by Caltrans concerning the use of our property without discussions well in advance regarding the potential impacts to our property and current usage, and how this will be compensated.

Thank you in advance for your time and consideration.

Kathryn M. Davis

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Civil Appellate Advocacy and Counseling
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Letter from Kathryn Davis dated 02/20/09

KD-1 The need for a temporary construction easement (TCE) on a portion of this property has been removed from consideration. As such, this property will not be temporarily used to build retaining walls or as a staging area.

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Chapter 5 List of Preparers

5.1 Public Agencies

5.1.1 California Department of Transportation, District 7

Ron Kosinski, Deputy District Director, Division of Environmental Planning

Aziz Elattar, Office Chief, Division of Environmental Planning

Carlos Montez, Senior Environmental Planner, Document Review

Mine Struhl, Associate Environmental Planner, Community Impact Assessment & Document Review

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Sushilkumar Chaudhari, Oversight Design Engineer

Ashraf Habbak, Project Manager

Robert Wang, Assoc. Environmental Planner; GIS Coordinator

Joel Bonilla, Environmental Planner; CIA Graphics

Sarah Berns, Environmental Planner; CIA Graphics

Daniel Tran, Environmental Planner; Land Use Data

Natalie Hill, Environmental Planner; Demographic Data

C. G. Stroud, Associate Right of Way Agent; Relocation Impact Memorandum

Daniel Dunn, Office Chief, R/W Relocation Assistance Program

Art Escalante, Transportation Engineer, Office of Traffic Investigations; Technical Review

Dinh H. Dao, Assoc. Transportation Engineer, Freeway Operations; Technical Review

Ed Krause, Assoc. Civil Engineer, Intelligent Transportation Systems; Technical Review

Jennifer Keevil, Landscape Architecture; Technical Review

Alex Kirkish, District Archaeologist; Historic Property Survey Report, Archaeological Survey Report & Technical Review

Prakash Yadav, Transportation Engineer, Hydraulics Unit; Technical Review

Vincent Chen, Transportation Engineer, Storm Water Unit; Technical Review

Hung Po Yang, Transportation Engineer, Geotechnical Services; Technical Review

Dawn Kukla, Sr., Environmental Planner; Technical Review

Tuanchi (Jack) Liu, Transportation Engineer, Hazardous Waste Branch; Addendum for the Supplemental Initial Site Assessment Report & Technical Review

Ayubur Rahman, Branch Chief, Hazardous Waste

Andrew Yoon, Senior Transportation Engineer, Air Quality Branch; Technical Review

Andy Woods, Transportation Engineer, Air Quality Branch; Technical Review

Ralph Thunstrom, Assoc. Transportation Engineer, Noise & Vibration Branch; Technical Review

Jin Lee, P.E., PMP, Branch Chief, Noise & Vibration Branch

Arnold Parmer, T.E., Transportation Engineer, Noise & Vibration Branch; Technical Review

Eric Hanson, Environmental Planner; Technical Review

Paul Caron, Sr. District Biologist

Barbara Marquez, Sr. Environmental Planner; Technical Review

Brian Manor, Environmental Planner; Document Review

5.2 Consultant Team

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Robert Blume, P.E., Project Manager

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Deborah Pracilio, Principal; Project Management and document review.

Nicole West, Senior Environmental Specialist; Assistant Project Management and preparation of the EIR/EA.

Romi Archer, Senior Environmental Planner; preparation of EIR/EA pursuant to CEQA.

Lisa Williams, Senior Environmental Specialist; Cumulative Impact Assessment.

Art Homrighausen, Principal, Biologist; management of the Natural Environment Study and Biological Studies.

Elizabeth Delk, Biologist; Natural Environment Study and Jurisdictional Delineation.

Leo Simone, Senior Biologist, Wildlife Movement Memo.

Blake Selna, Senior Biologist, Oak Tree Survey.

Tung-Chen Chung, Ph.D., INCE, Principal, management and review of the Air Quality Analysis and Noise Study.

Keith Lay, Associate, Air Quality/Noise Specialist; Air Quality Analysis.

Jason Lui, Noise Specialist; Noise Study, Noise Abatement Decision Report.

Ron Brugger, Air Quality Specialist; Energy Study.

Steve Conkling, Paleontology, Director, management of the Paleontology Report.

Meredith Stanley, Paleontology; Paleontology Report.

Lori Keller, Environmental Planner; Geology, Paleontology, Land Use sections, and Section 4(f) studies.

Erin Razban, Environmental Planner; Visual Impact Assessment.

Andrea Zullo, Environmental Planner; Visual Impact Assessment.

Jane Dillon, Assistant Environmental Planner; assisted with NADR, EIP and document preparation.

Danette LeBron, Word Processor; coordination of Word Processing and preparation of the document.

Jennette Bosseler, Editor; Editing and preparation of document.

Justin Roos, GIS Specialist; coordination and production of GIS aspects for the documents.

Meredith Canterbury, Assistant GIS Specialist; production of GIS aspects for the documents.

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Appendix A CEQA Checklist

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Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Environmental Impact Report/Environmental Impact Assessment. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES -- Would the				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES -- Would the				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of top soil?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project,and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the useof septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing orworking in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip,would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
VIII. HYDROLOGY AND WATER QUALITY -- Would theproject:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
or siltation on- or off-site?				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structureswhich would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				
f) For a project within the vicinity of a private airstrip,would the project expose people residing or working inthe project area to excessive noise levels?	☐	☐	☐	☒
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIII. PUBLIC SERVICES -- Would the project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XIV. RECREATION –				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect onthe environment?	☐	☐	☐	☒
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level ofservice standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
risks?				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant	No Impact
project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XVII. MANDATORY FINDINGS OF SIGNIFICANCE –				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Appendix B De Minimis Section 4(f) Evaluation

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SECTION 4(F) DE MINIMIS IMPACT FINDING

I-5 HOV and Truck Lanes Project
SR-14 to Parker Road
Los Angeles County, California

Description of the Section 4(f) Resource

Santa Clarita Woodlands Park is a public park on the north-facing flank of the Santa Susana Mountains to the west of I-5. These 4,000 acres of public parkland is owned and managed by the Santa Monica Mountains Conservancy (SMMC). It consists of numerous canyons and includes Ed Davis Park in Towsley Canyon.

Project Description

California Department of Transportation (Caltrans) proposes to widen existing Interstate 5 (I-5) to include high-occupancy vehicle (HOV) lanes and truck climbing lanes from State Route 14 (SR-14) on the south to Parker Road on the north, a distance of approximately 13.6 miles. The proposed improvements include extending the existing HOV lanes on I-5 from SR-14 to south of Parker Road, a distance of approximately 13 miles, and adding truck climbing lanes from the SR-14 interchange at Calgrove Boulevard (northbound) and to Pico Canyon Road/Lyons Avenue (southbound), a distance of approximately 3 to 4 miles.

The proposed project includes the following components: addition of HOV, truck, auxiliary lanes; bridge widening and/or replacement; modification of on- and off-ramps; upsizing or replacement of culverts; retaining walls; utility relocation; additional and upgraded Intelligent Transportation System (ITS) Facilities, and new landscaping and irrigation. Figure 2 shows the project features at the vicinity of Santa Clarita Woodlands State Park.

Project Impacts to Santa Clarita Woodlands Park

The proposed project would require the acquisition of approximately 0.026 acre of permanent right-of-way. Alternative 2 (the preferred alternative) would modify the existing I-5 freeway abutting property within Santa Clarita Woodlands Park. Placement of support columns would be required to allow for widening of the existing overhead freeway structure within the area identified.

Proposed Avoidance, Minimization, Mitigation, Enhancements to the Resource

The following measures to minimize harm and to preserve and enhance those features and values of the property that originally qualified the property for Section 4(f) protection will be implemented as project commitments:

- The standard Caltrans 15-ft setback from the edge of the bridge to the right-of-way will be evaluated further during design, and reductions will be considered to reduce impacts to the parcel. Caltrans is willing to reduce the setback, and will need to evaluate the reduction when more detailed information is available during the design of the project.
- The amount of $65,000.00 will be paid to the SMMC through an in-lieu fee program prior to start of construction.

- Caltrans will work with the SMMC on possible fencing locations, if necessary.
- Caltrans will pursue possible acquisition of APN 2826-025-007 with the owner of the parcel, if an agreement can be reached on the purchase price. The parcel will be turned over to the SMMC.

Public Involvement

A public hearing was conducted for the project on February 5, 2009. Documentation of the public involvement process can be found in Chapter 4 of the environmental document.

Official with Jurisdiction Concurrence

The SMMC supports the proposed project and concurs with the proposed impacts and minimization/enhancement measures listed above.

Conclusion

Based upon the above information, the following assessment has been made:

- The proposed project project includes all possible planning to minimize harm to Santa Clarita Woodlands Park.
- There are no anticipated impacts that will adversely affect the activities, features and attributes of Santa Clarita Woodlands Park.

De minimis finding on the I-5 HOV/Truck Lane project is being carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

Under 49 USC 303(d), FHWA may determine, if certain conditions are met, that a project will have only a *de minimis* impact, as defined in 23 CFR 774.17, on a property protected by Section 4(f) of the U.S. Department of Transportation Act of 1966. With respect to public parks, FHWA may make a finding of *de minimis* impact only if it determines that the project will not adversely affect the activities, features and attributes of the park eligible for 4(f) protection and the officials with jurisdiction over the park concur in the finding. The *de minimis* impact finding is based on the degree or level of impact including any avoidance, minimization, and mitigation or enhancement measures that are included in the project.

As such, Caltrans has determined that the project's impact to Santa Clarita Woodlands Park is *de minimus*.

Santa Monica Mountains Conservancy

California Department of Transportation

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 MAIN STREET, SUITE 100
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0362
FAX (213) 897-0360
TTY (213) 897-4937

Flex your power!
Be energy efficient!

August 20, 2008

Paul Edelman
Chief, Natural Resources Planning
Ramirez Canyon Park
Mountains Recreation and Conservation Authority
5810 Ramirez Canyon Road
Malibu, CA 90265

Subject: Section 4(f) *De Minimis* Finding for the I-5 HOV/Truck Lane Project

Dear Mr. Edelman:

The purpose of this letter is to inform the Santa Monica Mountains Conservancy (SMMC) that the California Department of Transportation (Caltrans) intends to make a *de minimis* impact finding on the effects that the I-5 HOV and Truck Lane project will have on the Santa Clarita Woodlands State Park.

Pursuant to discussion at our meeting on June 23, 2008, we are submitting for your review the proposed *de minimis* impact finding and the related exhibits. The *de minimis* finding explains the scope of the project, addresses the potential effects of the project on the park in accordance with 49 USC 303(d) (Section 4(f) of the U.S. Transportation Act of 1966).

At the meeting, additional discussion of the potential effects of the proposed project on wildlife movement across the I-5 freeway and possible measures to minimize these effects was conducted. Caltrans is continuing to evaluate existing wildlife movement, the project's effect on this movement and appropriate minimization measure for consideration in the biological resources assessment in the environmental document. This evaluation includes consideration of the impacts and minimization measures discussed at the meeting.

Also included with this letter in response to your request are five exhibits showing the existing and proposed bridge column locations for both alternatives at the Gavin Canyon UC and the proposed right-of-way at the SMMC parcel.

If you have any questions regarding the proposed project, please contact Mine Struhl at (213) 897-5446, or at mine_struhl@dot.ca.gov.

Sincerely,

Aziz Elattar
Office Chief- Division of Environmental Planning
Department of Transportation – District 7
100 Main Street, Suite 100
Los Angeles, CA 90012-3606
(213) 897-0686

Attachments: Section 4(f) *De minimis* Impact Finding
Gavin Canyon UC Exhibits (5)

SECTION 4(F) DE MINIMIS IMPACT FINDING

I-5 HOV and Truck Lanes Project
SR-14 to Parker Road
Los Angeles County, California

California Department of Transportation (Caltrans) intends to make a *de minimis* impact finding on the effects that the I-5 HOV and Truck Lane project will have on Santa Clarita Woodlands State Park. *De minimis* finding on the I-5 HOV/Truck Lane project is being carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

Under 49 USC 303(d), FHWA may determine, if certain conditions are met, that a project will have only a *de minimis* impact, as defined in 23 CFR 774.17, on a property protected by Section 4(f) of the U.S. Department of Transportation Act of 1966. With respect to public parks, FHWA may make a finding of *de minimis* impact only if it determines that the project will not adversely affect the activities, features and attributes of the park eligible for 4(f) protection, and the officials with jurisdiction over the park concur in the finding. The *de minimis* impact finding is based on the degree or level of impact including any avoidance, minimization, and mitigation or enhancement measures that are included in the project.

Project Description

Caltrans proposes to widen existing Interstate 5 (I-5) to include high-occupancy vehicle (HOV) lanes and truck climbing lanes from State Route 14 (SR-14) on the south to Parker Road on the north, a distance of approximately 13.6 miles (Figure 1). The proposed improvements include extending the existing HOV lanes on I-5 from SR-14 to south of Parker Road, a distance of approximately 13 miles, and adding truck climbing lanes from the SR-14 interchange at Calgrove Boulevard (northbound) and to Pico Canyon Road/Lyons Avenue (southbound), a distance of approximately 3 to 4 miles.

The proposed project includes the following components: addition of HOV, truck, auxiliary lanes; bridge widening and/or replacement; modification of on- and off-ramps; upsizing or replacement of culverts; retaining walls; utility relocation; additional and upgraded Intelligent Transportation System (ITS) Facilities, and new landscaping and irrigation. Figure 2 shows the project features at the vicinity of Santa Clarita Woodlands State Park.

Impacts to Santa Clarita Woodlands State Park

Alternatives 2 and 3 of the I-5 HOV/Truck Lane project would modify the existing I-5 freeway abutting property within Santa Clarita Woodlands State Park owned by the Santa Monica Mountains Conservancy (SMMC). As shown on Figure 3, approximately 0.026 acre, and 0.049 acre of the park would be affected by the construction of Alternatives 2 and 3, respectively. Placement of support columns would be required to allow for widening of the existing overhead freeway structure within the area identified.

De minimis Impact Finding

- The proposed project alternatives will not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). Alternatives 2 and 3 would use land that is along the extreme eastern boundary of the park. There are no

recreational activities occurring in this portion of the park. In addition, there would be no impact to access to the park.

- The proposed project includes all appropriate measures to minimize harm and to preserve and enhance those features and values of the property that originally qualified the property for Section 4(f) protection. The following measures were discussed with the SMMC:

    1. The standard Caltrans 15-ft setback from the edge of the bridge to the right-of-way will be evaluated further during design, and reductions will be considered to reduce impacts to the parcel. Caltrans is willing to reduce the setback, and will need to evaluate the reduction when more detailed information is available during the design of the project.
    2. The amount of $65,000.00 will be paid to the SMMC through an in-lieu fee program.
    3. Caltrans will work with the SMMC on possible fencing locations, if necessary.

- The public would be afforded the opportunity to review and comment on the effects of the project on the identified Section 4(f) resource as part of the CEQA/NEPA public review process.

Pursuant to 23 CFR 771.135(p), Caltrans will request written concurrence from the SMMC after the public review and comment period is provided regarding the above conditions.

Attachments: Figure 1. Project Location
Figure 2. Project Features
Figure 3. Impacted Area of Santa Clarita Woodlands State Park

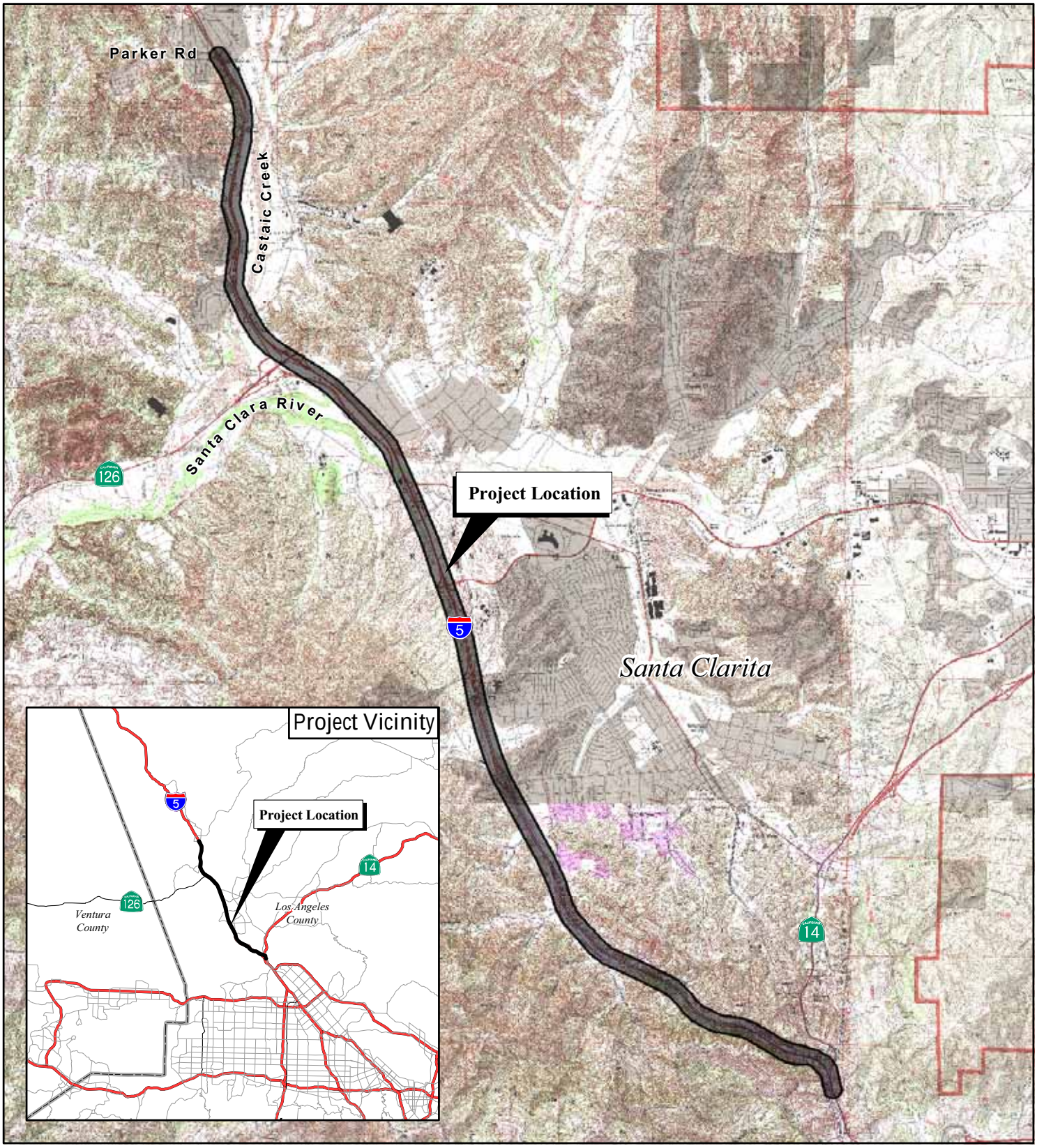


FIGURE 1

Legend

Project Location

0 3,750 7,500 Feet

I-5 HOV / Truck Lanes

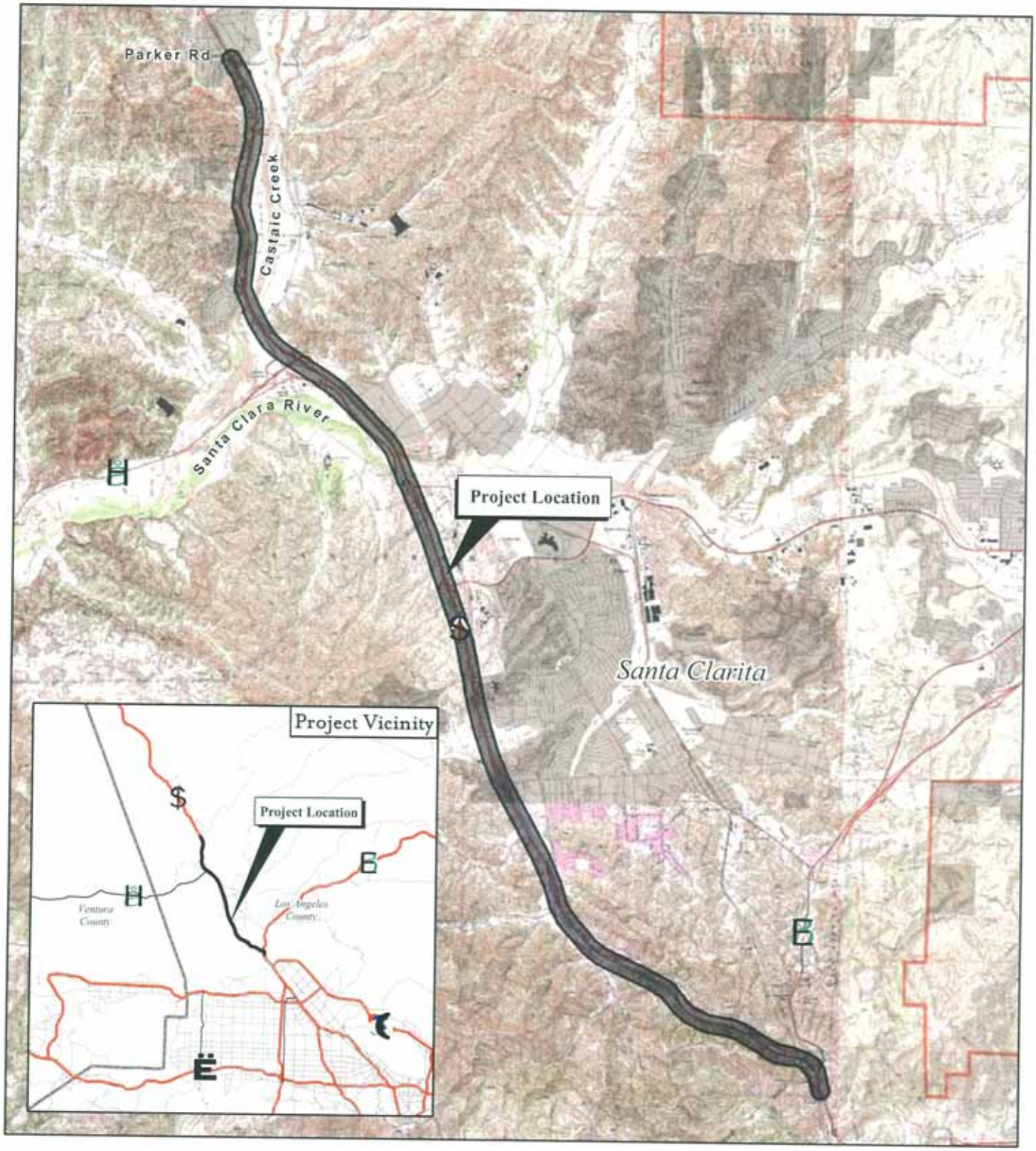
Project Location

07-LA-5 PM R44.9/R59.0

EA 2332E0

SOURCE: USGS 7.5' QUAD, CALIF.

I:\SIB0601\GIS\Fig1_1.mxd (12/19/2007)



LEGEND

Project Location

0 3,750 7,500 Feet

FIGURE 1

I-5 HOV / Truck Lanes

Location Map

SOURCE: USGS 7.5' QUAD, CALIF.

I:\SIB0601\GIS\Fig1.mxd (01/02/2008)

Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line
Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Existing Retaining Wall
Potential Retaining Wall
Proposed Drainage Improvements
Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements

0 150 300 Feet

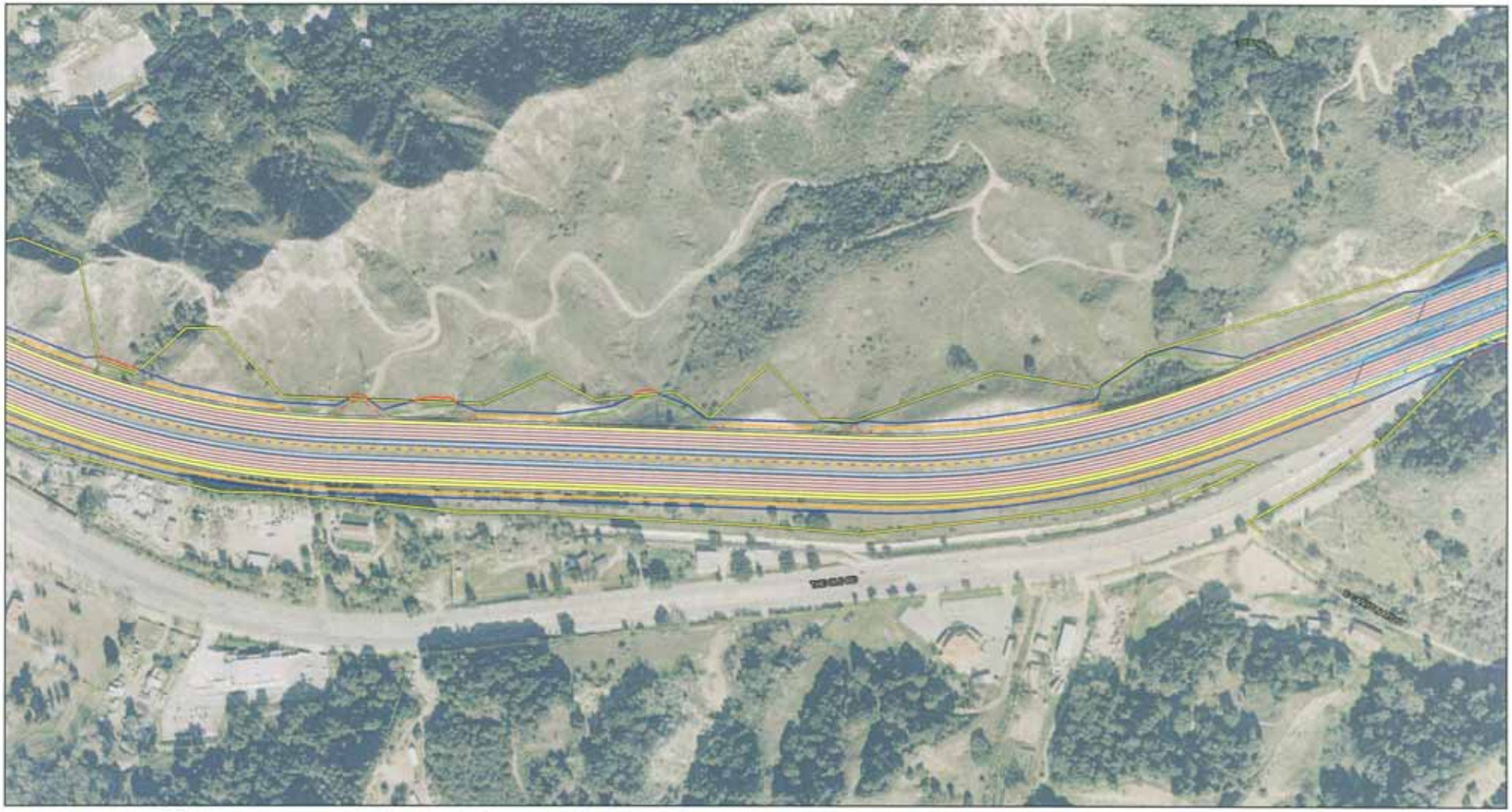
SOURCE: Air Photo USA (02/2006)

Map Index

FIGURE 2.3
SHEET 5 OF 17

I-5 HOV/Truck Lanes
Alternative 2 - Project Features

I:\SIB0601\GIS\Project_Features_Alt2.mxd (9/10/2008)



Potential Water Treatment Basin
Potential Construction Staging Area
Proposed Alignment
Existing Right-of-Way
Proposed Right-of-Way
Parcel Boundary
Disturbance Line
Temporary Construction Easement (TCE)
Structure to be Widened or Replaced
Toe of Fill
Top of Cut
Existing Retaining Wall
Potential Retaining Wall
Proposed Drainage Improvements
Improvements by Others
Existing Length of AUX Lane/ Extend Ramp
HOV Lanes
MFL Lanes
Proposed AUX Lanes
Truck Lanes
Unimproved Lanes/No Improvements
Frontage Road Improvements

0 150 300 Feet

SOURCE: Air Photo USA (02/2006).

Map Index

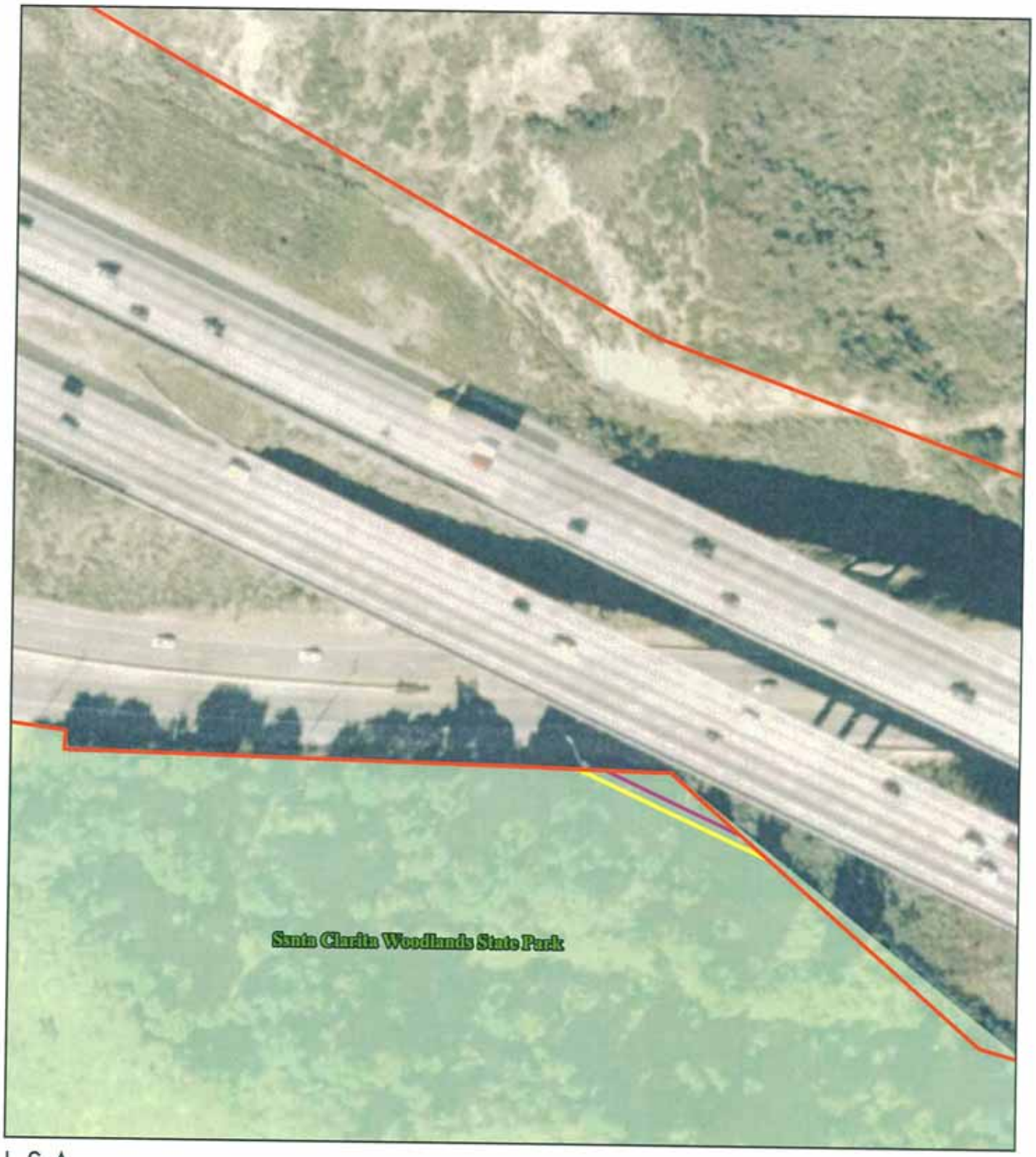
FIGURE 2.4

Sheet 5 of 17

I-5 HOV/Truck Lanes

Alternative 3 - Project Features

I:\SIB0601\GIS\Project_Features_AR3.mxd (9/10/2008)



LSA

Existing Right-of-Way
Alternative 2 Proposed Right-of-Way
Alternative 3 Proposed Right-of-Way
Parks, Open Space, and Recreation Areas

N

0 50 100
FEET

SOURCE: Psomas (01/07), Thomas Bros. (2007), City of Santa Clarita (2007).

I:\SIB0601\GIS\4F_FIG3.mxd (6/19/2008)

FIGURE 3

I-5 HOV/Truck Lanes
Impacted Area of
Santa Clarita Woodlands State Park

Appendix C Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION
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January 14, 2005

TITLE VI
POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

WILL KEMPTON
Director

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Appendix D Summary of Relocation Benefits

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Summary of Relocation Benefits

D.1 California Department of Transportation Relocation Assistance Program

D.1.1 Relocation Assistance Advisory Services

The California Department of Transportation (Caltrans) will provide relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of Caltrans' acquisition of real property for public use. Caltrans will assist residential displacees in obtaining comparable decent, safe and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displaces will be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include supplying information concerning federal and state assisted housing programs, and any other known services being offered by public and private agencies in the area.

D.1.2 Residential Relocation Payments Program

D.1.2.1 Residential

Moving Costs

Any displaced person who was "lawfully" in occupancy of the acquired property regardless of the length of occupancy in the property acquired will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 80 kilometers (50 miles), a moving service authorization, or a fixed payment based on a fixed moving cost schedule which is determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expenses payments, fully eligible homeowners may be entitled to payments for increased costs of purchasing replacement housing.

Homeowners who have owned and occupied their property for 180 days prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment equal to the difference between Caltrans' offer to purchase their property and the price of a comparable replacement dwelling, and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. Also the interest differential must be based upon the "lesser of" either the loan on the displacement property or the loan on the replacement property. The maximum combination of these three supplemental payments that the owner-occupants can receive is $22,500. If the calculated total entitlement (without the moving payments) is in excess of $22,500, the displacee may qualify for the Last Resort Housing described below.

Rental Supplement

Tenants who have occupied the property to be acquired by Caltrans for 90 days or more and owner-occupants who have occupied the property 90 to 180 days prior to the date of the first written offer to purchase may qualify to receive a rental differential payment. This payment is made when Caltrans determines that the cost to rent a comparable and "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the eligible occupant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitation noted below under the "Down Payment" section (see below). The maximum amount of payment to any tenant of 90 days or more and any owner-occupant of 90 to 179 days, in addition to moving expenses, will be $5,250. If the calculated total entitlement for rental supplement exceeds $5,250, the displacee may qualify for the Last Resort Housing Program described below.

The rental supplement of $7,500 or less will be paid in a lump sum, unless the displacee requests that it be paid in installments. The displaced person must rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the

date Caltrans takes legal possession of the property, or from the date the displacee vacates Caltrans acquired property, whichever is later.

Down Payment

Displacees eligible to receive a rental differential payment may elect to apply it to a down payment for the purchase of a comparable replacement dwelling. The down payment and incidental expenses cannot exceed the maximum payment of $5,250, unless the Last Resort Housing Program is indicated. The one-year eligibility period in which to purchase and occupy a "decent, safe and sanitary" replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24.404) contain the policy and procedure for implementing the Last Resort Housing Program on federal aid projects. In order to maintain uniformity in the program, Caltrans has also adopted these federal guidelines on non-federal-aid projects. Except for the amounts of payments and the methods in making them, last resort housing benefits are the same as those benefits for standard relocation as explained above. Last resort housing has been designed primarily to cover situations where available comparable replacement housing, or when their anticipated replacement housing payments, exceed the $2,520 and $22,500 limits of the standard relocation procedures. In certain exceptional situations, last resort housing may also be used for tenants of less than 90 days.

After the first written offer to acquire the property has been made, Caltrans will, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation.
- Number of people to be displaced and the distribution of adults and children according to age and sex.
- Location of school and employment.
- Special arrangements to accommodate any handicapped member of the family.
- Financial ability to relocate into comparable replacement dwelling, which will house all members of the family decently.

The above explanation is general in nature and is not intended to be a complete explanation of relocation regulations. Any questions concerning relocation should be addressed to Caltrans. Any persons to be displaced will be assigned a relocation advisor who will work closely with each displacee in order to see that all payments

and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments.

D.1.2.2 Mobile Home

A mobile home generally refers to single, double or triple wide mobile home units. It does not include manufactured homes that are permanently affixed to the realty, as these are treated as single family dwellings. However, it can include certain trailers or recreational vehicles that are a primary residence depending on how they are permanently affixed to the real property.

If the mobile home is not acquired by Caltrans, the owner (regardless of who occupies it) of a mobile home is eligible for a payment to move the mobile home to a replacement piece of land based on an actual cost basis. This includes the cost to dissemble, move and reassemble any porches, decks, skirting and/or awnings. Additional costs may be eligible for reimbursement if Caltrans determines they are "actual, reasonable and necessary."

Moving Cost

Displaced individuals and families may choose to be paid on the basis of actual, reasonable moving costs and related expenses, or according to a fixed moving cost schedule.

Replacement Housing Payments

180-Day Owner-Occupant

If you qualify as a 180-day owner occupant, you may be eligible—in addition to the fair market value of your property—for a RHP that consists of a Price Differential, Mortgage Differential and/or Incidental Expenses.

Price Differential

The Price Differential payment is the amount by which the cost of a replacement dwelling exceeds the acquisition cost of the displacement dwelling. This payment will assist you in purchasing a comparable decent, safe, and sanitary (DS&S) replacement dwelling. Caltrans will compute the maximum payment you may be eligible to receive. In order to receive the full amount of the calculated price differential, you must spend at least the amount calculated by Caltrans on a replacement property.

Mortgage Differential

The Mortgage Differential payment will reimburse your for any increased mortgage interest costs you might incur because the interest rate on your new mortgage for the real property, or the loan obtained for just the mobile home unit, exceeds the interest rate on the property acquired by Caltrans The payment computation is complex because it is based on prevailing rates, your existing loan and your new loan. Also, a part of this payment may be prorated such as reimbursement for a portion of your loan origination fees and mortgage points. To be eligible to receive this payment, the acquired property must have been encumbered by a bona fide mortgage which was a valid lien for at least 180 days prior to the initiation of negotiations.

Incidental Expenses

You may also be reimbursed for any actual and necessary Incidental Expenses that you incur in relation to the purchase of your replacement property. These expenses may be those costs for title search, recording fees, credit report, appraisal report, and certain other closing costs associated with the purchase of property. You may also be eligible for certain costs related to the purchase of a new mobile home, such as sales tax or use tax payments, DMV title transfer fees, or building and transportation permits. You will not be reimbursed for any recurring costs such as prepaid real estate taxes and property insurance.

If the total amount of your RHP (Price Differential, Mortgage Differential and Incidental Expenses) exceeds $22,500, the payment must be deposited directly into an escrow account or paid directly to the mortgage company.

90-Day Owner-Occupant

If you qualify as a 90-day occupant (either as an owner or tenant), you may be eligible for a RHP in the form of a Rent Differential. Remember – it is your status in the mobile home unit that determines your "occupancy."

Rent Differential

The Rent Differential payment is designed to assist you in renting a comparable decent, safe and sanitary replacement dwelling. The payment is based on the difference between the base monthly Rent for the property acquired by Caltrans (including average monthly cost for utilities) and the lesser of:

a) The monthly rent and estimated average monthly cost of utilities for a comparable replacement dwelling as determined by Caltrans, or

b) The monthly rent and estimated average monthly cost of utilities for the decent, safe and sanitary dwelling that you actually rent as a replacement dwelling.

In order to receive the full amount of the calculated Rent Differential, you must spend at least the amount calculated by Caltrans on a replacement property. This payment may – with certain limitations – be converted to a Down Payment Option to assist you in purchasing a replacement property.

Down Payment Option

The Down Payment is a direct conversion of the Rent Differential payment. If the Caltrans calculated Rent Differential is between $0 and $5,250, your Down Payment will be $5,250 which can be used towards the purchase of a replacement decent, safe and sanitary dwelling. If the Rent Differential is over $5,250, you may be able to convert the entire amount of the Rent Differential to a Down Payment option.

The Down Payment option must be used for the required Down Payment, which is usually a percentage of the entire purchase price, plus any eligible incidental expenses related to the purchase of the property. You must work closely with your Relocation Agent to ensure you can utilize the full amount of your Down Payment option towards the purchase.

Last Resort Housing

On most projects, an adequate supply of housing will be available for sale and for rent, and the benefits provided will be sufficient to enable you to relocate to comparable housing. However, there may be projects in certain locations where the supply of available housing is insufficient to provide the necessary housing for those persons being displaced. In such cases, Caltrans will utilize a method called Last Resort Housing. Last Resort Housing allows Caltrans to construct, rehabilitate or modify housing in order to meet the needs of the people displaced from a project. Caltrans can also pay above the statutory limits of $5,250 and $22,500 in order to make available housing affordable.

D.1.3 The Business and Farm Relocation Assistance Program

The Business and Farm Relocation Assistance Program provides aid in locating suitable replacement property for the displacee's farm or business, including, when requested, a current list of properties offered for sale or rent. In addition, certain types

of payments are available to businesses, farms, and non-profit organizations. These payments may be summarized as follows:

- Reimbursement for the actual direct loss of tangible personal property incurred as a result of moving or discontinuing the business in an amount not greater than the reasonable cost of relocating the property.
- Reimbursement up to $1,000 of actual reasonable expenses in searching for a new business site.
- Reimbursement up to $10,000 of actual reasonable expenses related to the reestablishment of the business at the new location
- Reimbursement of the actual reasonable cost of moving inventory, machinery, office equipment and similar business-related personal property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting personal property.
- Payment "in lieu" of moving expense is available to businesses which are expected to suffer a substantial loss of existing patronage as a result of the displacement, or if certain other requirements such as inability to find a suitable relocation site are met. This payment is an amount equal to the average annual net earnings for the last two taxable years prior to relocation. Such payment may not be less than $1,000 and not more than $20,000.

D.1.4 Additional Information

No relocation payment received will be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable “decent, safe and sanitary” replacement residence, open to all persons regardless of race, color, religion, sex or national origin, is available or has been made available to them by the state.

Any person, business, farm or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may

appeal for a hearing before a hearing officer or Caltrans' Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal council at his/her expense. Information about the appeal procedure is available from the Caltrans' Relocation Advisors.

The information above is not intended to be a complete statement of all of Caltrans' laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of the Caltrans' relocation programs.

D.1.5 Important Notice

To avoid loss of possible benefits, no individual, family, business, farm or non-profit organization should commit to purchase or rent a replacement property without first contacting a Caltrans of Transportation relocation advisor at:

State of California
Caltrans of Transportation, District # 7
100 S. Main Street
Los Angeles CA 90012

Attachment A:

Your Rights and Benefits as a Displacee
Under the Uniform Relocation Assistance Program
(Residential)
2007

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Attachment B:

Your Rights and Benefits as a Displacee Under the Uniform Relocation Assistance Program (Mobile Homes) 2007

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Attachment C:

Your Rights and Benefits as a Displaced Business, Farm or Nonprofit Organization Under the Uniform Relocation Assistance Program

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Appendix E Environmental Commitments Record

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Date: _____

Environmental Coordinator: _____

Phone Number: _____

Generalist: _____

District 7 Environmental Commitments Record

I-5 HOV/Truck Lanes Project (SR-14 to Parker Road) IA 2335E0

07-LA-5, PM 45.4/R59.0

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
BIOLOGICAL RESOURCES											
1-1	Environmentally Sensitive Areas (ESAs)	Biologist		Prior to clearing and construction			**NC-1** Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any oak tree, oak habitat, riparian and riverine communities, Venturan coastal sage scrub, adjacent to the project footprint and designated as ESAs to be preserved. The protected zone of each oak tree will extend 25 feet (ft) outside of the dripline of the tree. No grading or fill activity of any type will be permitted within the ESAs. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment shall be operated in a manner so as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, shall be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where trees and vegetation are immediately adjacent to planned grading activities.				
1-2	Pre-construction surveys Refer to the following line items for individual surveys: 1-8: measure TE-1 for the arroyo toad 1-8: measure TE-7 for nesting birds 1-9: measures AS-1, AS-2, and AS-3 for bats	—	—	—	—	—	—	—	—	—	—
1-3	Exclusionary measures Refer to line item 1-1 above for fencing for the ESAs	—	—	—	—	—	—	—	—	—	—
1-4	Monitoring required	Biologist		During all site preparation, grading, and construction			**NC-2** A biologist shall monitor construction for the duration of the project to ensure that vegetation removal, Best Management Practices (BMPs), ESAs, and all avoidance and minimization measures are properly constructed and followed.				

Date: _____

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District 7 Environmental Commitments Record

I-5 HOV/Truck Lanes Project (SR-14 to Parker Road) IA 2335E0

07-LA-5, PM 45.4/R59.0

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
1-5	Wetlands, riparian, and uplands mitigation	Biologist		Prior to the beginning of construction			**NC-6** Prior to beginning construction, a Habitat Mitigation and Monitoring Plan (HMMP) will be developed in coordination with the United States Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and United States Fish and Wildlife Service (USFWS) to ensure no net loss of riparian habitat value or acreage will result. The HMMP will comply with all terms and conditions set forth in the permits and opinions issued by the resource agencies and will include the following provisions: • Permanent impacts to native habitat and riparian habitat will be replaced on or off site at a minimum 2:1 ratio with in-kind habitat. Temporary impacts to native vegetation will be replaced at a minimum of 1:1 ratio, with in-kind habitat restored in place within the project area. If off-site restoration is conducted, it will be done within the same watershed as the proposed project. • The HMMP will identify a success criterion of at least 80 percent cover of native habitat and native riparian vegetation or composition structure similar to existing adjacent high-quality riparian vegetation. • Further criteria specified in the HMMP will include an establishment period for the replacement habitat, regular trash removal, and regular maintenance and monitoring activities to ensure the success of the mitigation plan. After construction, annual summary reports of biological monitoring will be provided to ACOE, CDFG, and USFWS documenting the monitoring effort. The duration of the monitoring and reporting will be established by resource agency permit conditions. • The HMMP will identify a success criterion for restored habitat of native Venturan coastal sage scrub vegetation of a composition structure similar to existing adjacent high-quality Venturan coastal sage scrub.				
		Biologist and Resident Engineer		During construction			**NC-5** All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated nonsensitive upland habitat areas. The designated upland areas will be located in such a manner as to prevent the runoff from any spills from entering waters of the United States.				
		Biologist		Prior to construction			**W-1** Prior to initiation of construction, an Individual Permit will be obtained through the ACOE pursuant to Section 404 of the Clean Water Act. After coordination with ACOE, if appropriate, a Nationwide Permit would be pursued. Any conditions in that Permit will be added to this ECR.				
		Biologist		Prior to construction			**W-2** Prior to initiation of construction, a Streambed Alternation Agreement with the California Department of Fish and Game				

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
							(CDFG) will be obtained. Additional conditions may be required by the United States Army Corps of Engineers (ACOE) and CDFG as part of the permitting process and those conditions would be adhered to. As discussed previously in Measure NC-8, riparian habitat would be replaced on or off site at a minimum 2:1 ratio with in-kind habitat for permanent impacts. Temporary impacts to riparian habitat would be replaced at a minimum of 1:1 ratio, with in-kind habitat restored in place within the project area. If off-site restoration is conducted, it would be done within the same watershed as the proposed project. Restoration would meet a success criterion of at least 80 percent cover of native riparian vegetation or composition structure similar to existing adjacent high-quality riparian vegetation. Any conditions in that Agreement will be added to this ECR.				
1-6	Compensatory measures Refer to line item 1-5, above, for wetlands, riparian, and upland mitigation	—	—	—	—	—	—	—	—	—	—
1-7	Vegetation and Plant Species Refer to line item 1-1 above, for additional plant species mitigation	Biologist		During construction			**NC-3** Per Caltrans policy, impacts to any oak trees (excluding California scrub oaks) with trunk sizes above 8 inches (in) diameter at breast height (dbh) will be replaced at a mitigation-to-impact ratio of 3:1 if possible. Heritage oaks (oaks with dbh greater than 36 in) will be replaced at a mitigation-to-impact ratio of 10:1 if possible.				
				During construction			**NC-4** Impacts to oak trees outside of the existing Caltrans right-of-way, the County of Los Angeles Oak Tree Protection Ordinances and the City of Santa Clarita Municipal Code require conditions that are deemed necessary to ensure that oak trees are protected. These conditions may involve, but are not limited to, replacement of oak trees and an oak tree protection plan within the project area to protect replacement oaks and those oak trees not impacted by the proposed project.				
1-8	Endangered species	Biologist		Prior to any site preparation, grading or construction			**TE-1** To ensure that no arroyo toads have moved onto the site, preconstruction surveys will be conducted by a qualified biologist prior to any work within these streambeds. This survey will include searching for any other listed amphibian species, including California red-legged frog. Should the arroyo toad or California red-legged frog be found on site at that time, a buffer will be established, and no work will be allowed within that buffer until consultation (formal or informal) with the USFWS has been conducted.				
		Biologist		During construction			**TE-2** Work within and near the Santa Clara River and Castaic Creek will take place outside of the peak reproductive time for the unarmored threespine stickleback (March through July) or				

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
							within Castaic Creek when it is not flowing.				
		Biologist		During construction			**TE-3** A flow diversion path will be constructed within the Santa Clara River and Castaic Creek during project construction that will ensure safe passage of sensitive fish species through the project site. No work will be allowed to take place within this diversion.				
		Biologist		During construction			**TE-4** Construction activities in the vicinity of the Santa Clara River and Castaic Creek will occur outside of any rain event, and BMPs will be employed to prevent sedimentation in these drainages.				
		Biologist		During construction			**TE-5** No fueling, lubrication, storage, or maintenance of construction equipment will be allowed within 150 feet (ft) of CDFG and ACOE jurisdictional areas.				
		Biologist		During construction			**TE-6** Spoil sites will not be located within CDFG or ACOE jurisdictional areas or in areas where refuse could be washed into the creek.				
		Biologist		During construction			**TE-7** In order to avoid effects to nesting birds, any native vegetation removal or tree (native or exotic) trimming activities will occur outside of the nesting bird season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing shall not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.				
1-9	Animal species	Biologist		Prior to vegetation removal or alteration of any bridge structure			**AS-1** A qualified bat biologist will perform preconstruction surveys during the spring and summer (May–August) prior to vegetation removal or alteration of any bridge structure, since bat roosts can change seasonally. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.				
		Biologist					**AS-2** In order to prevent effects to bridge- and crevice-nesting bats, all bridgework will be scheduled between September 1 and November 30 to avoid hibernating bats and the maternity season. If this is not feasible, bat exclusion devices will need to be installed under the supervision of a qualified biologist. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. All bat exclusion techniques will be coordinated between the District Biologist and the resource agencies.				
		Biologist		Prior to any alteration of the			**AS-3** Prior to any alteration of the Santa Clara River Bridge structure (or any other bridge structure deemed necessary after				

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
				Santa Clara River Bridge structure (or any other bridge structure deemed necessary after preconstruction surveys) or vegetation clearing in the vicinity of those bridges			preconstruction surveys) or vegetation clearing in the vicinity, bat houses will be constructed and installed under the guidance of a qualified bat biologist and Caltrans standard practices. After completion of the project, a qualified bat biologist will perform postconstruction surveys prior to bat houses being removed and disposed of.				
1-10	Invasive species Refer also to line item 2-3, below.	Biologist		During construction			**IS-1** Inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) will be employed should an invasion occur.				
		Biologist		Prior to the completion of construction			**IS-2** In compliance with Executive Order 13112, affected areas will be revegetated with plant species native to the vicinity, and the use of species listed on the California Invasive Plant Council's (Cal-IPC) Invasive Plant Inventory with a high or moderate rating will be avoided.				
		Biologist		During construction			**IS-3** During construction, the contractor will follow all pollution and litter laws and regulations.				
1-11	Other										
1-12	Other										
1-13	Other										
VISUAL/LANDSCAPE											
2-1	Landscape and plant design	Landscape Architect		During construction			**V-2 Landscape Plan.** A landscape plan will be prepared that will be incorporated into the final design of the proposed project. The landscape plan will include the following components, as feasible: • Identification of areas within the project limits for revegetation, including landscaping for graded areas with plant species consistent with adjacent vegetation • Planting of trees and shrubs along Interstate 5 (I-5) to enhance the existing visual planting character of the area • Revegetation of areas used as temporary construction easements (TCEs) • Erosion control measures will be implemented on slopes to aid in storm water prevention • Vine planting on sound walls and barriers (where feasible) to prevent vandalism and/or graffiti				
2-2	Plant palette Refer to line item 2-1, above.	—	—	—	—	—	—	—	—	—	—

Date: _____

Environmental Coordinator: _____

Phone Number: _____

Generalist: _____

District 7 Environmental Commitments Record

I-5 HOV/Truck Lanes Project (SR-14 to Parker Road) IA 2335E0

07-LA-5, PM 45.4/R59.0

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
2-3	Invasive species considerations Refer to line item 1-10, above.	—	-	-	-	-	—	—	—	—	—
2-4	Erosion control Refer to line items 15-2 and 15-3, below.	—	—	—	—	—	—	—	—	—	—
2-5	Special architectural features	Landscape Architect		During construction			**V-3 Wall Treatments.** Aesthetic treatments will be applied to walls associated with Key View 4. Other walls will be evaluated for aesthetic treatments during final design. Specific treatments will be coordinated with local agencies during final design.				
2-6	Contour grading Refer to line item 15-2, below.	—	—	—	—	—	—	—	—	—	—
2-7	Revegetation Plan – establishment types and period Refer to line item 2-1, above.	—	—	—	—	—	—	—	—	—	—
2-8	Removal and replacement of trees	Biologist		During construction			**V-1 Trees.** Existing mature trees will be avoided where practical. If removal of mature trees cannot be avoided, additional landscape improvements will be incorporated into the final design. Where feasible, trees removed will be replaced at a minimum 1:1 ratio using nursery-grown trees for the same species that are a minimum of one gallon in size. Replacement planting shall be as appropriate and approved by the Caltrans District Landscape Architect.				
2-9	Location of construction and staging areas	Resident Engineer		During construction			**V-4 Construction and Staging Areas.** Construction staging areas or storage yards shall be located within State right of way to the extent feasible, and construction access and staging shall be within the maximum project footprint or areas outside the project footprint that have been environmentally cleared for staging use.				
2-10	Standard Construction Specifications	Landscape Architect		During construction			**V-5 Construction Plan.** The project shall be constructed in accordance with Caltrans Standard Construction Specifications, which include measures to reduce visual impacts.				
2-11	Screening of Noise Barriers			During design and during construction of noise barriers			**V-6 Noise Barriers.** Where noise barriers are located adjacent to residential areas with existing views onto protected open space areas or of the adjacent Santa Monica or Santa Susana Mountains, use of transparent material, such as Plexiglas, shall be considered in the design of these noise barriers.				
2-12	Other										
2-13	Other										

Date: _____

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Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
Cultural Resources											
3-1	ESAs for archaeological resources There are no documented archaeological resources in the Area of Potential Effect (APE) and no ESAs are needed.	—	—	—	—	—	—	—	—	—	—
3-2	ESAs for historical resources There are no documented historical resources in the APE and no ESAs are needed.	—	—	—	—	—	—	—	—	—	—
3-3	Cultural resources Phase 3 excavation coordination There are no documented cultural resources in the APE and no Phase 3 excavations are needed.	—	—	—	—	—	—	—	—	—	—
3-4	Archaeological data recovery coordination There are no documented archaeological resources in the APE and no recovery coordination is required.	—	—	—	—	—	—	—	—	—	—
3-5	Native American Monitor There are no documented cultural resources in the APE and no Native American monitoring is required.	—	—	—	—	—	—	—	—	—	—
3-6	Unearth human remains and cultural resources provisions	Cultural Resources Specialist		During site preparation, grading and construction activities			**CR-1** If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.				
				During site preparation, grading and construction activities			**CR-2** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will				

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
							notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will also contact the District 7 Environmental Branch Chief so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.				
3-7	Other requirements set forth in the Memorandum of Agreement (MOA) or State Historic Preservation Officer (SHPO) consultation There are no documented cultural resources in the APE and no MOA or SHPO consultation is required.	—	—	—	—	—	—	—	—	—	—
3-8	Other										
3-9	Other										
3-10	Other										
Paleontology											
4-1	ESAs for paleontology The EIS/EIR did not identify any paleontological resources requiring protection in an ESA.	—	—	—	—	—	—	—	—	—	—
4-2	Monitoring required	Paleontologist		Prior to completion of the PS&E			**PAL-1** Prior to the completion of the PS&E, in accordance with the guidelines on the Caltrans Standard Environmental Reference (SER) Web site (Volume I, Chapter 8), a Paleontological Mitigation Plan (PMP) will be prepared by a Qualified Paleontologist for inclusion in the PS&E and implemented during the excavation phase of the project. The PMP should generally discuss the level of sensitivity of formations encountered along the project alignment, monitoring activities for areas identified as likely to contain paleontological resources (High A- and High B-rated sediments); salvage methods and procedures; resource collection, processing, identification, documentation, and curation activities and procedures; and make a recommendation for the preparation of a Paleontological Mitigation Report (PMR), at the conclusion of the project that follows the Department SER Volume I, Chapter 8 guidelines.. The PMP will include, but not be limited to, the following steps: • A qualified paleontological monitor, working under the direction of a qualified professional paleontologist, will be present at pre-grade meeting to explain mitigation methods				

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
							and procedures to the grading crew. • The paleontological monitor shall also be present on-site on a full-time basis during ground-disturbing/excavation activities in sediments with a high potential for containing paleontological resources. . The monitor will inspect cuts for fossils at all times, and will be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be equipped to rapidly remove any large fossil specimens encountered during excavation. During monitoring, samples will be collected and processed to recover microvertebrate fossils. Processing will include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains. • On encountering a large deposit of bone, the monitor will salvage all bone in the area using additional field staff, if necessary, and in accordance with modern paleontological techniques. • All fossils collected will be prepared to a reasonable point of identification. Excess sediment or matrix will be removed from the specimens to reduce the bulk of the material and the storage cost. Itemized catalogs of all material collected and identified will be provided to a museum repository along with the specimens. • Recommend that a Paleontological Mitigation Report (PMR) signifying completion of the PMP be prepared and submitted to the Lead Agencies and the institutional repository. The PMR will discuss monitoring methods, the results of the monitoring and salvage activities, the significance of any recovered resources and include the fossil catalog. • Recommend that all fossils collected during this work, along with the itemized inventory of these specimens and the PMR will be deposited in an established institutional repository, such as a museum, for permanent curation and storage.				
4-3	Data recovery coordination Refer to line item 4-2, above, for discussion of the PMP, including requirements for data recovery coordination.	—	—	—	—	—	—	—	—	—	—

Date: _____

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Generalist: _____

District 7 Environmental Commitments Record

I-5 HOV/Truck Lanes Project (SR-14 to Parker Road) IA 2335E0

07-LA-5, PM 45.4/R59.0

Log No.	Mitigation Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP/NSSP Required?	Permits, Specifications, and Plans References	Mitigation Measure	Date Completed	Completed Signature Page	Mitigation Complete?	Remarks
4-4	Unexpected discovery provisions Refer to line item 4-2, above, for discussion of the PMP, including unexpected discovery provisions.	—	—	—	—	—	—	—	—	—	—
4-5	Other										
4-6	Other										
4-7	Other										
COMMUNITY/SOCIAL IMPACTS											
5-1	Farmland Refer to line items 5-4, 11-1 and 10-2- below, for measures that would avoid or minimize potential short term impacts to agricultural operations during construction	Project Engineer		Prior to the start of any construction activity adjacent to farmlands							
5-2	Parks and recreation (such as multi-use trails, parks improvements needed, etc.) No parks or trails are affected by the project so no improvements to these types of resources is needed.	—	—	—	—	—	—	—	—	—	—
5-3	Americans with Disabilities Act (ADA) requirements	Project Engineer		During final design and construction			The Project Engineer will ensure that the final design provides for appropriate access facilities as required under the ADA, including such features as wheelchair ramps at the intersections of freeway ramps and local streets.				
5-4	Temporary detours This measure also applies to the following line items: 5-7: bicyclists and pedestrians 5-8: transit services 13-7: detours	Resident Engineer		Prior to construction			**T-1** Prior to construction, Caltrans will prepare a Traffic Management Plan (TMP) that will consist of, but not be limited to, the following standard measures to alleviate traffic inconvenience caused by construction activities. **Traffic Control:** This project will require traffic control elements such as lane/shoulder closures and temporary signing/ striping on the Interstate 5 (I-5) ramps and the I-5 mainline. **Construction Zone Enhanced Enforcement Program (COZEEP):** Through coordination with Caltrans and the California Highway Patrol (CHP), this program was developed to provide a safer work zone for both construction workers and the motoring public. The program uses two CHP officers who enforce lane closures and also provide a visual deterrent to errant/speeding vehicles.				

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							Public Awareness Campaign (PAC): Although the majority of the major closures will occur at night, vehicles traveling through the construction zone will likely experience longer-than-normal delays. To reduce these delays and confusion to the monitoring public during construction activities, Caltrans will implement a PAC. The purpose of the PAC is to keep the surrounding community abreast of the project's progress and construction activities that could affect their travel plans. The use of mailers/flyers, local newspaper advertising, local radio information, public meetings, a project Web site, and e-mail as appropriate should be effective tools for disseminating this information. In addition, all construction activities would be closely coordinated with the City of Santa Clarita and County of Los Angeles and other construction project that may occur at the same time. Comprehensive Stage Construction and Traffic Handling Plans. Signing: The project would require use of real-time communications with motorists such as changeable message signs and highway advisory announcements to alert motorists of upcoming construction activities, detours, and traffic conditions. Signage should be posted on I-5, SR-14, SR-126, and local arterials. Identification of park-and-ride facilities along with encouragement of other public transit and ridesharing usage. **Pedestrian Access:** Provide a pedestrian detour plan to accommodate sidewalk closures.				
		Project Engineer		Prior to construction			**T-2** Prior to construction, Caltrans will prepare a Ramp Closure Study for all ramps that will be closed for more than 10 consecutive days.				
5-5	Relocation impacts			During final design			All property acquisition and relocation will be handled in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) of 1970 (Public Law 91-646, 84 Stat. 1894).				
5-6	Joint development agreement Not applicable to this project.	—	—	—	-	—	—	—	—	—	-
5-7	Bicyclists and pedestrians Refer to line item 5-4, above, for information regarding the TMP and ramp study measures.	—	—	—	—	—	—	—	—	—	—

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5-8	Transit services Refer to line item 5-4, above, for information regarding the TMP and ramp study measures.	—	—	—	—	—	—	—	—	—	—
5-9	Other environmental commitments to local jurisdictions										
5-10	Community outreach activities during construction Refer to line item 5-4, above, for information regarding the TMP which includes community outreach. Refer to line item 10-2, measure N-7, for community outreach related to noise impacts.	—	—	—	—	—	—	—	—	—	—
5-11	Sensitive community resources and special access requirements No specific sensitive or access requirements were identified for the project; no action is needed.	—	—	—	—	—	—	—	—	—	—
5-12	Noise and vibration limitations Refer to line items 10-1 and 10-2, below regarding noise attenuation and limitations.	—	—	—	—	—	—	—	—	—	—
5-13	Other										
5-14	Other										
5-15	Other										
LAND USE											
6-1	De Minimis finding and coordination with the Santa Monica Mountains Conservancy (SMMC)	Project Engineer and Biologist		During final design			**LU-1** The Santa Monica Mountains Conservancy (SMMC) and the California Department of Transportation (Caltrans) have determined that the project's impact to Santa Clarita Woodlands Park is *de minimis*, and the following measures will be implemented as project commitments:	—	—	—	—

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							• The standard Caltrans 15-foot setback from the edge of the bridge to the right of way will be evaluated further during final design, and reductions will be considered to reduce impacts to the parcel. Caltrans is willing to reduce the setback, and will need to evaluate the reduction when more detailed information is available during design of the project. • The amount of $65,000.00 will be paid to the SMMC through an in-lieu fee program prior to start of construction. • Caltrans will work with the SMMC on possible fencing locations near the Gavin Canyon overcrossing, if necessary. • Caltrans will pursue possible acquisition of Assessor's Parcel Number (APN) 2826-025-007 with the owner of the parcel if an agreement can be reached on the purchase price. The parcel will be turned over to the SMMC.				
6-2	Other										
6-3	Other										
6-4	Other										
FLOODPLAINS AND HYDROLOGY											
7-1	Construction in floodplains Refer also to the following line items: 1-6 for compensatory measures 14-1 to 14-9 for water quality measures	Resident Engineer		During construction			**HY-1** Construction within 100-year floodplains will be limited and will be based on coordination with the Los Angeles Regional Water Quality Board, Region 4.				
7-2	Construction of falsework in floodplains Refer also to the following line items: 1-6 for compensatory measures 14-1 to 14-11 for water quality measures	Resident Engineer		During construction			**HY-2** Construction of falsework within the 100-year floodplain will be confined to the area immediately adjacent to the existing piers (within 20 ft).				
7-3	Flood Control Permit from Los Angeles County	Resident Engineer		Prior to construction			**Flood Control Permit.** A permit from Los Angeles County will be needed for work in and adjacent to Los Angeles County flood control facilities. Any conditions from that permit will be added to this ECR.				
7-4	Other										

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7-5	Other										
7-6	Other										
WILD AND SCENIC RIVERS											
8-1	General There are no wild and scenic rivers in the project area.	—	—	—	—	—	—	—	—	—	—
ENERGY											
9-1	General: The EIS/EIR did not identify any mitigation commitments related to energy.	—	—	—	—	—	—	—	—	—	—
NOISE ATTENUATION											
10-1	Sound barriers	Project Engineer		Prior to the completion of construction			**N-1** Prior to construction completion, sound walls that are determined to be reasonable and feasible will, where possible, be constructed.				
10-2	Construction windows to comply with local Noise Ordinances Refer also to line item 5-13, above.	Resident Engineer		During construction			**N-2** The control of noise from construction activities will conform to Caltrans Standard Specifications, Section 7-1.01I, "Sound Control Requirements," and Caltrans Standard provisions S5-300. These provisions state: "Sound control shall conform to the provisions in Section 7-1.01I, Sound Control Requirements, of the Standard Specifications and these special provisions. The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 A-weighted decibel (dBA) at a distance of 50 feet (ft). This requirement in no way relieves the contractor from responsibility for complying with local ordinances regulating noise level. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixer or transient equipment that may or may not be owned by the contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel. Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional will be allowed therefore."				
		Resident Engineer		During all project excavation and on-site grading			**N-3** During all project excavation and on-site grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.				
		Resident Engineer		During construction			**N-4** During all project construction, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.				
		Resident Engineer		During construction			**N-5** During all project construction, the construction contractor shall, to the extent feasible, locate equipment staging in areas				

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							that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site.				
		Resident Engineer		During construction			**N-6** The construction contractor shall use alternative methodologies and/or apply noise abatement measure to reduce noise impacts if construction noise levels would exceed the City's noise standard when construction is outside of the State's right-of-way.				
		Resident Engineer		Prior to construction			**N-7** Prior to project construction, the project contractor shall develop and execute a community information program, notifying neighbors of planned construction schedules and periods of maximum activity. The notice shall provide a construction schedule, required noise conditions applied to the project, and the name and telephone number of the Construction Project Manager who can address questions, and problems that may arise during construction.				
		Resident Engineer		During construction			**N-8** If nighttime construction is required, the construction contractors shall use pile driving alternatives such as vibratory pile driving, pre-drilling, or cast-in-drill hole (CIDH) to reduce noise and vibration levels. In addition, the contractor shall follow state and federal guidelines and polices to determine the appropriate available measures that can be used to reduce the construction noise and vibration impacts.				
		Resident Engineer		During construction			**N-9** During all project construction, the project contractor shall use alternative pile driving methods such as vibratory pile driving, predrilling, or cast-in-drill-hole (CIDH) wherever possible.				
10-3	Other										
10-4	Other										
10-5	Other										
AIR QUALITY											
11-1	Dust control during construction activities	Resident Engineer		During all site preparation, grading, and construction			**AQ-1** Pursuant to 40 Code of Federal Regulations (CFR) 93.115 and 93.117, construction activities shall be required to comply with the mitigation and control measures included in Appendix IV-A of the 2007 Air Quality Management Plan (AQMP).				
	Dust control and other Best Management Practices (BMPs)	Resident Engineer		During all site preparation, grading, and construction			The following South Coast Air Quality Management District (SCAQMD) standard measures would avoid or minimize air pollutant emissions associated with construction activities: • The construction contractor will adhere to the requirements of SCAQMD rules and regulations (Rule 1108) on cutback and emulsified asphalt paving materials. • To reduce fugitive dust emissions, the construction contractor will adhere to the requirements of SCAQMD Rule 403. The Best Available Control Measures (BACMs) specified in SCAQMD's Rule 403 will be incorporated into the project construction. The BACMs are listed in Table				

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							2.14.H in the EIR/EA.				
		Resident Engineer		During all site preparation, grading, and construction			Caltrans Standard Construction Specifications (Sections 10 and 18 for dust control and Section 39-306 for asphalt concrete plant) will be adhered to in order to reduce emissions. The standard Caltrans specifications to minimize the emission of fugitive dust are listed below. • All disturbed areas, including storage piles, not being actively utilized for construction purposes will be effectively stabilized for dust emissions using water, chemical stabilizers/suppressants, or vegetative ground cover. • All on-site unpaved roads and off-site unpaved access roads will be effectively stabilized for dust emissions using water or chemical stabilizers/suppressants. • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities will be effectively controlled for fugitive dust emissions by utilizing applications of water or by presoaking. • When materials are transported off site, all material will be covered or effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container will be maintained. • All operations will limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. The use of blower devices is expressly forbidden. • Following the addition of materials to or the removal of materials from the surface of outdoor storage piles, said piles will be effectively stabilized for fugitive dust emissions utilizing sufficient water or chemical stabilizers/suppressants. • Traffic speeds on unpaved roads will be limited to 15 miles per hour. • Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. • Wheel washers for all exiting trucks will be installed, or all trucks and equipment will be washed off before leaving the site.				

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							• Wind breaks will be installed at windward side(s) of construction areas. • Excavation and grading activity will be suspended when winds exceed 20 miles per hour. • Area subject to excavation, grading, and other construction activity will be limited at any one time.				
11-2	Equipment specifications Refer to line item 11-1, above, for measures related to equipment specifications.	—	—	—	—	—	—	—	—	—	—
11-3	Other										
11-4	Other										
11-5	Other										
Hazardous Materials Investigation/Treatment											
12-1	Hazardous waste clearing affecting advertising (does the hazardous waste need to be moved, removed, or processed under the construction contract?)	—	—	—	—	—	—	—	—	—	—
12-2	Aerially deposited lead (ADL) issues and provisions	Project Engineer		During preparation of the PS&E			**HW-6** During preparation of the PS&E, Caltrans will conduct soil sampling and testing for ADL will be conducted in unpaved locations adjacent to Interstate 5 (I-5) within the project limits. The analytical results of the soil sampling will determine the appropriate handling of the soil and disposal of surplus materials. Excavated hazardous soils will require off-site disposal as hazardous waste at a permitted facility. Refer to Standard Special Provisions (SSP) XE S5-740 and 19-900 for additional information on the disposal of soils affected with ADL.				
12-3	Appropriate Health and Safety Plan	Resident Engineer		Prior to any site preparation, grading and construction			The contractor will be required to prepare a site and project specific Health and Safety Plan.				
12-4	Appropriate Lead Compliance Plan	Resident Engineer		Prior to any site preparation, grading and construction			The contractor will be required to prepare a site and project specific Lead Compliance Plan.				

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12-5	Bridge lead paint provisions	Resident Engineer		During preparation of the PS&E			**HW-3** Asbestos-containing material (ACM) and lead-based paint (LBP) surveys shall be conducted during construction for any buildings or structures with the potential of ACMs and/or LBP concerns that would be demolished. If ACMs and/or LBP are detected, the PS&E will require a licensed contractor to remove the ACMs and/or LBP materials prior to demolition.				
12-6	Road striping lead paint provisions	Resident Engineer		Prior to and during construction			**HW-5** During construction, yellow traffic stripes and pavement marking material shall be removed, collected and tested in accordance with Standard Special Provision (SSP) XE 14-001 "Remove Yellow Traffic Stripe and Pavement Marking (Hazardous Waste)".				
12-7	Asbestos Refer to line item 12-5, above.	—	—	—	-	—	—	—	—	—	—
12-8	Suspect hazardous wastes and underground tanks	Resident Engineer		During construction			**HW-7** If suspect hazardous waste or underground tanks are encountered during construction, the contractor will stop work and follow the procedures outlined in Appendix E, the Caltrans Unknown Hazards Procedures for Construction.				
12-9	Recognized environmental concerns during construction	Resident Engineer		During construction			**HW-1** If recognized environmental concerns such as odor and discoloration of soil are encountered during construction, a Phase II Hazardous Waste Site Investigation shall be performed. This requirement shall be included in the Plans, Specifications and Estimates (PS&E).				
12-10	Excavation deeper than 10 feet	Resident Engineer		During any excavation deeper than 10 ft			**HW-2** During soil excavation deeper than 10 feet (ft), Caltrans will conduct on-site soil gas monitoring will be conducted with photoionization detectors (PID) or flame ionization detectors (FID). This requirement shall be included in the Plans, Specifications and Estimates (PS&E).				
12-11	Electric transformers	Project Engineer		During preparation of the PS&E			**HW-4** During preparation of the PS&E, Caltrans will inspect utility pole-mounted transformers within the project area for leaks. Leaking transformers will be considered a polychlorinated biphenyl (PCB) hazard unless tested and will be handled accordingly.				
12-12	Property at 28070 The Old Road, Valencia	Project Engineer		During preparation of the PS&E			**HW-8** If property is acquired from 28070 The Old Road, and/or 28120 The Old Road, Valencia, a detailed hazard waste site investigation for soil and groundwater shall be conducted during the Plans, Specifications and Estimates (PS&E).				
12-13	Other										
12-14	Other										
12-15	Other										
Construction											
13-1	Special training for construction workers	Resident Engineer		Prior to any site preparation, grading, and construction							
13-2	Clearing and grubbing	—	—	—	—	—					
13-3	Construction windows and	Resident Engineer	Varies	Prior to any site		TBD	Various permits				

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	work hours for sensitive resources, community impacts, and other			preparation, grading and construction							
13-4	Required notification with/reporting to Resources Agencies including contact names Refer to the various line items associated with the difference resources agencies permits.	—	—	—	—	—	—	—	—	—	- -
13-5	Air quality construction monitoring Refer to line items 11-1 and 11-2, above.	—	—	—	—	—	—	—	—	—	- -
13-6	Noise/air quality specifications related to construction activities Refer to line items 11-1 and 11-2 for air quality measures and 10-2 for noise measures.	—	—	—	—	—	—	—	—	—	- -
13-7	Detours Refer to line item 5-4, above, for information regarding the TMP and ramp study measures.	—	—	—	—	—	—	—	—	—	- -
13-8	Construction effects on utility and emergency services providers Refer to line item 5-4, above, for information regarding the TMP and ramp study measures.	—	—	—	—	—	—	—	—	—	—
13-9	Relocation of utilities	Resident Engineer		Before and during construction			All utility relocation would occur in consultation with the owners or operators of the affected utilities. Utility infrastructures impacted by the project construction would be relocated before or during construction, protected in place or abandoned. Utilities to be relocated as part of the project construction would be relocated in such a manner as to minimize any disruption of service those utilities provide.				
13-10	Relocation of VIF Facilities.	Project Engineer		During final design			**U-1** Modifications to the existing California Highway Patrol facilities would be needed to restore the existing available truck				

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							inspection capacity improvements would be include expansion to the east to generate a more usable area for the facility. This expansion would require conversion of the existing open channel into a covered pipe system to provide room for the ramp to be widened. Retaining walls would also be necessary. Coordinate with the CHP to redesign the Castaic Commercial Enforcement Facility (Castaic VIF) to replace the lane capacity lost due to construction of the Alternative 3 improvements.				
13-11	Other										
13-12	Other										
Water Quality Requirements											
14-1	Storm Water Pollution Prevention Plan/Water Pollution Control Program (SWPPP/WPCP)	Resident Engineer		During all site preparation, grading, and construction			**WQ-1** The provisions of the Caltrans Statewide National Pollution Discharge Elimination System (NPDES) Permit *(Order No. 99-06-DWQ NPDES No. CAS000003)* and any subsequent permit as they relate to construction activities for the project, will be complied with during construction. This will include submission of a Notice of Construction (NOC) to the Los Angeles Regional Water Quality Control Board (RWQCB) at least 30 days prior to the start of construction, preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), and submission of a *Notice of Construction Completion* (NCC) to the Los Angeles RWQCB upon completion of construction and stabilization of the site.				
14-2	Erosion control Refer to line items 14-1, 14-3, and 15-3 for measures and actions related to erosion control.	—	—	—	-	-	—				
14-3	Permanent storm water control measures including operations and maintenance information	Caltrans –Water Quality	TBD	During operation			**WQ-2** The procedures outlined in the *Storm Water Quality Handbooks, Project Planning and Design Guide* will be followed during implementation of Treatment Control BMPs for the project. This will include coordination with the Los Angeles Regional Water Quality Control Board (RWQCB) with respect to feasibility, maintenance, and monitoring of Treatment Control BMPs as set forth in the Caltrans Statewide Storm Water Management Plan.				
14-4	Monitoring required Refer to line items 14-1and 14-3	—	—	—	—	—	—	—	—	—	—
14-5	Critical temporary BMPs Refer to line items 14-1and 14-3	—	—	—	—	—	—	—	—	—	—
14-6	Impacted water bodies	—	—	—	—	—	—	—	—	—	—

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	Refer to line items 14-1and 14-3										
14-7	High risk water resources	—	—	—	—	—	—	—	—	—	—
14-8	Permanent treatment controls Refer to line item 14-3, above.	—	—	—	—	—	—	—	—	—	—
14-9	Permits from the Los Angeles Regional Water Quality Control Board (LARWQCB)	Project Engineer		Prior to any site preparation, grading, and construction			A Section 402 NPDES permit from the LARWQCB will be required prior to any project construction activity. Any conditions from that permit will be added to this ECR.				
		Project Engineer		Prior to any site preparation, grading, and construction			A Section 402 NPDES permit from the LARWQCB will be required for any groundwater dewatering during project construction. Any conditions from that permit will be added to this ECR.				
							A Section 401 Permit will be required from the LARWQCB prior to any project construction. Any conditions from that permit will be added to this ECR.				
14-10	Other										
14-11	Other										
14-12	Other										
Other: Geology, Soils, Seismic, and Topography											
15-1	Geotechnical Report	Project Engineer		Prior to completion of final design			**GEO-1** Prior to completion of final design, a design-level geotechnical report shall be prepared, This report will document soil-related constraints and hazards such as slope instability, settlement, liquefaction, or related secondary seismic impacts that may be present. The report will also include: • Evaluation of expansive soils and recommendations regarding construction procedures and/or design criteria to minimize the effect of these soils on the development of the project. • Identification of liquefiable areas within the project limits and provision of recommendations for mitigation.				
15-2	Slope design	Project Engineer		During final design			**GEO-2** In conjunction with final design, the grading of side slopes will be designed and graded so that surface erosion of the engineered fill is not increased compared to existing, natural conditions.				
15-3	Erosion and slope stability	Resident Engineer		During construction			**GEO-3** In conjunction with construction activity, planting of native vegetation with good soil-binding characteristics and low water requirements on engineered slopes will be performed to reduce erosion and slope instability.				
15-4	Quality Assurance/Quality Control Plan	Resident Engineer		During the geotechnical testing			**GEO-4** A quality assurance/quality control plan will be maintained that includes observing, monitoring, and testing by a geotechnical engineer and/or geologist during construction to				

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							confirm that geotechnical/geologic recommendations are fulfilled, or that if different site conditions are encountered, appropriate changes are made to accommodate such issues.				
15-5	Groundwater wells	Project Engineer		During final design			**GEO-5** Prior to completion of final design, Caltrans will undertake a detailed review to locate all groundwater wells within the project footprint. Any groundwater wells that occur within the project footprint will be abandoned properly during project construction. As may be required (i.e., for active wells), the water supply provided by the well will be replaced. Replacement water may be provided by a variety of means, such as installing a new well or a connection to municipal supply.				
15-6	Seismic design criteria	Project Engineer		During final design and construction			**GEO-6** Final design and construction will comply with Caltrans Seismic Design Criteria and address potential impacts associated with ground shaking, liquefaction, and seismically induced settlement.				
15-7	Construction Activities	Project Engineer		During construction			**GEO-7** Implementation of safe construction practices and compliance with the Caltrans and California Division of Occupational Safety and Health Administration (Cal-OSHA) requirements would minimize the temporary impacts of construction.				
15-8	Other										
15-9	Other										
Other: Various											
16-1	Encroachment permit from Los Angeles County – Public Works	Project Engineer		Prior to any site preparation, grading, and construction			An encroachment permit from Los Angeles County will be acquired by Caltrans or the construction contractor prior to any construction within the public right-of way owned by the County, primarily along The Old Road.				
16-2	Other										
16-3	Other										
16-4	Other										

Appendix F List of Acronyms

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LIST OF ACRONYMS

ac	acres
AB	Assembly Bill
abn	abandoned
ACMs	asbestos-containing materials
ACP	asbestos concrete pipe
ACOE	United States Army Corps of Engineers
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
amsl	above mean sea level
APE	Association of Environmental Professionals
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
AST	aboveground storage tank
AT&T	American Telephone and Telegraph
BACM	Best Available Control Measures
BMP	Best Management Practice
BO	Biological Opinion
BP	before present

BP	British Petroleum
BSA	Biological Study Area
CAA	Clean Air Act as amended in 1990
CAAQS	California Ambient Air Quality Standards
Cal-IPC	California Invasive Plant Council
Cal-OSHA	California Division of Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CCP	Changeable Message Signs
CCTV	Closed Circuit Television
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act of 1992
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIA	Community Impact Assessment

CIF	Castaic Inspection Facility
CMP	Corrugated Metal Pipe
CMS	Changeable Message Signs
CNPS	California Native Plant Society
CO	carbon monoxide
CORRACTS	Corrective Action Sites
COZEEP	Construction Zone Enhanced Enforcement Program
CSG	Conservation Service Group
CWA	Clean Water Act
cy	cubic yards
dBA	A-weighted decibel
dBA L_{eq}	A-weighted noise level
dbh	diameter at breast height
DPM	diesel particulate matter
DTSC	Department of Toxic Substance Control
DU	Dwelling Unit
EIP	Early Implementation Plan
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	United States Environmental Protection Agency
ERNS	Emergency Response Action Notification System

ESA	Environmentally Sensitive Area
ETW	edge-of-travel-way
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FID	Flame Ionization Detector
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Mitigation Program
FPPA	Farmland Protection Policy Act
ft	feetft-lb/blow foot-pounds per blow
FTA	Federal Transit Administration
GEN	Generators
GHG	greenhouse gas
HMMP	Habitat Mitigation Monitoring Plan
HOV	High-Occupancy Vehicle
HSG	Hydrologic Soil Groups
I-5	Interstate 5
IL	Insertion Loss
in	inch
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change

IS	Site Investigation
IS	Initial Study
ITS	Intelligent Transportation System
IWMB	California Integrated Waste Management Board
LA Co	Los Angeles County
LACFD	Los Angeles County Fire Department
LBP	lead-based paint
LACSD	Los Angeles County Sheriff's Department
LEDPA	least environmentally damaging practicable alternative
L_{max}	maximum sound level
LHS	Lutheran Hospital Society
LOS	level of service
LUST	leaking underground storage tank
MCD	multiple concrete duct
MCE	Maximum Credible Earthquake
MCGMP	Multi-County Goods Movement Action Plan
Metro	Los Angeles County Metropolitan Transportation Authority
Metropolitan	Metropolitan Water District of Southern California
mi	miles
MLD	Most Likely Descendant
MOU	Memorandum of Understanding
mph	miles per hour

MSF	Million Square Feet
MSAT	Mobile Source Air Toxics
MTD	multiple tile duct
mya	million years ago
N/A	not applicable or not available
NAAQS	National Ambient Air Quality Standard
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NB	northbound
NCC	Notice of Construction Completion
NCCHCS	North County Combined Highway Corridors Study
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NF	Not Feasible
NFRAP	No Further Remedial Action Planned
NHPA	National Historic Preservation Act
NHS	National Highway System
NLEV	national low-emission vehicle
NLR	No Longer Reporting
NO_2	nitrogen dioxide
NOAA	National Oceanographic and Atmospheric Administration
NOC	Notice of Construction

NOI	Notice of Intent
NOP	Notice of Preparation
NCCHCS	North County Combined Highway Corridors Study
NP	Not Permitted
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O_3	ozone
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PAC	Public Awareness Campaign
Pb	lead
PCBs	polychlorinated biphenyls
PDS	Project Development Support
PDT	Project Development Team
PEAR	Preliminary Environmental Assessment Report
PID	Photo Ionization Detector
PM	particulate matter *or* post mile
PMP	Paleontological Mitigation Plan
POAQC	project of air quality concern
ppm	parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code

PRIMP	Paleontological Resource Impact Mitigation Program
PS&E	Plans, Specifications, and Estimates
PSR	Project Study Report
PT&T	Pacific Telephone and Telegraph Company
RAP	Relocation Assistance Program
RCB	Reinforced Concrete Box
RCP	Reinforce Concrete Pipe
RCRA	Resource Conservation and Recovery Act of 1976
RCRIS	Resource Conservation and Recovery Information System
RFG	reformulated gasoline
RMS	Ramp Metering Stations
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users
SB	southbound
SB	Sound Barrier
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCH	State Clearinghouse

SER	(Caltrans) Standard Environmental Reference
SHELL	State Highway Extra Legal Load
SHPO	State Historic Preservation Office/Officer
S-ISA	Supplemental Initial Site Assessment Report
So Cal Gas	Southern California Gas Company
SO_2	sulfur dioxide
SSP	Standard Special Provision
SR-14	State Route 14
SR-118	State Route 118
SR-126	State Route 126
SR-134	State Route 134
SR-170	State Route 170
SSP	stopping sight distance
SWL	Solid Waste Landfill Facilities
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TCE	Temporary Construction Easement
TCR	Transportation Concept Report
TCWG	Transportation Conformity Working Group
TMDLs	Total Maximum Daily Loads

TMP	Traffic Management Plan
TMS	Traffic Monitoring Stations
TNM	Traffic Noise Model
TSM	Transportation System Management
TSCA	Toxic Substances Control Act
TSD	treatment, storage, and disposal
USC	United States Code
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
VCSS	Venturan coastal sage scrub
VdB	RMS velocity in decibels
VHT	vehicle hours traveled
VIA	Visual Impact Assessment
vph	vehicles per hour
VMT	vehicles miles traveled
YTS	Yellow Traffic Stripes

Appendix G List of Technical Studies

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Technical Studies Prepared for the Proposed Project

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Appendix H References

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Appendix I USFWS Species List/ Concurrence Letter

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
2009-I-0466

September 1, 2009

Paul Caron
Division of Environmental Planning
California Department of Transportation
110 Main Street, Suite 100
Los Angeles, California 90012-3606

Subject: I-5 HOV and Truck Climbing Lane Project, Alternative 2-Reduced Median Alternative, Los Angeles County, California

Dear Mr. Caron:

We are responding to your request, received in our office via electronic mail message on May 26, 2009, for our concurrence that the subject project is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*) and unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), and would have no effect on the federally endangered arroyo toad (*Bufo californicus*), southwestern willow flycatcher (*Epidonx traillii extimus*), and slender-horned spineflower (*Dodecahema leptoceras*), and the Federal candidate San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandino*).

The California Department of Transportation (Caltrans) proposes to add one high occupancy vehicle (HOV) lane in each direction on Interstate 5 (I-5), from the State Route 14 (SR-14) interchange at the southern portion of the project limit, and north to Parker Road from post mile (PM) R45.4 to PM R59.0; a distance of approximately 13.6 miles. The proposed project would also add truck lanes from the SR-14 interchange to Calgrove Boulevard (northbound) and to Pico Canyon Road/Lyons Avenue (southbound).

On August 17, 2009, pursuant to the Federal regulations governing interagency consultation (50 CFR 402), we requested additional information on the details of the proposed project to adequately assess the potential for adverse affects to the unarmored threespine stickleback and critical habitat for the arroyo toad associated with the installation of rock slope protection at the Castaic Creek Bridge. You provided the requested additional information via letter dated August 26, 2009, which was received in our office via electronic mail the same day.

In your August 26, 2009, letter, you stated that rock slope protection would be installed in Castaic Creek during the summer months, when Caltrans anticipates low-flow conditions. Additionally, the rock slope protection would be installed outside of the low-flow channel and dewatering would not be required.

Because the work area at the Castaic Creek Bridge would be nearly dry and there would be no aquatic habitat connectivity between the confluence of Castaic Creek and the Santa Clara River (where the unarmored threespine stickleback occurs) at that time, we concur with your determination that the proposed project is not likely to adversely affect the unarmored threespine stickleback. We also concur with your determination that the proposed project would have no effect on the arroyo toad, southwestern willow flycatcher, slender-horned spineflower, or the San Fernando Valley spineflower because none of these species nor their suitable habitats were found in the proposed project area during focused surveys.

Your letter also clarified that the Natural Environment Study (NES) for the proposed project erroneously included an area of arroyo toad critical habitat that had been previously excluded from the current critical habitat designation. Because there is no designated critical habitat for the arroyo toad in the proposed project area, critical habitat for the arroyo toad would not be affected by the proposed project.

If you have any further questions regarding this matter, please contact Steve Kirkland of my staff at (805) 644-1766, extension 267.

Sincerely,

/s/ Roger P. Root

Roger P. Root
Assistant Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

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IN REPLY REFER TO:
2009-SL-0043

LSA
LSA ASSOCIATES, INC.

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November 4, 2008

Elizabeth Delk, Biologist
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614

Subject: Revised Species List for the Proposed I-5 Widening Project, City of Santa Clarita, Los Angeles County, California

Dear Ms. Delk:

We are responding to your request dated October 23, 2008, and received in our office on October 24, 2008, for an updated list of endangered, threatened, proposed, and candidate species which may be present in the vicinity of the subject project. The proposed action is located in the U.S. Geological Survey Newhall and Oat Mountain 7.5 Minute series quadrangles. The enclosed species list is a revised version of the previously provided list dated July 28, 2006.

The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act prohibits the taking of any federally listed endangered or threatened species. Section 3(18) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species.

The enclosed list of species fulfills the requirements of the Service under section 7(c) of the Act. Exemptions to the prohibitions against take may be obtained through coordination with the Service through interagency consultation for projects with Federal involvement pursuant to section 7 or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act. If the subject project is to be funded, authorized, or carried out by a Federal agency and may affect a listed species, the Federal agency must consult with the Service, pursuant to section 7(a)(2) of the Act. If a proposed project does not involve a Federal agency but may result in the take of a listed animal species, the project proponent should apply for an incidental take permit,

pursuant to section 10(a)(1)(B) of the Act. Once you have determined if the proposed project will have a lead Federal agency, we can provide you with more detailed information regarding the section 7 or 10(a)(1)(B) permitting process.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Game's (CDFG) Natural Diversity Data Base. You can contact the CDFG at (916) 324-3812 for information on other sensitive species that may occur in this area.

If you have any questions regarding this letter, please contact Andrea Adams of my staff at (805) 644-1766, extension 318.

Sincerely,

Chris Dellith
Senior Biologist

Enclosure

LISTED AND CANDIDATE SPECIES THAT MAY OCCUR IN THE VICINITY OF THE I-5 WIDENING PROJECT, CITY OF SANTA CLARITA, LOS ANGELES COUNTY,CALIFORNIA

Birds		
Southwestern willow flycatcher	*Empidonax traillii extimus*	E
Least Bell's vireo	*Vireo bellii pusillus*	E, CH
Coastal California gnatcatcher	*Polioptila californica*	T
Amphibians		
Arroyo toad	*Bufo californicus*	E
Fish		
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	E
Plants		
San Fernando Valley spineflower	*Chorizanthe parryi* var. *Fernandina*	C
Slender-horned spineflower	*Dodecahema leptoceras*	E

Key:

E – Endangered T - Threatened CH - Critical habitat

C - Candidate species for which the Fish and Wildlife Service has on file sufficient information on the biological vulnerability and threats to support proposals to list as endangered or threatened.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

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IN REPLY REFER TO:
PAS 2875.4312.5702

July 28, 2006

Ingri Baroni, Biologist
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614

Subject: Species List for the Proposed I-5 Widening Project, City of Santa Clarita, Los Angeles County, California

Dear Ms. Baroni:

We are responding to your request dated, June 6, 2006, and received in our office on June 8, 2006, for information on endangered, threatened, proposed, and candidate species which may be present in the vicinity of the subject project. The proposed action is located in the United States Geological Survey Newhall and Oat Mountain 7.5 Minute series quadrangles.

The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act prohibits the taking of any federally listed endangered or threatened species. Section 3(18) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species.

The enclosed list of species fulfills the requirements of the Service under section 7(c) of the Act. Exemptions to the prohibitions against take may be obtained through coordination with the Service through interagency consultation for projects with Federal involvement pursuant to section 7 or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act. If the subject project is to be funded, authorized, or carried out by a Federal agency and may affect a listed species, the Federal agency must consult with the Service, pursuant to section

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7(a)(2) of the Act. If a proposed project does not involve a Federal agency but may result in the take of a listed animal species, the project proponent should apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act. Once you have determined if the proposed project will have a lead Federal agency, we can provide you with more detailed information regarding the section 7 or 10(a)(1)(B) permitting process.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Game's (CDFG) Natural Diversity Data Base. You can contact the CDFG at (916) 324-3812 for information on other sensitive species that may occur in this area.

If you have any questions regarding this letter, please contact Steve Kirkland of my staff at (805) 644-1766, extension 267.

Sincerely,

Carl T. Benz
Assistant Field Supervisor
Santa Barbara/Ventura/ Los Angeles

Enclosure

LISTED AND CANDIDATE SPECIES THAT MAY OCCUR IN THE VICINITY OF THE I-5 WIDENING PROJECT, CITY OF SANTA CLARITA, LOS ANGELES COUNTY,CALIFORNIA

Birds		
Southwestern willow flycatcher	*Empidonax traillii extimus*	E
Least Bell's vireo	*Vireo bellii pusillus*	E, CH
Amphibians		
Arroyo toad	*Bufo californicus*	E
Fish		
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	E
Plants		
San Fernando Valley spineflower	*Chorizanthe parryi* var. *Fernandina*	C
Slender-horned spineflower	*Dodecahema leptoceras*	E

Key:

E - Endangered CH - Critical habitat

C - Candidate species for which the Fish and Wildlife Service has on file sufficient information on the biological vulnerability and threats to support proposals to list as endangered or threatened.

Appendix J Biological Listed and Proposed Species Table

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Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
PLANTS					
Greata's aster	*Aster greatae*	CSP CNPS: 1B.3	Perennial herb (rhizomatous) found in broad-leaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland/mesic; elevation 1,000 to 6,600 ft. Known from Los Angeles County.	A	Suitable habitat is lacking or highly degraded in the BSA. This species is typically found at higher elevations than occur in the BSA. Not observed during LSA's 2006 or 2007 surveys.
Braunton's milk-vetch	*Astragalus brauntonii*	FE CSP CNPS: 1B.1	Perennial herb considered a limestone endemic and dependent on fire. Typically associated with the fire-dependent chaparral habitat on limestone and on down-wash sites. Elevation is below 3,000 ft. Los Angeles, Orange, and Ventura Counties.	A	The habitat for this species is conspicuous and would have been detected if present in the BSA. Suitable soils lacking in BSA. Not observed during LSA's 2006 or 2007 surveys.
Nevin's barberry	*Berberis nevinii*	FE CE CNPS: 1B.1	Gravelly wash margins in alluvial scrub, or coarse soils in chaparral; typically 900 to 2,700 ft elevation; Los Angeles, San Bernardino, Riverside, and San Diego Counties.	P	Suitable habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Slender mariposa lily	*Calochortus clavatus* var. *gracilis*	CSP CNPS: 1B.2	Shaded foothill canyons in areas of chaparral; typically 1,200 to 3,300 ft elevation; known only from San Gabriel Mountains of Los Angeles and San Bernardino Counties.	A	Suitable habitat is lacking or highly degraded in the BSA. This species is typically found at higher elevations than those that occur in the BSA. Not observed during LSA's 2006 or 2007 surveys.
Plummer's mariposa lily	*Calochortus plummerae*	CSP CNPS: 1B.2	Perennial herb of sandy or rocky sites of (usually) granitic or alluvial material in valley and foothill grassland, coastal scrub, chaparral, cismontane woodland, and lower montane coniferous forest at 300 to 5,600 ft elevation. Known from the Santa Monica Mountains to San Jacinto Mountains in Riverside, San Bernardino, Los Angeles and Ventura Counties.	P	General habitat for this species is present within the project area. However, suitable habitat is highly degraded in the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
San Fernando Valley spineflower	*Chorizanthe parryi* var. f*ernandina*	FSC CE CNPS: 1B.1	Annual herb found in sandy soils in coastal scrub, primarily in northeastern Western Transverse Ranges and San Gabriel Mountains at elevations between 10 and 4,000 ft.	P	General habitat for this species is present within the project area. However, suitable habitat is highly degraded in the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Santa Susana tarplant	*Deinandra minthornii*	CR CNPS: 1B.2	Perennial deciduous shrub with many woody stems in chaparral communities between 980 to 1,640 ft elevation. Known from the Santa Susana and Santa Monica Mountains in Ventura and Los Angeles Counties.	A	This shrub would have been detected if present in the BSA. Not observed during LSA's 2006 or 2007 surveys.
Slender-horned spineflower	*Dodecahema leptoceras*	FE CE CNPS: 1B.1	Gravel soils of Temecula arkose deposits in openings in chamise chaparral in the Vail Lake Area, or on sandy soils in opening in alluvial scrub (usually late seral stage) in floodplain terraces and benches that receive overbank deposits every 50 to 100 years from generally large washes or rivers; 600 to 2,500 ft elevation. Los Angeles, Riverside, and San Bernardino Counties.	P	General habitat for this species is present within the project area. However, suitable habitat is highly degraded in the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.
San Gabriel bedstraw	*Galium grande*	CSP CNPS: 1B.2	Perennial herb found in chaparral, lower montane coniferous forest/granitic, sandy; elevation 1,400 to 4,900 ft. Known from only three occurrences in Riverside and San Bernardino Counties.	P	General habitat for this species is present within the project area. However, suitable habitat is highly degraded in the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Los Angeles sunflower	*Helianthus nuttallii* ssp. *parishii*	CSP CNPS: 1A	Herbaceous perennial rhizomatus herb of marshes and swamps (wet ground) below 1,500 ft elevation. Known from Los Angeles, San Bernardino, and Orange Counties.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Davidson's bush mallow	*Malacothamnus davidsonii*	US: none CA: CSP CNPS: 1B	Perennial deciduous shrub found in chaparral, cismontane woodland, CSS, and riparian woodland	A	This shrub would have been detected if present in BSA. Not observed during LSA's 2006 or

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
			between 600 to 2,800 ft elevation. Known from Monterey, San Mateo, Santa Clara, San Luis Obispo, and Los Angeles Counties.		2007 surveys.
Spreading navarretia	*Navarretia fossalis*	FT CSP CNPS: 1B.1	Vernal pools, chenopod scrub, marshes and swamps playas. Known only from Riverside and San Diego Counties; 100 to 4,300 ft elevations.	A	Suitable habitat for this species is lacking in the project area. Not observed during LSA's 2006 or 2007 surveys.
Southern California black walnut	*Juglans californica*	CSP CNPS: 4.2	Perennial deciduous tree usually with several trunks. Locally common below 4,500 ft elevation on slopes and in canyons. Known from Orange and western cismontane San Bernardino County to Ventura County.	P, O	General habitat for this species is present within the project area. This species was observed during LSA's 2006 and 2007 surveys and is discussed in Chapter 4.
Short-joint beavertail	*Opuntia basilaris* var. *brachyclada*	CSP CNPS: 1B.2	Perennial succulent shrub of sandy soil or coarse, granitic loam in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland at 1,400 to 5,900 ft elevation. Known only from Los Angeles and San Bernardino Counties. Historically distributed on the desert slopes of the San Gabriel and San Bernardino Mountains, and also the Providence Mountains.	A	Suitable habitat for this species is lacking in the project area. This species is typically found at higher elevations than those that occur in the BSA. Not observed during LSA's 2006 or 2007 surveys.
California Orcutt grass	*Orcuttia californica*	FE CE CNPS: 1B.1	Vernal pools in Ventura, Riverside, and San Diego Counties, Baja California; known from fewer than 20 locations; below 2,200 ft elevation.	A	Suitable habitat for this species is lacking in the project area. Not observed during LSA's 2006 or 2007 surveys.
Rayless ragwort	*Senecio aphanactis*	CSP CNPS: 2.2	Annual herb of drying alkaline flats in cismontane woodland, CSS, and chaparral at 2,600 ft elevation. Known in California from Alameda, Contra Costa, Fresno, Los Angeles, Merced, Orange, Riverside, Santa Barbara, Santa Clara, San Diego, San Luis Obispo, Solano, and Ventura Counties.	P	General habitat for this species is present within the project area. However, suitable habitat is highly degraded in the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
INVERTEBRATES					
Monarch butterfly	*Danaus plexippus*	CSA (wintering sites)	Varied habitats throughout much of North and South America; milkweeds required for breeding. Winter roosts are located in wind-protected groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	A	Not observed during 2006 or 2007 surveys, and wintering habitat may not be present.
FISH					
Santa Ana sucker	*Catostomus santaanae*	FT CSC	Historic range includes the Los Angeles, San Gabriel, and Santa Ana River drainage systems located in Southern California. An introduced population also occurs in the Santa Clara River drainage system in Southern California. Found in shallow, cool, running water.	P, O	This species was observed during the initial sensitive fish species survey conducted by SMEA in the Santa Clara River and Castaic Creek within the BSA. Several size classes were observed, indicating that at least some reproduction was occurring in the portion of the streams within the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	FE CE	Inhabits cool clear water with abundant vegetation, such as weedy pools, backwaters, and in emergent vegetation along stream edges where water velocity is low. Known from the upper Santa Clara River drainage in Los Angeles, Ventura, and San Luis Obispo Counties, and the San Antonio River in Vandenburg Air Force Base in Santa Barbara County.	P, O	This species was observed within the Santa Clara River within the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Arroyo chub	*Gila orcuttii*	CSC	Perennial streams or intermittent streams with permanent pools; slow water sections of streams with mud or sand substrates; spawning occurs in pools. Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita River systems;	P, O	This species was observed during the initial sensitive fish species survey conducted by SMEA in the Santa Clara River and Castaic Creek within the BSA. Several size classes were observed, indicating that at least some

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
			introduced in Santa Ynez, Santa Maria, Cuyama, and Mojave River systems and smaller coastal streams.		reproduction was occurring in the portion of the streams within the BSA. Potential for this species to occur within the project impact area is discussed in Chapter 4.
AMPHIBIANS					
Arroyo toad	*Bufo californicus*	FE CSC	Washes and arroyos with open water; sand or gravel beds, for breeding, pools with sparse overstory vegetation. Coastal and a few desert streams from Monterey County to Baja California.	P, CH	Suitable breeding and foraging habitat exists in the Santa Clara River and associated uplands within the project area. However, arroyo toads were not observed during 2006 or 2007 focused surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
California red-legged frog	*Rana aurora draytonii*	FT CSC	Streams with slow-moving water and deep pools; dense, shrubby riparian vegetation at pool edges. Coastal streams from Marin County to northwestern Baja California, but extirpated from most of southwestern California.	P	Potentially suitable habitat is present on the Santa Clara River, but the species was not observed during surveys for arroyo toad conducted in 2006 and 2007, and the species is extirpated from most of the region. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Western spadefoot	*Spea hammondii*	CSC	Grasslands and other relatively open habitats; requires pools (persisting for at least three weeks) for breeding; burrows in loose soils during dry season. Found in Central valley and foothills, coast ranges, inland valleys, to northwestern Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
REPTILES					
Silvery legless lizard	*Anniella pulchra pulchra*	CSC	Fossorial. Inhabits loose soil and humus from central California to northern Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Coastal western whiptail	*Aspidoscelis tigris stejnegeri*	CSA	Wide variety of habitats including CSS, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Southwestern pond turtle	*Actinemys marmorata pallida*	CSC	Inhabits permanent or nearly permanent water below 6,000 ft from the San Francisco Bay area south to northern Baja California. Absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Requires basing sites such as partially submerged logs, rocks, or open mud banks.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
San Diego horned lizard	*Phrynosoma coronatum blainvilii*	CSC	Wide variety of habitats including CSS, grassland riparian woodland; typically on or near loose sandy soils; coastal and inland areas from Ventura County to Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Coastal rosy boa	*Lichanura trivirgata rosafusca*	CSC	Inhabits rock outcrops and rocky shrublands from southwestern California to northern Baja California.	P	General habitat for this species is present within the project area. Habitat may be of marginal suitability. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
San Bernardino ringneck snake	*Diadophis punctatus modestus*	CSA	Under surface objects along drainage courses, in mesic chaparral and oak and walnut woodland communities. Moist habitats of southwestern California from about Ventura to Orange Counties.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	CSC	Coastal chaparral, washes, sandy flats, and rocky areas from San Luis Obispo County to northwestern Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Two-striped garter snake	*Thamnophis hammondii*	CSC	Highly aquatic. Only in or near permanent sources of water. Streams with rocky beds supporting willows or other riparian vegetation. From Monterey County to northwest Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
BIRDS					
Cooper's hawk	*Accipiter cooperii*	CSA (nesting)	Primarily forests and woodlands throughout North America.	P, O	Cooper's hawk was observed during the 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Merlin	*Falco columbarius*	CSC	Open country; breeds in the Holarctic Region and winters south to the tropics. Rare fall migrant and winter visitor to southwestern California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	CSC	Steep, rocky CSS and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.	P, O	Observed during the 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Long-eared owl	*Asio otus*	CSC (nesting)	Scarce and local in forests and woodlands throughout much of the Northern Hemisphere.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
Burrowing owl	*Athene cunicularioa*	CSC (burrow sites)	Open country in much of North and South America.	A	Suitable habitat is not present within the BSA.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	CE	Breeds and nests in extensive stands of dense cottonwood and willow riparian forest along broad, lower flood bottoms of larger river systems. Widespread, but local, in western North America; very rare and local in California. Winters in South America.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Costa's hummingbird	*Calypte costae*	CSA (nesting)	Primarily deserts, arid brushy foothills, and chaparral in the southwestern United States and northwestern Mexico.	P, O	Observed during the 2006 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Nuttall's woodpecker	*Picoides nuttallii*	CSA (nesting)	Oak, pine-oak, and riparian woodland in California and northwestern Baja California.	P, O	Observed during the 2006 and 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Loggerhead shrike	*Lanius ludovicianus*	CSC (nesting)	Open country in much of North America, but declining in many areas, including southwestern California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Oak titmouse	*Baeolophus inornatus*	CSA (nesting)	Primarily oak woodland from southern Oregon to southern Baja California Sur.	P, O	Observed during the 2006 and 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
California thrasher	*Toxostoma redivivum*	CSA	Primarily chaparral and riparian woodland from northern California to northwestern Baja California.	P, O	Observed during the 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
California yellow warbler	*Dendroica petechia brewsteri*	CSC (nesting)	Riparian woodland while nesting in the western United States and northwestern Baja California; more widespread in brushy areas and woodlands during migration and winter, when occurring	P, O	Observed during the 2006 and 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
			from western Mexico to northern South America.		
Lark sparrow	*Chondestes grammacus*	CSA (nesting)	Open situations with scattered bushes or trees. Breeds throughout much of western North America and winters from the southern United States to southern Mexico.	P, O	Observed during the 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Lawrence's goldfinch	*Carduelis lawrencei*	CSA (nesting)	Oak woodland chaparral, riparian woodland and other habitats in arid regions, but usually near water; from northern California to northern Baja California, but periodically wandering throughout much of western North America.	P, O	Observed during the 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
White-tailed kite	*Elanus leucurus*	CSA (nesting) CFP	Open country in South America and southern North America.	P, O	Observed during the 2006 and 2007 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE SE	Rare and local breeder in extensive riparian areas of dense willows or (rarely) tamarisk, usually with standing water, in the southwestern United States and (formerly?) northwestern Mexico. Winters in Central and South America.	P	Not observed during focused surveys conducted in 2006 and 2007. One willow flycatcher observed on one day in 2007 was probably from a more northerly (nonextimus) population. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
Yellow-breasted chat	*Icteria virens*	none CSC	Riparian thickets of willows, brushy tangles near watercourses. Nests in riparian woodland throughout much of western North America. Winters in Central America.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Coastal California gnatcatcher	*Polioptila californica californica*	FT CSC	Inhabits CSS in low-lying foothills and valleys in cismontane southwestern California and northwestern Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Least Bell's vireo	*Vireo bellii pusillus*	FE CE	Formerly occurred in well-developed riparian areas from northcentral California to Baja California. Now absent from the northern portion of its range, but populations in Southern California are growing rapidly in response to intense management efforts. Winters in western Mexico.	P, CH	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
MAMMALS					
Pallid bat	*Antrozous pallidus*	CSC	Varied habitats in western North America.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Mexican long-tongued bat	*Choeronycteris mexicana*	CSC	Occasionally found in San Diego County. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves as well as in and around buildings.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Townsend's big-eared bat	*Corynorhinus townsendii*	CSC	Wide variety of habitat types, primarily in western North America.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
Spotted bat	*Euderma maculatum*	CSC	Found in western North America from southern British Columbia to the Mexican border, at widely scattered localities.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Western mastiff bat	*Eumops perotis californicus*	CSC	Ranged historically throughout much of the southwestern United States and northwestern Mexico. In California, most records are from rocky areas at low elevations where roosting occurs primarily in crevices.	P	General habitat for this species is present within the project area. This species is a crevice-dwelling species; however, there has been no recorded bridge or culvert use by this species. Foraging animals travel widely. Potential for this species to occur within the project impact area is discussed in Chapter 4
Western red bat	*Lasiurus blossevillii*	CSA	Forages over a wide range of habitats, but generally roosts in woodlands and forests. Ranges from southwestern Canada through the western United States and Middle America to South America.	P, O	This species was observed during the 2006 focused bat survey. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Hoary bat	*Lasiurus cinereus*	CSA	Widespread in North America (and Hawaii), with habits similar to the western red bat.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Southwestern yellow bat	*Lasiurus xanthinus*	CSA	Varied habitats, but usually near water; often associated with palm trees. southwestern United States to southern Mexico.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Lesser long-nosed bat	*Leptonycteris curasoae yerbabuenae*	FE	Open country of coastal Southern California and northern Baja California.	P	General habitat for this species is present within the project area. Habitat probably unsuitable and very unlikely at this location. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	CSC	Open country of coastal Southern California and northern Baja California.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
California leaf-nosed bat	*Macrotus californicus*	CSC	Occurs in the Lower Sonoran life zone in the deserts of California, southern Nevada, Arizona and south into Baja California and Sonora, Mexico. Uses warm diurnal roosts in caves, mines and buildings with temperatures that often exceed 28°C. Forages primarily in desert riparian habitats.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Yuma myotis	*Myotis yumanensis*	CSA	Varied habitats in western North America.	P, O	This species was observed during the 2006 focused bat survey. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Western small-footed myotis	*Myotis ciliolabrum*	CSA	Varied habitats throughout much of North America.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Fringed myotis	*Myotis thysanodes*	CSA	Widespread in western North America. Occurs from sea-level to 9,350 ft but is most common at middle elevations of 3,937 to 6,890 ft. Distribution is patchy. It appears to be most common in drier woodlands (oak, pinyon-juniper, ponderosa pine) but is found in a wide variety of habitats including desert scrub, mesic coniferous forest, grassland, and sage-grass steppe. Roosts in crevices in buildings, underground mines, rocks, cliff faces, and bridges. Roosting in decadent trees	P, O	This species was observed during the 2006 focused bat survey. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
			and snags, particularly large ones, is common.		
Cave myotis	*Myotis velifer*	CSC	Usually found at low elevations in arid southwest. Primarily roosts in crevices in caves, but also uses mines, and occasionally buildings and bridges. This species is also known to roost in barn swallow nests. Forages in dense riparian vegetation and drier desert washes.	P	General habitat for this species is present within the project area. Habitat probably unsuitable; in California this species is primarily restricted to the Sonora Desert. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Long-legged myotis	*Myotis volans*	CSA	Widespread in western North America. Primarily occurs in coniferous forests, but also occurs seasonally in riparian and desert habitats. Utilizes abandoned buildings, cracks in the ground, cliff crevices, exfoliating tree bark, and hollows within snags as summer day roosts; caves and mine tunnels are used as hibernacula.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.
San Diego desert woodrat	*Neotoma lepida intermedia*	CSC	Frequents poorly vegetated arid lands and is especially associated with cactus patches. Occurs along the Pacific slope from about San Luis Obispo County to northwest. Baja California.	P	Observed during the 2006 surveys. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	CSC	Varied habitats but usually associated with high cliffs or rocky areas; southwestern North America.	P, O	This species was observed during the 2006 focused bat survey. Potential for this species to occur within the project impact area is discussed in Chapter 4.
Big free-tailed bat	*Nyctinomops macrotis*	CSC	Mainly an inhabitant of rugged, rocky habitats in arid landscapes of southwestern North America.	P	General habitat for this species is present within the project area. Habitat may be of marginal suitability. Potential for this species to occur within the project impact area is discussed in Chapter 4

Listed and Proposed Species, Critical Habitat, and other Sensitive Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present or Absent/ Species Observed	Rationale
Ringtail	*Bassariscus astutus*	CFP	Woody and rocky areas of the southwestern United States and most of Mexico.	P	General habitat for this species is present within the project area. Potential for this species to occur within the project impact area is discussed in Chapter 4.

Source: Natural Environment Study (LSA Associates, Inc., August 2008).

Habitat Present/Absent: Absent (A) 0 no habitat present and no further work needed. Habitat Present (P) – habitat is, or may be present. Species observed during surveys (O) – Based on the literature review the species has been observed within the area of the BSA. Critical Habitat (CH) – Project footprint is located within designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC); California Endangered (CE); California Threatened (CT); Fully Protected Species (CFP); California Species of Special Concern (CSC); California Special Plant (CSP), California Special Animal (CSA), California Native Plant Society (CNPS); 1A,Plants presumed extinct in California; 1B, Plants considered by CNPS to be rare, threatened, or endangered in California and elsewhere, 2, Plants considered by CNPS to be rare, threatened, or endangered in California, but more common elsewhere; 3, Plants about which more information is needed – a CNPS review list ; CNPS threat categories: 0.1-Seriously threatened in California (high degree/immediacy of threat); 0.2-Fairly threatened in California (moderate degree/immediacy of threat); 0.3-Not very threatened in California (low degree/immediacy of threats or no current threats known)

Appendix K NRCS-CPA-106 Form for Farmlands

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United States Department of Agriculture

NRCS
Natural Resources Conservation Service
44811 North Date Ave. Suite G
Lancaster, CA 93534

Phone: (661) 945-2604
Fax : (661) 942-5503

Carlos Montez
Branch Chief – Division of Environmental Planning
Department of Transportation - District 7
100 Main Street, Suite 100
Los Angeles, CA 90012-3606

9/12/2008

SUBJECT: Farmland Conversion Impact Rating for I-5 HOV and Truck Lane Project

Dear Mr. Montez:

Attached are the completed NRCS sections of Farmland Conversion Impact Rating Form NRCS-CPA-106.

If you have any questions, please contact me at (661) 945-2604 x 108 or by email: paul.nguyen@ca.usda.gov

Sincerely,

Paul Nguyen
Soil Conservationist
USDA NRCS

Cc: Mine Struhl, Associate Environmental Planner California Department of Transportation
Jae Lee USDA NRCS, District Conservationist

Attach.

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 8/25/08	4. Sheet 1 of 1
1. Name of Project I-5 HOV and Truck Lane	5. Federal Agency Involved FHWA/Caltrans	
2. Type of Project Transportation	6. County and State Los Angeles County, CA	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS 8/28/08	2. Person Completing Form Paul Nguyen
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐	4. Acres Irrigated 26,005	Average Farm Size 72
5. Major Crop(s) Carrot, Onion, Alfalfa	6. Farmable Land in Government Jurisdiction Acres: 48,847 % 1.8	7. Amount of Farmland As Defined in FPPA Acres: 30,770 % 1.2
8. Name Of Land Evaluation System Used CA - Storie System	9. Name of Local Site Assessment System None	10. Date Land Evaluation Returned by NRCS 9/12/08

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment Alternative3			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	3.02			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0			
C. Total Acres In Corridor	3.02	0	0	0
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	3.02			
B. Total Acres Statewide And Local Important Farmland	0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.006			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	2			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	86			
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points			
1. Area in Nonurban Use	15	2			
2. Perimeter in Nonurban Use	10	5			
3. Percent Of Corridor Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	10			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availablility Of Farm Support Services	5	5			
8. On-Farm Investments	20	18			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	60	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100				
Total Corridor Assessment (From Part VI above or a local site assessment)	160	60	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	60	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
			YES ☐ NO ☑

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

Appendix L RTP, RTIP, and Air Quality Conformity Documentation

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State Highway

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA996134	Los Angeles	SCAB	L201	LA996134	CAN71	5	44.25	46	S	TCM Committed	0	2008
							PTC	156,600	Agency	CALTRANS		

Route 5: RTE. 5/14 INTERCHANGE & HOV LNS ON RTE 14 - CONSTRUCT 2 ELEVATED LANES - HOV CONNECTOR (DIRECT CONNECTORS) (EA# 16800)(2001 CFP 8343) (PPNO 0168M)

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
CMAQ	4,006		97,364	101,370	101,370							101,370
PROP "C25" FUNDS		2,000	12,130	14,130	2,000	8,956	3,174					14,130
STATE CASH - RIP	10,116	1,776	29,208	41,100	41,100							41,100
LA996134 Total	14,122	3,776	138,702	156,600	144,470	8,956	3,174					156,600

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LAE0465	Los Angeles	SCAB		LAE0465	CAN69	5	45.4	59	S	NON-EXEMPT	0	2008
							PTC	410,000	Agency	CALTRANS		

Route 5: IN L.A./SANTA CLARITA ON RTE 5 FROM SR14 TO PARKER RD, HOV & TRUCK LANE IMPROVEMENT(EA 23320,2332E,2332A,2332C, PPNO 3189, 3189A, 3189B) SAFETEA LU #465

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU	1,600			1,600		1,600						1,600
PRIVATE FUNDS	6,570			6,570		6,570						6,570
LAE0465 Total	8,170			8,170		8,170						8,170

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA0F098	Los Angeles	SCAB		LA0F098	CAN65	10	31.1	32.3	S	EXEMPT	0	2008
							PTC	70,460	Agency	CALTRANS		

Route 10: L.A. COUNTY I-10 AND I-605 IC;CONSTRUCT ONE/TWO LANE BRIDGE STRUCTURE, BRANCHING OFF SB OF RTE 605 TO EB OF RTE 10 AT-GRADE CONNECTOR RAMP (EA 24540, PPNO 3529; CONSTRUCT ONE-LANE CONNECTOR FROM SB I-605 TO WB I-10.

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
NATIONAL HWY SYSTEM-SHOPP	6,490			6,490	6,490							6,490
GARVEE BOND FINANCING		4,300	53,400	57,700				57,700				57,700
STATE CASH		1,210	5,060	6,270				6,270				6,270
LA0F098 Total	6,490	5,510	58,460	70,460	6,490			63,970				70,460

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA01342	Los Angeles	SCAB	1014	LA01342	CAN69	10	31.2	33.4	S	TCM Committed	0	2008
							PTC	190,957	Agency	CALTRANS		

Route 10: RT 10 FROM RT 605 TO PUENTE AVE HOV LANES (8+0 TO 8+2) (EA# 117070, PPNO 0306H) PPNO 3333 3382 AB 3090 REP (TCRP #40)

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
CMAQ			61,851	61,851	61,851							61,851
PROP "C25" FUNDS	960			960	960							960
STATECASH - PRIOR STIP			62,949	62,949		62,949						62,949
STATE CASH - RIP	8,097	29,251		37,348	37,348							37,348
TRAFFIC CONGESTION RELIEF	2,749	25,100		27,849	27,849							27,849
LA01342 Total	11,806	54,351	124,800	190,957	128,008	62,949						190,957

LOS ANGELES COUNTY RTIP PROJECTS				
SYS-TEM*	RTP ID	ROUTE	DESCRIPTION	PROJECT COST ($1,000'S)
S	LAE0465	5	IN L.A./SANTA CLARITA ON RTE 5 FROM SR14 TO PARKER RD, HOV, TRUCK LANE, AND AUXILIARY LANE IMPROVEMENTS	$410,000
S	LAE2577	5	STUDY NORWALK, SANTA FE SPRINGS, DOWNEY, MONTEBELLO, & COMMERCE: ON I-5, CONDUCT PLAN'G, ENV. & ENG. STUDIES FOR WIDEN'G W/HOV & MIXED FLOW LNS FROM I-605 TO I-710.	$4,160
S	0309S	10	BALDWIN PARK AND WEST COVINA - PUENTE AVE TO CITRUS STREET SOUNDWALL PROJECT (95 STIP-IIP) (EA# 111720, PPNO# 0309S)	$10,865
S	LA000548	10	FROM PUENTE TO CITRUS HOV LANES FROM 8 TO 10 LANES (C-ISTEA 77720) (EA# 117080, PPNO# 0309N)	$182,000
S	LA01342	10	RT 10 FROM RT 605 TO PUENTE AVE HOV LANES (8+0 TO 8+2) (EA# 117070, PPNO 0306H) PPNO 3333 3382 AB 3090 REP (TCRP #40)	$191,000
S	LA0B875	10	HOV LANES FROM CITRUS TO ROUTE 57/210 - (EA# 11934, PPNO# 0310B)	$191,500
S	LA0F098	10	L.A. COUNTY I-10 AND I-605 IC;CONSTRUCT ONE/TWO LANE BRIDGE STRUCTURE, BRANCHING OFF SB OF RTE 605 TO EB OF RTE 10 AT-GRADE CONNECTOR RAMP (EA 24540, PPNO 3529)	$70,460
S	LA0C8102	14	SR-14 FREEWAY/AVENUE I INTERCHANGE IMPROVEMENTS-WIDENING AVE I FROM 2 TO 3 LANES IN EACH DIRECTION, ADDING DUAL LEFT TURN LANES, AND WIDENING A BRIDGE STRUCTURE. PPNO 3123.	$10,581
S	LA0D45	47	SR-47 EXPRESSWAY - SCHUYLER HEIM BRIDGE REPLACEMENT (2 MF + 1 AUX NB, 3 MF + 1 AUX SB); CONSTRUCT EXPRESSWAY (4 TO 7 LNS) FROM OCEAN BLVD TO ALAMEDA ST/PCH; CONSTRUCT NEW 2-LANE FLYOVER FROM EB NAVY WAY TO NB SR-47	$687,000
S	LA0B412	60	ROUTE 57/60 INTERCHANGE MIS (E/P, PS/E ONLY)	$1,191
S	LA0D399	60	CONSTRUCTION OF NEW PARTIAL DIAMOND INTERCHANGE FOR STATE ROUTE 60 (SR-60) AT LEMON AVE (SAFETEA-LU # 587).	$19,000
S	LA996137	60	RTE. 60 HOV LNS. FROM RTE. 605 TO BREA CANYON RD. -- CONSTRUCT ONE HOV LANE IN EACH DIRECTION) (CFP: 358, 4262, 6137=67,150+IIP: 5,100) (EA#129410, 129421, PPNO 0482R,0482RA)	$153,300
S	LA0B951	71	ROUTE 10 TO ROUTE 60 - EXPRESSWAY TO FREEWAY CONVERSION - ADD 1 HOV LANE AND 1 MIXED FLOW LANE EACH DIRECTION . (2001 CFP 8349, TCRP #50) (EA# 210600, PPNO 2741) SAFETEA-LU # 3771 (TCRP #50)	$445,000
S	LA0D31	101	CONSTRUCT ONE ADDITIONAL LANE FOR BOTH NORTH AND SOUTH BOUND OFF-RAMPS AT VAN NUYS BLVD. (RIP 1 M, IIP 8 M) (EA # 199630) (PPNO 2789) (DEMO= NAT. CORRIDOR PLANNING AND BORDER DEV.)	$4,064
S	17850	105	LOS ANGELES - SEPULVEDA BLVD TO NASH STREET - WIDEN N/B OFF-RAMP @ SEPULVEDA BL FROM W/B RTE 105. FROM 1 LANE TO 2 LANES. (PPNO# 2119, EA# 17850K) (IIP $7,394)	$28,160
S	LA0F073	105	PROJECTS WITHIN LOS ANGELES INTERNATIONAL AIPORT TO ELIMINATE TRAFFIC BOTTLENECKS. (LAWA) (SEC.336 FUNDING)	$5,067
S	LA0D328	110	IN LOS ANGELES-SB HARBOR FREEWAY FROM 8TH STREET ON RAMP TO I-110/I-10 CONNECTOR, CONSTRUCT AUXILIARY LANE AND MODIFY RAMPS (EA 24110, PPNO 3343)	$54,932

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Qualitative PM Hot Spot Analysis Review

June 2008	Determination
LAE0465 - I-5 HOV and Truck Lanes	Analysis deemed acceptable for NEPA circulation

U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration
California Division

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (fax)

July 13, 2009

In Reply Refer To:
HDA-CA
Document # P59198

Doug Failing, District Director
California Department of Transportation
District 7
100 South Main Street, Suite 100
Los Angeles, CA 90012-3606

Attention: Andrew Yoon, Senior Transportation Engineer

Dear Mr. Yoon:

SUBJECT: Project-Level Conformity Determination for the I-5 HOV, Truck, and Auxiliary Lanes Improvement Project

On June 23, 2009, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a request for the project-level conformity determination for the Interstate 5 High Occupancy Vehicle, Truck, and Auxiliary Lanes Improvement Project pursuant to 23 U.S.C. 327(a)(2)(B)(ii)(1). The project is in an area that is designated nonattainment or maintenance for ozone, course particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), and nitrogen dioxide (NO_2).

The project-level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 C.F.R. Part 93 have been met. The project is included in the Southern California Association of Government's (SCAG) currently conforming *2008 Regional Transportation Plan (RTP),* and the *2008 Regional Transportation Improvement Program (RTIP).* The current conformity determinations for the RTP and RTIP were approved by FHWA and the Federal Transit Administration (FTA) on January 14, 2009. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

Based on the information provided, FHWA finds that the Conformity Determination for the Interstate 5 High Occupancy Vehicle, Truck, and Auxiliary Lanes Improvement Project conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93.

If you have any questions pertaining to this conformity finding, please contact Aimee Kratovil, FHWA Air Quality Specialist, at (916) 498-5866.

Sincerely,

AKrat

For
Walter C. Waidelich, Jr.
Division Administrator

cc: (email)
Steve Luxenberg, FHWA
Carlos Montez, Caltrans
Mike Brady, Caltrans
Andy Woods, Caltrans

AKratovil/ac

Appendix M Sound Barrier Modeling and Noise Abatement Recommendation (NAR)

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Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-1*		R-1	**76**[3]	**69**[4]	7	**68**	8	**66**	10	65	11	64	12	NP[5]	NP
		R-2	56	--[6]	--	--	--	--	--	--	--	--	--	--	--
		R-3	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-4	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-5	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-6	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-7	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-8	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-9	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-10	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-11	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-12	65	--	--	--	--	--	--	--	--	--	--	--	--
3-2**		R-13	**67**	61	6	60	7	59	8	59	8	59	8	59	8
3-3**		R-14	**70**	63	7	63	7	62	8	60	10	60	10	59	11
3-4**	1**	R-15	**73**	--[7]	--	**67**	6	64	9	62	11	61	12	61	12
		R-16	**71**	--	--	**68**	3	65	6	64	7	62	9	61	10
		R-17	**71**	--	--	**68**	3	65	6	64	7	63	8	62	9
	2**	R-18	**70**	--	--	**67**	3	64	6	63	7	62	8	61	9
	1**	R-19	**66**	--	--	64	2	64	2	64	2	63	3	62	4
		R-20	**66**	--	--	64	2	63	3	63	3	62	4	62	4
	2**	R-21	**69**	--	--	**66**	3	64	5	63	6	62	7	61	8
	1**	R-22	**64**	--	--	62	2	61	3	61	3	60	4	60	4
3-5**	3**	R-23	**73**	--	--	**72**	1	**71**	2	**69**	4	**68**	5	**67**	6
		R-24	**73**	--	--	**71**	2	**70**	3	**69**	4	**67**	6	**66**	7
		R-25	**73**	--	--	**71**	2	**70**	3	**69**	4	**67**	6	**67**	6
		R-26	**71**	--	--	**70**	1	**68**	3	**67**	4	**66**	5	**66**	5
		R-27	**66**	--	--	**66**	0	64	2	64	2	64	2	64	2
		R-28	**67**	--	--	**66**	1	**66**	1	65	2	65	2	64	3
		R-29	65	--	--	65	0	64	1	64	1	63	2	63	2
	4**	R-30	**70**	--	--	--	--	**68**	2	**66**	4	65	5	65	5
		R-31	**70**	--	--	--	--	**68**	2	**67**	3	65	5	64	6

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-5**	4**	R-32	**69**	--	--	--	--	**68**	1	**66**	3	65	4	64	5
		R-33	65	--	--	--	--	64	1	64	1	64	1	64	1
		R-34	63	--	--	--	--	63	0	63	0	63	0	63	0
3-5**	4**	R-35	**72**	--	--	--	--	**72**	0	**72**	0	**72**	0	**72**	0
3-6**	5**	R-36	**69**	--	--	--	--	--	--	**67**	2	**66**	3	65	4
		R-37	**70**	--	--	--	--	--	--	**68**	2	**66**	4	65	5
		R-38	**67**	--	--	--	--	--	--	**67**	0	**67**	0	**67**	0
		R-39	**70**	--	--	--	--	--	--	**70**	0	**70**	0	**70**	0
		R-40	**68**	NF[8]	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
3-7**		R-41	**66**	59	7	58	8	58	8	58	8	58	8	58	8
		R-42	59	--	--	--	--	--	--	--	--	--	--	--	--
3-8**		R-43	**70**	**66**	4	**66**	4	65	5	65	5	65	5	65	5
		R-44	**76**	**70**	6	**68**	8	**66**	10	65	11	65	11	64	12
3-9**	7**	R-45	64	63	1	63	1	62	2	62	2	61	3	61	3
3-8**		R-46	57	57	0	57	0	57	0	57	0	57	0	57	0
	6**	R-47	57	57	0	57	0	57	0	57	0	57	0	57	0
		R-48	58	58	0	58	0	58	0	58	0	58	0	58	0
3-9**	7**	R-49	65	65	0	65	0	65	0	65	0	64	1	64	1
		R-50	**67**	65	2	64	3	63	4	62	5	62	5	61	6
		R-51	**71**	**68**	3	**66**	5	65	6	64	7	62	9	62	9
		R-52	**71**	**68**	3	65	6	64	7	62	9	61	10	61	10
		R-53	**74**	**74**	0	**74**	0	**74**	0	**73**	1	65	9	62	12
		R-54	**68**	63	5	60	8	58	10	57	11	56	12	56	12
		R-55	61	61	0	61	0	61	0	61	0	61	0	61	0
		R-56	63	63	0	63	0	62	1	62	1	61	2	61	2
		R-57	65	65	0	65	0	64	1	63	2	62	3	61	4
		R-58	59	59	0	59	0	58	1	58	1	57	2	56	3
		R-59	57	57	0	57	0	57	0	57	0	57	0	57	0
	8**	R-60	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-61	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-62	55	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	10**	R-63	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-64	57	--	--	--	--	--	--	--	--	--	--	--	--
	9**	R-65	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-66	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-67	59	--	--	--	--	--	--	--	--	--	--	--	--
	11**	R-68	59	--	--	--	--	--	--	--	--	--	--	--	--
	11**	R-69	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-70	57	--	--	--	--	--	--	--	--	--	--	--	--
	10**	R-71	59	--	--	--	--	--	--	--	--	--	--	--	--
	9**	R-72	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-73	60	--	--	--	--	--	--	--	--	--	--	--	--
	11**	R-74	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-75	50	--	--	--	--	--	--	--	--	--	--	--	--
		R-76	49	--	--	--	--	--	--	--	--	--	--	--	--
	10**	R-77	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-78	56	--	--	--	--	--	--	--	--	--	--	--	--
	9**	R-79	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-80	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-81	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-82	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-83	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-84	65	--	--	--	--	--	--	--	--	--	--	--	--
2-1**		R-85	**69**	63	6	61	8	60	9	59	10	58	11	58	11
		R-86	**70**	65	5	62	8	60	10	59	11	58	12	58	12
		R-87	**69**	61	8	60	9	59	10	58	11	58	11	57	12
		R-88	62	62	0	62	0	62	0	62	0	62	0	62	0
		R-89	59	59	0	59	0	59	0	59	0	59	0	59	0
2-2**		R-90	65	60	5	59	6	58	7	58	7	57	8	57	8
		R-91	**67**	62	5	61	6	60	7	60	7	59	8	59	8
		R-92	**68**	63	5	62	6	61	7	60	8	59	9	59	9
		R-93	49	49	0	49	0	49	0	49	0	49	0	49	0

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
2-2**		R-94	48	48	0	48	0	48	0	48	0	48	0	48	0
		R-95	52	52	0	52	0	52	0	52	0	52	0	52	0
2-3**		R-96	**68**	63	5	61	7	60	8	59	9	59	9	58	10
		R-97	64	61	3	61	3	60	4	60	4	60	4	60	4
		R-98	62	60	2	59	3	58	4	58	4	57	5	57	5
		R-99	53	53	0	53	0	53	0	53	0	53	0	53	0
2-4**		R-100	**75**	**68**	7	64	11	61	14	60	15	59	16	59	16
		R-101	**71**	64	7	63	8	62	9	61	10	60	11	60	11
		R-102	**71**	65	6	63	8	61	10	60	11	60	11	59	12
2-4**		R-103	41	41	0	41	0	41	0	41	0	41	0	41	0
		R-104	64	59	5	58	6	57	7	56	8	56	8	55	9
		R-105	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-106	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-107	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-108	56	--	--	--	--	--	--	--	--	--	--	--	--
	12***	R-109	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-110	57	--	--	--	--	--	--	--	--	--	--	--	--
	13**	R-111	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-112	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-113	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-114	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-115	62	--	--	--	--	--	--	--	--	--	--	--	--
2-5*		R-116	**66**	64	2	64	2	64	2	63	3	63	3	NP	NP
		R-117	62	62	0	61	1	61	1	61	1	61	1	NP	NP
		R-118	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-119	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-120	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-121	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-122	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-123	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-124	56	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-125	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-126	56	--	--	--	--	--	--	--	--	--	--	--	--
2-6**		R-127	**69**	62	7	61	8	59	10	58	11	58	11	57	12
		R-128	59	--	--	--	--	--	--	--	--	--	--	--	--
2-7**	14**	R-129	**68**	--	--	**68**	0	**68**	0	**68**	0	**68**	0	**68**	0
		R-130	63	--	--	--	--	--	--	--	--	--	--	--	--
	15**	R-131	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-132	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-133	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-134	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-135	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-136	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-137	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-138	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-139	56	--	--	--	--	--	--	--	--	--	--	--	--
1-1**		R-140	**66**	63	3	63	3	63	3	63	3	63	3	63	3
		R-141	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-142	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-143	55	--	--	--	--	--	--	--	--	--	--	--	--
1-1**		R-144	57	55	2	55	2	55	2	55	2	55	2	55	2
1-2**	18**	R-145	**72**	**67**	5	**66**	6	**64**	8	63	9	62	10	61	11
	17**	R-146	**72**	**67**	5	65	7	64	8	62	10	61	11	60	12
1-3***		R-147	**72**	64	8	63	9	61	11	61	11	59	13	59	13
		R-148	**69**	65	4	64	5	64	5	64	5	63	6	63	6
		R-149	**69**	**69**	0	**69**	0	**69**	0	**69**	0	**69**	0	**69**	0
		R-150	64	64	0	64	0	64	0	64	0	64	0	64	0
		R-151	61	61	0	61	0	61	0	61	0	61	0	61	0
1-4**		R-152	**70**	**67**	3	65	5	64	6	64	6	63	7	63	7
		R-153	**66**	65	1	64	2	64	2	64	2	63	3	63	3
		R-154	64	63	1	62	2	62	2	62	2	62	2	62	2
		R-155	**67**	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
1-4**		R-156	61	61	0	61	0	61	0	61	0	61	0	61	0
		R-157	59	59	0	59	0	59	0	59	0	59	0	59	0
		R-158	60	60	0	60	0	60	0	60	0	60	0	60	0
		R-159	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-160	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-161	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-162	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-163	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-164	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-165	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-166	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-167	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-168	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-169	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-170	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-171	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-172	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-173	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-174	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-175	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-176	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-177	53	--	--	--	--	--	--	--	--	--	--	--	--
	16*	R-178	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-179	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-180	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-181	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-182	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-183	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-184	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-185	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-186	53	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	16*	R-187	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-188	63	--	--	--	--	--	--	--	--	--	--	--	--
1-5*		R-189	**74**	--	--	--	--	--	--	--	--	**72**	2	NP	NP
		R-190	**70**	--	--	--	--	--	--	--	--	**69**	1	NP	NP
		R-191	**68**	--	--	--	--	--	--	--	--	**67**	1	NP	NP
		R-192	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-193	55	--	--	--	--	--	--	--	--	--	--	--	--
1-5*		R-194	66	--	--	--	--	--	--	--	--	65	0	NP	NP
		R-195	61	--	--	--	--	--	--	--	--	61	0	NP	NP
		R-196	61	--	--	--	--	--	--	--	--	61	0	NP	NP
		R-197	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-198	54	--	--	--	--	--	--	--	--	--	--	--	--
1-5*		R-199	63	--	--	--	--	--	--	--	--	63	0	NP	NP
		R-200	59	--	--	--	--	--	--	--	--	59	0	NP	NP
		R-201	60	--	--	--	--	--	--	--	--	60	0	NP	NP
		R-202	**66**	--	--	--	--	--	--	--	--	65	1	NP	NP
		R-203	59	--	--	--	--	--	--	--	--	59	0	NP	NP
		R-204	58	--	--	--	--	--	--	--	--	58	0	NP	NP
1-5*	16*	R-205	58	--	--	--	--	--	--	--	--	58	0	NP	NP
		R-206	55	--	--	--	--	--	--	--	--	55	0	NP	NP
		R-207	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-208	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-209	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-210	59	--	--	--	--	--	--	--	--	59	0	NP	NP
		R-211	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-212	53	--	--	--	--	--	--	--	--	53	0	NP	NP
		R-213	54	--	--	--	--	--	--	--	--	54	0	NP	NP
		R-214	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-215	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-216	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-217	55	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	16*	R-218	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-219	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-220	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-221	60	--	--	--	--	--	--	--	--	--	--	--	--
1-6**		R-222	**69**	63	6	62	7	61	8	60	9	59	10	58	11
		R-223	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-224	64	--	--	--	--	--	--	--	--	--	--	--	--
1-7**		R-225	**66**	62	4	61	5	61	5	61	5	61	5	60	6
		R-226	**66**	62	4	61	5	61	5	61	5	61	5	60	6
		R-227	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-228	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-229	60	--	--	--	--	--	--	--	--	--	--	--	--
	19**	R-230	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-231	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-232	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-233	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-234	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-235	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-236	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-237	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-238	53	--	--	--	--	--	--	--	--	--	--	--	--
	19**	R-239	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-240	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-241	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-242	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-243	57	--	--	--	--	--	--	--	--	--	--	--	--
	20**	R-244	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-245	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-246	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-247	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-248	47	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA $L_{eq}(h)$

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	20**	R-249	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-250	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-251	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-252	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-253	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-254	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-255	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-256	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-257	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-258	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-259	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-260	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-261	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-262	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-263	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-264	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-265	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-266	39	--	--	--	--	--	--	--	--	--	--	--	--
		R-267	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-268	40	--	--	--	--	--	--	--	--	--	--	--	--
		R-269	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-270	44	--	--	--	--	--	--	--	--	--	--	--	--
		R-271	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-272	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-273	65	--	--	--	--	--	--	--	--	--	--	--	--
1-8*		R-274	**70**	**70**	0	**69**	1	**69**	1	**69**	1	**68**	2	NP	NP
		R-275	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-276	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-277	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-278	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-279	62	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.J Sound Barrier Modeling for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-280	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-281	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-282	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-283	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-284	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-285	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-286	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-287	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-288	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-289	48	--	--	--	--	--	--	--	--	--	--	--	--
1-9**		R-290	**72**	64	8	63	9	63	9	63	9	62	10	62	10
		R-291	62	--	--	--	--	--	--	--	--	--	--	--	--

Source: LSA Associates, Inc., August 2008.

[1] Refer to Figure 2 for existing wall heights.

[2] I.L.: Insertion Loss.

[3] Numbers in bold represent noise levels that approach or exceed the Noise Abatement Criteria (NAC).

[4] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

[5] NP = Not Permitted. Sound barriers within 15 ft of the nearest travel lane are not permitted to exceed 14 ft in height.

[6] No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

[7] Shaded areas represent existing walls and their approximate height. Refer to Figure 2 for the existing wall height.

[8] NF = Not Feasible. As Receptor R-40 has driveway access onto The Old Road, it is not feasible to abate traffic noise levels along the residential property line.

* Wall along edge of shoulder

** Wall residential property line

dBA = A-weighted decibels dBA L_{eq}(h) = A-weighted noise level ft = feet SB = Sound barrier

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-1	**76**[3]	--[4]	--	--	--	--	--	--	--	--	--	--	--
3-10**		R-2	56	56	0	56	0	56	0	55	1	55	1	NP[5]	NP
		R-3	58	58	0	58	0	58	0	57	1	57	1	NP	NP
		R-4	60	60	0	60	0	60	0	60	0	60	0	NP	NP
		R-5	65	65	0	65	0	65	0	64	1	63	2	NP	NP
		R-6	64	64	0	64	0	64	0	63	1	63	1	NP	NP
		R-7	56	56	0	56	0	56	0	56	0	56	0	NP	NP
		R-8	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-9	59	59	0	59	0	59	0	58	1	57	2	NP	NP
		R-10	64	64	0	64	0	63	1	63	1	62	2	NP	NP
		R-11	64	64	0	64	0	63	1	63	1	62	2	NP	NP
		R-12	65	64	1	64	1	64	1	63	2	62	3	NP	NP
		R-13	**67**	**67**	0	**66**	1	**66**	1	**66**	1	**66**	1	NP	NP
		R-14	**70**	**69**	1	**69**	1	**69**	1	**69**	1	**69**	1	NP	NP
3-11**		R-15	**73**	**72**	1	**71**	2	**70**	3	**69**	4	**69**	4	NP	NP
	1***	R-16	**71**	**70**	1	**69**	2	**68**	3	**67**	4	**66**[6]	5	NP	NP
		R-17	**71**	**68**	3	**67**	4	**67**	4	65	6	64	7	NP	NP
	2***	R-18	**70**	**67**	3	**67**	3	**66**	4	65	5	63	7	NP	NP
	1***	R-19	**66**	**66**	0	65	1	64	2	64	2	63	3	NP	NP
		R-20	**66**	65	1	65	1	64	2	63	3	62	4	NP	NP
	2***	R-21	**69**	**67**	2	**67**	2	**66**	3	63	6	62	7	NP	NP
	1***	R-22	64	64	0	64	0	63	1	62	2	62	2	NP	NP
	3***	R-23	**73**	**72**	1	**70**	3	**69**	4	**68**	5	**66**	7	NP	NP
		R-24	**73**	**72**	1	**71**	2	**70**	3	**69**	4	**68**	5	NP	NP
		R-25	**73**	**73**	0	**72**	1	**71**	2	**69**	4	**69**	4	NP	NP
		R-26	**71**	**69**	2	**69**	2	**69**	2	**68**	3	**66**	5	NP	NP
		R-27	**66**	**66**	0	65	1	65	1	65	1	62	4	NP	NP
		R-28	**67**	**67**	0	**67**	0	**66**	1	**66**	1	65	2	NP	NP
		R-29	65	65	0	65	0	64	1	63	2	63	2	NP	NP
	4***	R-30	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	NP	NP
		R-31	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	NP	NP

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-11**	4***	R-32	**69**	**69**	0	**69**	0	**68**	1	**68**	1	**67**	2	NP	NP
		R-33	65	65	0	65	0	65	0	64	1	64	1	NP	NP
		R-34	63	63	0	63	0	**63**	0	**63**	0	62	1	NP	NP
3-11*		R-35	**72**	**72**	0	**69**	3	**68**	4	**68**	4	**67**	5	NP	NP
	5***	R-36	**69**	**69**	0	**69**	0	**68**	1	**68**	1	**66**	3	NP	NP
		R-37	**70**	**70**	0	**70**	0	**70**	0	**69**	1	**68**	2	NP	NP
		R-38	**67**	**67**	0	**66**	1	65	2	65	2	64	3	NP	NP
		R-39	**70**	**70**	0	**70**	0	**68**	2	**67**	3	**66**	4	NP	NP
		R-40	**68**	**68**	0	65	3	64	4	63	5	62	6	NP	NP
		R-41	**66**	**66**	0	**66**	0	**66**	0	**66**	0	**66**	0	NP	NP
		R-42	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-43	**70**	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0	NP	NP
		R-44	**76**	**76**	0	**76**	0	**76**	0	**76**	0	**76**	0	NP	NP
	7***	R-45	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-46	57	57	0	57	0	57	0	57	0	57	0	NP	NP
	6***	R-47	57	57	0	57	0	57	0	57	0	57	0	NP	NP
		R-48	58	58	0	58	0	58	0	58	0	58	0	NP	NP
	7***	R-49	65	65	0	65	0	65	0	65	0	65	0	NP	NP
		R-50	**67**	**67**	0	**67**	0	**67**	0	**67**	0	**66**	1	NP	NP
		R-51	**71**	**71**	0	**70**	1	**70**	1	**69**	2	**69**	2	NP	NP
		R-52	**71**	**71**	0	**70**	1	**70**	1	**68**	3	**67**	4	NP	NP
		R-53	**74**	**73**	1	**72**	2	**72**	2	**70**	4	**69**	5	NP	NP
		R-54	**68**	**67**	1	**67**	1	**67**	1	**67**	1	**66**	2	NP	NP
		R-55	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-56	63	63	0	63	0	63	0	62	1	62	1	NP	NP
		R-57	65	65	0	65	0	65	0	65	0	65	0	NP	NP
		R-58	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-59	57	57	0	57	0	57	0	57	0	57	0	NP	NP
	8***	R-60	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-61	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-62	55	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	10***	R-63	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-64	57	--	--	--	--	--	--	--	--	--	--	--	--
	9***	R-65	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-66	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-67	59	--	--	--	--	--	--	--	--	--	--	--	--
	11***	R-68	59	--	--	--	--	--	--	--	--	--	--	--	--
	11***	R-69	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-70	57	--	--	--	--	--	--	--	--	--	--	--	--
	10***	R-71	59	--	--	--	--	--	--	--	--	--	--	--	--
	9***	R-72	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-73	60	--	--	--	--	--	--	--	--	--	--	--	--
	11***	R-74	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-75	50	--	--	--	--	--	--	--	--	--	--	--	--
		R-76	49	--	--	--	--	--	--	--	--	--	--	--	--
	10***	R-77	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-78	56	--	--	--	--	--	--	--	--	--	--	--	--
	9***	R-79	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-80	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-81	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-82	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-83	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-84	65	--	--	--	--	--	--	--	--	--	--	--	--
2-8**		R-85	**69**	**69**	0	**68**	1	**68**	1	**67**	2	**67**	2	NP	NP
		R-86	**70**	**70**	0	**69**	1	**68**	2	**68**	2	**68**	2	NP	NP
		R-87	**69**	**69**	0	**69**	0	**69**	0	**68**	1	**68**	1	NP	NP
		R-88	62	62	0	62	0	62	0	62	0	62	0	NP	NP
		R-89	59	59	0	58	1	58	1	58	1	58	1	NP	NP
		R-90	65	65	0	65	0	65	0	64	1	64	1	NP	NP
		R-91	**67**	**67**	0	**67**	0	**67**	0	**66**	1	**66**	1	NP	NP
		R-92	**68**	**68**	0	**68**	0	**68**	0	**66**	2	**66**	2	NP	NP
		R-93	49	49	0	49	0	49	0	49	0	49	0	NP	NP

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
2-8**		R-94	48	48	0	48	0	48	0	48	0	48	0	NP	NP
		R-95	52	52	0	52	0	52	0	52	0	52	0	NP	NP
		R-96	**68**	**68**	0	**68**	0	**67**	1	**66**	2	**66**	2	NP	NP
		R-97	64	64	0	64	0	64	0	63	1	63	1	NP	NP
		R-98	62	62	0	62	0	62	0	62	0	62	0	NP	NP
		R-99	53	53	0	53	0	53	0	53	0	53	0	NP	NP
		R-100	**75**	**75**	0	**75**	0	**73**	2	**72**	3	**71**	4	NP	NP
		R-101	**71**	**71**	0	**71**	0	**71**	0	**70**	1	**68**	3	NP	NP
		R-102	**71**	**71**	0	**70**	1	**70**	1	**69**	2	**68**	3	NP	NP
		R-103	41	--	--	--	--	--	--	--	--	--	--	--	--
		R-104	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-105	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-106	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-107	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-108	56	--	--	--	--	--	--	--	--	--	--	--	--
	12***	R-109	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-110	57	--	--	--	--	--	--	--	--	--	--	--	--
	13***	R-111	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-112	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-113	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-114	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-115	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-116	**66**	--	--	--	--	--	--	--	--	--	--	--	--
		R-117	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-118	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-119	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-120	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-121	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-122	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-123	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-124	56	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-125	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-126	56	--	--	--	--	--	--	--	--	--	--	--	--
2-9**		R-127	**69**	**67**	2	**66**	3	65	4	64	5	63	6	NP	NP
		R-128	59	59	0	58	1	58	1	58	1	57	2	NP	NP
	14***	R-129	**68**	**68**	0	**68**	0	**68**	0	**68**	0	**68**	0	NP	NP
		R-130	63	63	0	63	0	63	0	63	0	63	0	NP	NP
	15***	R-131	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-132	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-133	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-134	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-135	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-136	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-137	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-138	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-139	56	--	--	--	--	--	--	--	--	--	--	--	--
1-10		R-140	**66**	**66**	0	**66**	0	**66**	0	65	1	65	1	NP	NP
		R-141	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-142	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-143	55	--	--	--	--	--	--	--	--	--	--	--	--
1-10**		R-144	57	57	0	57	0	57	0	57	0	56	1	NP	NP
	18***	R-145	**72**	**72**	0	**72**	0	**72**	0	**72**	0	**70**	2	NP	NP
	17***	R-146	**72**	**72**	0	**72**	0	**71**	1	**70**	2	**69**	3	NP	NP
		R-147	**72**	**72**	0	**72**	0	**72**	0	**72**	0	**72**	0	NP	NP
		R-148	**69**	**69**	0	**69**	0	**69**	0	**69**	0	**68**	1	NP	NP
		R-149	**69**	**69**	0	**69**	0	**69**	0	**69**	0	**69**	0	NP	NP
		R-150	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-151	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-152	**70**	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0	NP	NP
		R-153	**66**	**66**	0	**66**	0	**66**	0	**66**	0	**66**	0	NP	NP
		R-154	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-155	**67**	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0	NP	NP

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SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
1-10**		R-156	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-157	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-158	60	60	0	60	0	60	0	60	0	60	0	NP	NP
		R-159	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-160	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-161	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-162	63	63	0	63	0	63	0	63	0	63	0	NP	NP
		R-163	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-164	56	56	0	56	0	56	0	56	0	56	0	NP	NP
		R-165	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-166	53	53	0	53	0	53	0	53	0	53	0	NP	NP
		R-167	52	52	0	52	0	52	0	52	0	52	0	NP	NP
		R-168	51	51	0	51	0	51	0	51	0	51	0	NP	NP
		R-169	49	49	0	49	0	49	0	49	0	49	0	NP	NP
		R-170	51	51	0	51	0	51	0	51	0	51	0	NP	NP
1-10**		R-171	64	64	0	63	1	62	2	62	2	60	4	NP	NP
		R-172	62	62	0	62	0	62	0	62	0	61	1	NP	NP
		R-173	62	62	0	62	0	62	0	62	0	62	0	NP	NP
		R-174	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-175	60	60	0	60	0	60	0	60	0	60	0	NP	NP
		R-176	55	55	0	55	0	55	0	55	0	55	0	NP	NP
		R-177	53	53	0	53	0	53	0	53	0	53	0	NP	NP
	16*	R-178	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-179	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-180	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-181	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-182	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-183	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-184	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-185	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-186	53	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	16*	R-187	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-188	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-189	**74**	--	--	--	--	--	--	--	--	--	--	--	--
		R-190	**70**	--	--	--	--	--	--	--	--	--	--	--	--
		R-191	**68**	--	--	--	--	--	--	--	--	--	--	--	--
		R-192	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-193	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-194	**66**	--	--	--	--	--	--	--	--	--	--	--	--
		R-195	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-196	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-197	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-198	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-199	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-200	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-201	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-202	**66**	--	--	--	--	--	--	--	--	--	--	--	--
		R-203	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-204	58	--	--	--	--	--	--	--	--	--	--	--	--
	16*	R-205	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-206	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-207	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-208	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-209	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-210	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-211	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-212	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-213	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-214	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-215	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-216	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-217	55	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	16*	R-218	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-219	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-220	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-221	60	--	--	--	--	--	--	--	--	--	--	--	--
1-10**		R-222	**69**	**66**	3	65	4	64	5	63	6	62	7	NP	NP
		R-223	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-224	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-225	**66**	**66**	0	**66**	0	65	1	65	1	64	2	NP	NP
		R-226	**66**	**66**	0	65	1	65	1	65	1	64	2	NP	NP
		R-227	59	58	1	58	1	58	1	58	1	57	2	NP	NP
		R-228	57	57	0	57	0	57	0	57	0	57	0	NP	NP
		R-229	60	--	--	--	--	--	--	--	--	--	--	--	--
	19***	R-230	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-231	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-232	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-233	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-234	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-235	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-236	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-237	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-238	53	--	--	--	--	--	--	--	--	--	--	--	--
	19***	R-239	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-240	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-241	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-242	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-243	57	--	--	--	--	--	--	--	--	--	--	--	--
	20***	R-244	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-245	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-246	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-247	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-248	47	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	20***	R-249	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-250	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-251	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-252	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-253	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-254	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-255	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-256	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-257	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-258	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-259	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-260	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-261	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-262	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-263	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-264	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-265	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-266	39	--	--	--	--	--	--	--	--	--	--	--	--
		R-267	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-268	40	--	--	--	--	--	--	--	--	--	--	--	--
		R-269	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-270	44	--	--	--	--	--	--	--	--	--	--	--	--
		R-271	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-272	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-273	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-274	**70**	--	--	--	--	--	--	--	--	--	--	--	--
		R-275	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-276	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-277	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-278	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-279	62	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.K Additional Sound Barrier Modeling within Right of Way for Alternative 2, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-280	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-281	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-282	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-283	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-284	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-285	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-286	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-287	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-288	63	--	--	--	--	--	--	--	--	--	--	--	--
1-11**		R-289	48	48	0	48	0	48	0	48	0	48	0	NP	NP
		R-290	**72**	**72**	0	**72**	0	**72**	0	**72**	0	**72**	0	NP	NP
		R-291	62	--	--	--	--	--	--	--	--	--	--	--	--

Source: *Noise Impact Analysis* (LSA Associates, Inc., August 2008).

[1] Refer to Figure 2.15.1 for existing wall heights.

[2] I.L.: Insertion Loss.

[3] Numbers in **bold** represent noise levels that approach or exceed the NAC.

[4] No alternative sound barriers were evaluated for this receptor.

[5] NP = Not Permitted. Sound barriers within 15 ft of the nearest travel lane are not permitted to exceed 14 ft in height.

[6] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

* Wall along edge of shoulder

** Wall along right of way

*** Wall along residential property line

ft = feet

dBA = A-weighted decibels

dBA L_{eq}(h) = A-weighted noise level

SB = Sound barrier

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-1*		R-1	**76**[3]	**69**[4]	7	**68**	8	**66**	10	65	11	64	12	NP[5]	NP
		R-2	56	--[6]	--	--	--	--	--	--	--	--	--	--	--
		R-3	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-4	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-5	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-6	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-7	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-8	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-9	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-10	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-11	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-12	65	--	--	--	--	--	--	--	--	--	--	--	--
3-2**		R-13	**67**	61	6	60	7	60	7	59	8	59	8	59	8
3-3**		R-14	**69**	65	4	63	6	62	7	60	9	60	9	59	10
3-4**		R-15	**73**	--[7]	--	**67**	6	65	8	63	10	62	11	61	12
	1**	R-16	**72**	--	--	**68**	4	65	7	64	8	63	9	62	10
		R-17	**71**	--	--	**68**	3	**66**	5	64	7	63	8	62	9
	2**	R-18	**71**	--	--	**67**	4	65	6	63	8	62	9	61	10
	1**	R-19	**66**	--	--	64	2	65	1	64	2	63	3	62	4
		R-20	**66**	--	--	65	1	64	2	63	3	62	4	62	4
	2**	R-21	**69**	--	--	**67**	2	64	5	63	6	62	7	62	7
	1**	R-22	64	--	--	62	2	61	3	61	3	60	4	60	4
3-5**	3**	R-23	**74**	--	--	**72**	2	**71**	3	**69**	5	**68**	6	**67**	7
		R-24	**73**	--	--	**72**	1	**71**	2	**69**	4	**68**	5	**67**	6
		R-25	**73**	--	--	**72**	1	**71**	2	**69**	4	**68**	5	**67**	6
		R-26	**71**	--	--	**70**	1	**68**	3	**67**	4	**66**	5	**66**	5
		R-27	**66**	--	--	**66**	0	65	1	64	2	64	2	64	2
		R-28	**67**	--	--	**66**	1	**66**	1	**66**	1	65	2	64	3
		R-29	65	--	--	65	0	64	1	64	1	63	2	63	2
	4**	R-30	**70**	--	--	--	--	**68**	2	**67**	3	**66**	4	65	5
		R-31	**70**	--	--	--	--	**68**	2	**67**	3	**66**	4	64	6
		R-32	**70**	--	--	--	--	**68**	2	**67**	3	65	5	64	6
		R-33	65	--	--	--	--	64	1	64	1	65	0	64	1
		R-34	63	--	--	--	--	63	0	63	0	63	0	63	0

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-5**	4**	R-35	**72**	**--**	--	--	--	**72**	0	**72**	0	**72**	0	**72**	0
3-6**	5**	R-36	**69**	--	--	--	--	--	--	**67**	2	**66**	3	65	4
		R-37	**71**	--	--	--	--	--	--	**68**	3	**67**	4	65	6
		R-38	**67**	--	--	--	--	--	--	**67**	0	**67**	0	**67**	0
		R-39	**70**	--	--	--	--	--	--	**70**	0	**70**	0	**70**	0
		R-40	**68**	NF[8]	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
3-7**		R-41	**66**	59	7	58	8	58	8	58	8	58	8	58	8
		R-42	59	--	--	--	--	--	--	--	--	--	--	--	--
3-8**		R-43	**70**	**66**	4	**66**	4	**66**	4	65	5	65	5	65	5
		R-44	**76**	**70**	6	**68**	8	**66**	10	65	11	65	11	64	12
3-9**	7**	R-45	64	63	1	63	1	62	2	62	2	61	3	61	3
3-8**		R-46	56	56	0	56	0	56	0	56	0	56	0	56	0
	6**	R-47	57	57	0	57	0	57	0	57	0	57	0	57	0
		R-48	58	58	0	58	0	58	0	58	0	58	0	58	0
3-9**	7**	R-49	65	65	0	65	0	65	0	65	0	64	1	64	1
		R-50	**67**	65	2	64	3	63	4	62	5	62	5	61	6
		R-51	**70**	**68**	2	**66**	4	65	5	64	6	62	8	61	9
		R-52	**71**	**68**	3	65	6	63	8	61	10	60	11	59	12
		R-53	**74**	**74**	0	**74**	0	**74**	0	**73**	1	65	9	62	12
		R-54	**68**	63	5	60	8	58	10	57	11	56	12	56	12
		R-55	61	61	0	61	0	61	0	61	0	61	0	61	0
		R-56	63	63	0	63	0	62	1	62	1	61	2	61	2
		R-57	**67**	**67**	0	**66**	1	64	3	63	4	62	5	61	6
		R-58	62	61	1	59	3	58	4	58	4	57	5	56	6
		R-59	59	59	0	59	0	59	0	59	0	59	0	59	0
	8**	R-60	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-61	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-62	57	--	--	--	--	--	--	--	--	--	--	--	--
	10**	R-63	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-64	57	--	--	--	--	--	--	--	--	--	--	--	--
	9**	R-65	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-66	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-67	59	--	--	--	--	--	--	--	--	--	--	--	--
	11**	R-68	59	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	11**	R-69	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-70	57	--	--	--	--	--	--	--	--	--	--	--	--
	10**	R-71	58	--	--	--	--	--	--	--	--	--	--	--	--
	9**	R-72	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-73	60	--	--	--	--	--	--	--	--	--	--	--	--
	11**	R-74	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-75	50	--	--	--	--	--	--	--	--	--	--	--	--
		R-76	49	--	--	--	--	--	--	--	--	--	--	--	--
	10**	R-77	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-78	56	--	--	--	--	--	--	--	--	--	--	--	--
	9**	R-79	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-80	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-81	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-82	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-83	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-84	65	--	--	--	--	--	--	--	--	--	--	--	--
2-1**		R-85	**69**	63	6	61	8	60	9	59	10	58	11	58	11
		R-86	**70**	65	5	62	8	60	10	59	11	58	12	58	12
		R-87	**69**	61	8	60	9	59	10	58	11	57	12	57	12
		R-88	62	62	0	62	0	62	0	62	0	62	0	61	1
		R-89	59	59	0	59	0	59	0	59	0	59	0	59	0
2-2**		R-90	65	60	5	59	6	58	7	58	7	57	8	57	8
		R-91	**67**	62	5	61	6	60	7	59	8	59	8	59	8
		R-92	**68**	63	5	61	7	61	7	60	8	59	9	59	9
		R-93	48	48	0	48	0	48	0	48	0	48	0	48	0
		R-94	48	48	0	48	0	48	0	48	0	48	0	48	0
		R-95	50	50	0	50	0	50	0	50	0	50	0	50	0
2-3**		R-96	**68**	63	5	61	7	60	8	59	9	59	9	58	10
		R-97	64	61	3	61	3	60	4	60	4	60	4	59	5
		R-98	62	60	2	59	3	58	4	58	4	57	5	57	5
		R-99	53	53	0	53	0	53	0	53	0	53	0	53	0
2-4**		R-100	**74**	**67**	7	64	10	61	13	60	14	59	15	59	15
		R-101	**71**	64	7	63	8	62	9	61	10	60	11	60	11
		R-102	**71**	65	6	63	8	61	10	60	11	60	11	59	12

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
2-4**		R-103	41	41	0	41	0	41	0	41	0	41	0	41	0
		R-104	64	59	5	58	6	57	7	56	8	56	8	55	9
		R-105	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-106	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-107	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-108	56	--	--	--	--	--	--	--	--	--	--	--	--
	12**	R-109	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-110	58	--	--	--	--	--	--	--	--	--	--	--	--
	13**	R-111	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-112	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-113	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-114	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-115	62	--	--	--	--	--	--	--	--	--	--	--	--
2-5*		R-116	**66**	64	2	64	2	64	2	63	3	63	3	NP	NP
		R-117	62	62	0	61	1	61	1	61	1	61	1	NP	NP
		R-118	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-119	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-120	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-121	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-122	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-123	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-124	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-125	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-126	56	--	--	--	--	--	--	--	--	--	--	--	--
2-6**		R-127	**68**	62	6	61	7	59	9	58	10	57	11	57	11
		R-128	59	--	--	--	--	--	--	--	--	--	--	--	--
2-7**	14**	R-129	**68**	--	--	**68**	0	**68**	0	**68**	0	**67**	1	**67**	1
		R-130	63	--	--	--	--	--	--	--	--	--	--	--	--
	15**	R-131	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-132	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-133	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-134	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-135	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-136	55	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-137	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-138	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-139	56	--	--	--	--	--	--	--	--	--	--	--	--
1-1**		R-140	**66**	62	4	62	4	62	4	62	4	62	4	62	4
		R-141	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-142	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-143	55	--	--	--	--	--	--	--	--	--	--	--	--
1-1**		R-144	57	55	2	55	2	55	2	55	2	55	2	55	2
1-2**	18**	R-145	**72**	**67**	5	**66**	6	64	8	63	9	62	10	61	11
	17**	R-146	**73**	**67**	6	65	8	64	9	62	11	61	12	60	13
1-3**		R-147	**72**	64	8	63	9	61	11	60	12	59	13	59	13
		R-148	**69**	65	4	64	5	64	5	64	5	63	6	63	6
		R-149	**69**	**69**	0	**69**	0	**69**	0	**69**	0	**69**	0	**69**	0
		R-150	64	64	0	64	0	64	0	64	0	64	0	64	0
		R-151	61	61	0	61	0	61	0	61	0	61	0	61	0
1-4**		R-152	**70**	66	4	65	5	64	6	64	6	63	7	63	7
		R-153	**66**	64	2	64	2	63	3	63	3	63	3	63	3
		R-154	64	60	4	60	4	60	4	60	4	59	5	59	5
		R-155	**67**	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0
		R-156	61	61	0	61	0	61	0	61	0	61	0	61	0
		R-157	59	59	0	59	0	59	0	59	0	59	0	59	0
		R-158	60	60	0	60	0	60	0	60	0	60	0	60	0
		R-159	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-160	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-161	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-162	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-163	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-164	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-165	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-166	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-167	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-168	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-169	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-170	51	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-171	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-172	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-173	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-174	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-175	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-176	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-177	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-178	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-179	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-180	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-181	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-182	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-183	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-184	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-185	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-186	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-187	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-188	63	--	--	--	--	--	--	--	--	--	--	--	--
1-5*		R-189	**74**	--	--	--	--	--	--	--	--	**72**	2	NP	NP
1-5*		R-190	**70**	--	--	--	--	--	--	--	--	**69**	1	NP	NP
	16*	R-191	**68**	--	--	--	--	--	--	--	--	**67**	1	NP	NP
		R-192	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-193	55	--	--	--	--	--	--	--	--	--	--	--	--
1-5*		R-194	65	--	--	--	--	--	--	--	--	65	0	NP	NP
1-5*		R-195	61	--	--	--	--	--	--	--	--	59	2	NP	NP
1-5*		R-196	61	--	--	--	--	--	--	--	--	61	0	NP	NP
		R-197	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-198	54	--	--	--	--	--	--	--	--	--	--	--	--
1-5*		R-199	63	--	--	--	--	--	--	--	--	60	3	NP	NP
1-5*		R-200	59	--	--	--	--	--	--	--	--	59	0	NP	NP
1-5*		R-201	60	--	--	--	--	--	--	--	--	60	0	NP	NP
1-5*		R-202	66	--	--	--	--	--	--	--	--	64	2	NP	NP
1-5*		R-203	59	--	--	--	--	--	--	--	--	59	0	NP	NP
1-5*		R-204	58	--	--	--	--	--	--	--	--	58	0	NP	NP

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
1-5*	16*	R-205	58									58	0	NP	NP
		R-206	55	--	--	--	--	--	--	--	--	55	0	NP	NP
		R-207	57	--	--	--	--	--	--	--	--	57	0	NP	NP
		R-208	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-209	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-210	59	--	--	--	--	--	--	--	--	59	0	NP	NP
		R-211	56	--	--	--	--	--	--	--	--	56	0	NP	NP
		R-212	54	--	--	--	--	--	--	--	--	54	0	NP	NP
		R-213	54	--	--	--	--	--	--	--	--	54	0	NP	NP
		R-214	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-215	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-216	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-217	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-218	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-219	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-220	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-221	59	--	--	--	--	--	--	--	--	--	--	--	--
1-6**		R-222	**68**	63	5	62	6	61	7	60	8	59	9	58	10
		R-223	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-224	64	--	--	--	--	--	--	--	--	--	--	--	--
1-7**		R-225	**67**	62	5	62	5	61	6	61	6	61	6	60	7
		R-226	**66**	62	4	62	4	61	5	61	5	61	5	60	6
		R-227	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-228	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-229	60	--	--	--	--	--	--	--	--	--	--	--	--
	19**	R-230	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-231	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-232	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-233	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-234	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-235	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-236	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-237	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-238	53	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-239	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-240	52	--	--	--	--	--	--	--	--	--	--	--	--
	19**	R-241	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-242	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-243	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-244	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-245	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-246	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-247	52	--	--	--	--	--	--	--	--	--	--	--	--
	20**	R-248	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-249	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-250	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-251	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-252	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-253	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-254	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-255	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-256	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-257	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-258	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-259	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-260	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-261	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-262	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-263	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-264	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-265	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-266	39	--	--	--	--	--	--	--	--	--	--	--	--
		R-267	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-268	41	--	--	--	--	--	--	--	--	--	--	--	--
		R-269	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-270	44	--	--	--	--	--	--	--	--	--	--	--	--
		R-271	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-272	50	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.L Sound Barrier Modeling for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
1-8*		R-273	**66**	65	1	65	1	65	1	65	1	64	2	NP	NP
		R-274	**70**	**70**	0	**69**	1	**69**	1	**69**	1	**68**	2	NP	NP
		R-275	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-276	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-277	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-278	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-279	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-280	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-281	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-282	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-283	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-284	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-285	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-286	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-287	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-288	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-289	49	--	--	--	--	--	--	--	--	--	--	--	--
1-9**		R-290	**73**	64	9	63	10	63	10	63	10	62	11	62	11
		R-291	62	--	--	--	--	--	--	--	--	--	--	--	--

Source*: Noise Impact Analysis* (LSA Associates, Inc., August 2008).

[1] Refer to Figure 2.15.1 for existing wall height.

[2] I.L.: Insertion Loss.

[3] Numbers in **bold** represent noise levels that approach or exceed the Noise Abatement Criteria (NAC).

[4] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

[5] NP = Not Permitted. Sound barriers within 15 ft of the nearest travel lane are not permitted to exceed 14 ft in height.

[6] No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

[7] Shaded areas represent existing walls and their approximate height. Refer to Figure 2.15.1 for the existing wall height.

[8] NF = Not Feasible. As Receptor R-40 has driveway access onto The Old Road, it is not feasible to abate traffic noise levels along the residential property line.

* Wall along edge of shoulder

** Wall along residential property line

ft = feet dBA = A-weighted decibels dBA $L_{eq}(h)$ = A-weighted noise level SB = Sound barrier

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-1	**76**[3]	--[4]	--	--	--	--	--	--	--	--	--	--	--
3-10**		R-2	56	56	0	56	0	56	0	55	1	55	1	NP[5]	NP
		R-3	58	58	0	58	0	58	0	58	0	57	1	NP	NP
		R-4	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-5	65	65	0	65	0	65	0	65	0	64	1	NP	NP
		R-6	64	64	0	64	0	64	0	64	0	63	1	NP	NP
		R-7	56	56	0	56	0	56	0	56	0	56	0	NP	NP
		R-8	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-9	59	59	0	59	0	59	0	58	1	57	2	NP	NP
		R-10	64	64	0	64	0	64	0	63	1	62	2	NP	NP
		R-11	64	64	0	64	0	64	0	63	1	63	1	NP	NP
		R-12	65	64	1	64	1	64	1	64	1	63	2	NP	NP
		R-13	**67**	**67**	0	**67**	0	**66**	1	**66**	1	**66**	1	NP	NP
		R-14	**69**	**69**	0	**69**	0	**69**	0	**69**	0	**69**	0	NP	NP
3-11**	1***	R-15	**73**	**72**	1	**72**	1	**71**	2	**71**	2	**69**	4	NP	NP
		R-16	**72**	**70**	2	**69**	3	**68**	4	**67**[6]	5	**66**	6	NP	NP
		R-17	**71**	**68**	3	**68**	3	**67**	4	**66**	5	64	7	NP	NP
	2***	R-18	**71**	**68**	3	**68**	3	**67**	4	65	6	63	8	NP	NP
	1***	R-19	**66**	**66**	0	65	1	64	2	64	2	63	3	NP	NP
		R-20	**66**	65	1	65	1	64	2	63	3	62	4	NP	NP
	2***	R-21	**69**	**67**	2	**67**	2	**66**	3	64	5	62	7	NP	NP
	1***	R-22	64	64	0	63	1	63	1	62	2	62	2	NP	NP
	3***	R-23	**74**	**72**	2	**71**	3	**70**	4	**69**	5	**67**	7	NP	NP
		R-24	**73**	**72**	1	**71**	2	**70**	3	**69**	4	**68**	5	NP	NP
		R-25	**73**	**73**	0	**72**	1	**71**	2	**70**	3	**69**	4	NP	NP
		R-26	**71**	**69**	2	**69**	2	**69**	2	**68**	3	**67**	4	NP	NP
		R-27	**66**	**66**	0	65	1	65	1	64	2	64	2	NP	NP
		R-28	**67**	**67**	0	**67**	0	**66**	1	**66**	1	**66**	1	NP	NP
		R-29	65	65	0	65	0	64	1	63	2	63	2	NP	NP
	4***	R-30	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	NP	NP
		R-31	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	NP	NP
		R-32	**70**	**69**	1	**69**	1	**68**	2	**68**	2	**67**	3	NP	NP
		R-33	65	65	0	65	0	65	0	64	1	64	1	NP	NP

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-11**	4***	R-34	63	63	0	63	0	63	0	63	0	62	1	NP	NP
		R-35	**72**	**71**	1	**69**	3	**68**	4	**68**	4	**67**	5	NP	NP
	5***	R-36	**69**	**69**	0	**69**	0	**68**	1	**67**	2	**66**	3	NP	NP
		R-37	**71**	**71**	0	**70**	1	**70**	1	**69**	2	**68**	3	NP	NP
		R-38	**67**	**67**	0	**66**	1	65	2	65	2	64	3	NP	NP
		R-39	**70**	**70**	0	**69**	1	**68**	2	**67**	3	**66**	4	NP	NP
		R-40	**68**	**67**	1	65	3	64	4	63	5	62	6	NP	NP
		R-41	**66**	**66**	0	**66**	0	**66**	0	**66**	0	**66**	0	NP	NP
		R-42	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-43	**70**	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0	NP	NP
		R-44	**76**	**76**	0	**76**	0	**76**	0	**76**	0	**75**	1	NP	NP
	7***	R-45	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-46	56	56	0	56	0	56	0	56	0	56	0	NP	NP
	6***	R-47	57	57	0	57	0	57	0	57	0	57	0	NP	NP
		R-48	58	58	0	58	0	58	0	58	0	57	1	NP	NP
	7***	R-49	65	65	0	65	0	65	0	65	0	65	0	NP	NP
		R-50	**67**	**67**	0	**67**	0	**66**	1	**66**	1	**66**	1	NP	NP
		R-51	**70**	**70**	0	**70**	0	**69**	1	**69**	1	**69**	1	NP	NP
		R-52	**71**	**70**	1	**70**	1	**69**	2	**68**	3	**67**	4	NP	NP
		R-53	**74**	**73**	1	**72**	2	**72**	2	**70**	4	**69**	5	NP	NP
		R-54	**68**	**67**	1	**66**	2	**66**	2	**66**	2	**66**	2	NP	NP
		R-55	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-56	63	63	0	63	0	62	1	62	1	61	2	NP	NP
		R-57	**67**	**67**	0	**66**	1	**66**	1	66	1	64	3	NP	NP
		R-58	62	62	0	61	1	61	1	61	1	61	1	NP	NP
		R-59	59	59	0	59	0	59	0	59	0	58	1	NP	NP
	8***	R-60	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-61	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-62	57	--	--	--	--	--	--	--	--	--	--	--	--
	10***	R-63	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-64	57	--	--	--	--	--	--	--	--	--	--	--	--
	9***	R-65	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-66	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-67	59	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	11***	R-68	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-69	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-70	57	--	--	--	--	--	--	--	--	--	--	--	--
	10***	R-71	58	--	--	--	--	--	--	--	--	--	--	--	--
	9***	R-72	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-73	60	--	--	--	--	--	--	--	--	--	--	--	--
	11***	R-74	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-75	50	--	--	--	--	--	--	--	--	--	--	--	--
		R-76	49	--	--	--	--	--	--	--	--	--	--	--	--
	10***	R-77	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-78	56	--	--	--	--	--	--	--	--	--	--	--	--
	9***	R-79	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-80	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-81	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-82	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-83	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-84	65	--	--	--	--	--	--	--	--	--	--	--	--
2-8**		R-85	**69**	**69**	0	**68**	1	**68**	1	**67**	2	**66**	3	NP	NP
		R-86	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**66**	4	NP	NP
		R-87	**69**	**69**	0	**69**	0	**69**	0	**68**	1	**67**	2	NP	NP
		R-88	62	62	0	62	0	62	0	62	0	61	1	NP	NP
		R-89	59	59	0	58	1	58	1	58	1	57	2	NP	NP
		R-90	65	65	0	65	0	65	0	65	0	64	1	NP	NP
		R-91	**67**	**67**	0	**67**	0	**67**	0	**66**	1	65	2	NP	NP
		R-92	**68**	**68**	0	**68**	0	**68**	0	**66**	2	65	3	NP	NP
		R-93	48	48	0	48	0	48	0	48	0	48	0	NP	NP
		R-94	48	48	0	48	0	48	0	48	0	48	0	NP	NP
		R-95	50	50	0	50	0	50	0	50	0	50	0	NP	NP
		R-96	**68**	**68**	0	**68**	0	**67**	1	**66**	2	65	3	NP	NP
		R-97	64	64	0	64	0	64	0	64	0	62	2	NP	NP
		R-98	62	62	0	62	0	62	0	62	0	60	2	NP	NP
		R-99	53	53	0	53	0	53	0	53	0	53	0	NP	NP
		R-100	**74**	**74**	0	**73**	1	**73**	1	**72**	2	**72**	2	NP	NP
		R-101	**71**	**71**	0	**71**	0	**70**	1	**70**	1	**68**	3	NP	NP
		R-102	**71**	**71**	0	**70**	1	**70**	1	**69**	2	**68**	3	NP	NP

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-103	41	--	--	--	--	--	--	--	--	--	--	--	--
		R-104	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-105	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-106	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-107	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-108	56	--	--	--	--	--	--	--	--	--	--	--	--
	12***	R-109	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-110	58	--	--	--	--	--	--	--	--	--	--	--	--
	13***	R-111	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-112	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-113	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-114	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-115	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-116	**66**	--	--	--	--	--	--	--	--	--	--	--	--
		R-117	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-118	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-119	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-120	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-121	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-122	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-123	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-124	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-125	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-126	56	--	--	--	--	--	--	--	--	--	--	--	--
2-9**		R-127	**68**	**67**	1	**67**	1	**66**	2	65	3	64	4	NP	NP
		R-128	59	59	0	59	0	59	0	59	0	59	0	NP	NP
	14***	R-129	**68**	**68**	0	**68**	0	**68**	0	**68**	0	**67**	1	NP	NP
		R-130	63	63	0	63	0	63	0	63	0	63	0	NP	NP
	15***	R-131	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-132	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-133	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-134	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-135	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-136	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-137	56	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-138	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-139	56	--	--	--	--	--	--	--	--	--	--	--	--
1-10**		R-140	**66**	64	2	64	2	64	2	63	3	62	4	NP	NP
		R-141	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-142	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-143	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-144	57	56	1	55	2	55	2	54	3	54	3	NP	NP
	18***	R-145	**72**	**72**	0	**72**	0	**72**	0	**71**	1	**69**	3	NP	NP
	17***	R-146	**73**	**73**	0	**72**	1	**70**	3	**69**	4	**67**	6	NP	NP
		R-147	**72**	**72**	0	**72**	0	**72**	0	**72**	0	**71**	1	NP	NP
		R-148	**69**	**69**	0	**69**	0	**69**	0	**68**	1	**67**	2	NP	NP
		R-149	**69**	**69**	0	**69**	0	**69**	0	**68**	1	**68**	1	NP	NP
		R-150	64	64	0	64	0	64	0	63	1	63	1	NP	NP
		R-151	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-152	**70**	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0	NP	NP
		R-153	**66**	**66**	0	**66**	0	**66**	0	**66**	0	**66**	0	NP	NP
		R-154	64	64	0	64	0	64	0	64	0	64	0	NP	NP
		R-155	**67**	**67**	0	**67**	0	**67**	0	**67**	0	**66**	1	NP	NP
1-10**		R-156	61	61	0	61	0	61	0	61	0	61	0	NP	NP
		R-157	59	59	0	59	0	59	0	59	0	59	0	NP	NP
		R-158	60	60	0	60	0	60	0	60	0	60	0	NP	NP
		R-159	64	62	2	62	2	62	2	62	2	62	2	NP	NP
		R-160	64	62	2	62	2	62	2	62	2	62	2	NP	NP
		R-161	63	62	1	62	1	62	1	62	1	61	2	NP	NP
		R-162	62	61	1	61	1	61	1	61	1	61	1	NP	NP
		R-163	59	59	0	59	0	58	1	58	1	58	1	NP	NP
		R-164	56	56	0	56	0	56	0	56	0	56	0	NP	NP
		R-165	59	57	2	57	2	57	2	57	2	57	2	NP	NP
		R-166	53	53	0	53	0	53	0	53	0	53	0	NP	NP
		R-167	52	52	0	52	0	52	0	52	0	52	0	NP	NP
		R-168	51	51	0	51	0	51	0	51	0	51	0	NP	NP
		R-169	49	49	0	49	0	49	0	49	0	49	0	NP	NP

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SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
1-10**		R-170	51	51	0	51	0	51	0	51	0	51	0	NP	NP
		R-171	64	63	1	61	3	60	4	60	4	58	6	NP	NP
		R-172	62	62	0	61	1	61	1	60	2	59	3	NP	NP
		R-173	63	63	0	62	1	61	2	61	2	60	3	NP	NP
		R-174	62	62	0	61	1	60	2	60	2	59	3	NP	NP
		R-175	60	60	0	60	0	59	1	59	1	58	2	NP	NP
		R-176	55	55	0	55	0	55	0	54	1	54	1	NP	NP
		R-177	54	54	0	54	0	54	0	53	1	53	1	NP	NP
		R-178	64	--	--	--	--	--	--	--	--	--	--	--	--
	16*	R-179	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-180	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-181	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-182	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-183	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-184	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-185	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-186	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-187	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-188	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-189	**74**	--	--	--	--	--	--	--	--	--	--	--	--
		R-190	**70**	--	--	--	--	--	--	--	--	--	--	--	--
		R-191	**68**	--	--	--	--	--	--	--	--	--	--	--	--
		R-192	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-193	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-194	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-195	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-196	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-197	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-198	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-199	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-200	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-201	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-202	66	--	--	--	--	--	--	--	--	--	--	--	--
		R-203	59	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	16*	R-204	58	--		--	--	--	--	--	--	--	--	--	--
		R-205	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-206	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-207	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-208	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-209	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-210	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-211	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-212	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-213	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-214	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-215	58	--	--	--	--	--	--	--	--	--	--	--	--
		R-216	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-217	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-218	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-219	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-220	59	--	--	--	--	--	--	--	--	--	--	--	--
		R-221	59	--	--	--	--	--	--	--	--	--	--	--	--
1-10**		R-222	**68**	64	4	63	5	63	5	62	6	60	8	NP	NP
		R-223	62	60	2	59	3	59	3	59	3	58	4	NP	NP
		R-224	64	62	2	61	3	61	3	60	4	59	5	NP	NP
		R-225	**67**	65	2	65	2	64	3	63	4	63	4	NP	NP
		R-226	**66**	**66**	0	65	1	64	2	64	2	63	3	NP	NP
		R-227	59	57	2	57	2	57	2	57	2	56	3	NP	NP
		R-228	57	57	0	57	0	56	1	56	1	56	1	NP	NP
		R-229	60	59	1	59	1	59	1	59	1	59	1	NP	NP
	19***	R-230	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-231	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-232	65	--	--	--	--	--	--	--	--	--	--	--	--
		R-233	63	--	--	--	--	--	--	--	--	--	--	--	--
		R-234	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-235	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-236	54	--	--	--	--	--	--	--	--	--	--	--	--
		R-237	59	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	19***	R-238	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-239	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-240	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-241	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-242	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-243	57	--	--	--	--	--	--	--	--	--	--	--	--
	20***	R-244	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-245	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-246	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-247	52	--	--	--	--	--	--	--	--	--	--	--	--
		R-248	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-249	51	--	--	--	--	--	--	--	--	--	--	--	--
		R-250	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-251	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-252	53	--	--	--	--	--	--	--	--	--	--	--	--
		R-253	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-254	57	--	--	--	--	--	--	--	--	--	--	--	--
		R-255	62	--	--	--	--	--	--	--	--	--	--	--	--
		R-256	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-257	55	--	--	--	--	--	--	--	--	--	--	--	--
		R-258	56	--	--	--	--	--	--	--	--	--	--	--	--
		R-259	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-260	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-261	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-262	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-263	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-264	48	--	--	--	--	--	--	--	--	--	--	--	--
		R-265	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-266	39	--	--	--	--	--	--	--	--	--	--	--	--
		R-267	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-268	41	--	--	--	--	--	--	--	--	--	--	--	--
		R-269	49	--	--	--	--	--	--	--	--	--	--	--	--
		R-270	44	--	--	--	--	--	--	--	--	--	--	--	--
		R-271	47	--	--	--	--	--	--	--	--	--	--	--	--
		R-272	50	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.15.M Additional Sound Barrier Modeling within Right of Way for Alternative 3, dBA L_{eq}(h)

SB No.	Existing Wall No.[1]	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-273	66	--	--	--	--	--	--	--	--	--	--	--	--
		R-274	70	--	--	--	--	--	--	--	--	--	--	--	--
		R-275	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-276	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-277	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-278	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-279	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-280	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-281	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-282	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-283	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-284	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-285	61	--	--	--	--	--	--	--	--	--	--	--	--
		R-286	60	--	--	--	--	--	--	--	--	--	--	--	--
		R-287	64	--	--	--	--	--	--	--	--	--	--	--	--
		R-288	64	--	--	--	--	--	--	--	--	--	--	--	--
1-11**		R-289	49	49	0	49	0	49	0	49	0	48	1	NP	NP
		R-290	**73**	**73**	0	**73**	0	**73**	0	**73**	0	**73**	0	NP	NP
		R-291	62	--	--	--	--	--	--	--	--	--	--	--	--

Source*: Noise Impact Analysis* (LSA Associates, Inc., August 2008).

[1] Refer to Figure 2.15.1 for existing wall height.

[2] I.L.: Insertion Loss.

[3] Numbers in **bold** represent noise levels that approach or exceed the NAC.

[4] No alternative sound barriers were evaluated for this receptor.

[5] NP = Not Permitted. Sound barriers within 15 ft of the nearest travel lane are not permitted to exceed 14 ft in height.

[6] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

* Wall along edge of shoulder

** Wall along right of way

*** Wall along residential property line

dBA = A-weighted decibels dBA L_{eq}(h) = A-weighted noise level ft = feet SB = Sound barrier

Table 2.15.N Sound Barrier Modeling within ~~ROW~~Right of Way for Alternative 2, dBA L_{eq}

SB No.	Existing Wall No.	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-118	**67**[2]	65	2	64	3	62[3]	5	62	5	61	6	61	6
		R-119	**67**	**66**	1	65	2	63	4	63	4	62	5	62	5
		R-120	**67**	**66**	1	**66**	1	64	3	63	4	63	4	63	4
2-5*		R-121	**67**	**66**	1	**66**	1	65	2	65	2	64	3	64	3
		R-122	64	63	1	63	1	61	3	60	4	60	4	60	4
		R-123	65	64	1	64	1	62	3	61	4	61	4	60	5
		R-124	63	62	1	62	1	61	2	60	3	59	4	59	4
		R-125	**66**	64	2	64	2	63	3	62	4	61	5	61	5
		R-127	**68**	**67**	1	**66**	2	65	3	64	4	63	5	61	7
		R-128	60	58	2	58	2	58	2	57	3	57	3	57	3
	14***	R-129	**74**	**73**	1	**73**	1	**72**	2	**72**	2	**71**	3	**71**	3
		R-130	65	64	1	64	1	63	2	63	2	62	3	62	3
	15***	R-131	61	61	0	60	1	60	1	60	1	60	1	59	2
		R-132	62	62	0	61	1	61	1	61	1	61	1	61	1
	14***	R-292	**69**	**68**	1	**68**	1	**68**	1	**68**	1	**67**	2	**66**	3
		R-293	**67**	**66**	1	**66**	1	**66**	1	65	2	65	2	64	3
		R-294	65	65	0	65	0	64	1	64	1	63	2	63	2
		R-295	62	62	0	62	0	61	1	61	1	61	1	61	1
		R-296	**70**	**68**	2	**67**	3	**66**	4	**66**	4	65	5	63	7
		R-297	**67**	65	2	64	3	64	3	63	4	62	5	61	6
		R-298	64	63	1	62	2	61	3	61	3	60	4	59	5
		R-299	62	60	2	60	2	59	3	59	3	58	4	58	4
2-9*		R-300	**68**	**66**	2	**66**	2	65	3	64	4	63	5	63	5
		R-301	65	64	1	64	1	63	2	63	2	62	3	62	3
		R-302	64	63	1	62	2	62	2	62	2	61	3	61	3
		R-303	63	62	1	62	1	61	2	61	2	61	2	61	2
		R-304	62	61	1	61	1	61	1	60	2	60	2	60	2
		R-305	63	62	1	62	1	61	2	61	2	61	2	61	2
		R-306	62	61	1	61	1	61	1	61	1	61	1	61	1
		R-307	63	63	0	63	0	62	1	62	1	62	1	62	1
		R-308	64	63	1	63	1	63	1	63	1	63	1	63	1

Table 2.15.N Sound Barrier Modeling within ROWRight of Way for Alternative 2, dBA L_{eq}

SB No.	Existing Wall No.	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-309	63	62	1	62	1	62	1	62	1	62	1	62	1
		R-310	58	57	1	57	1	56	2	56	2	56	2	56	2
		R-311	62	61	1	61	1	61	1	61	1	60	2	60	2
2-5*		R-312	**69**	**67**	2	**67**	2	65	4	64	5	64	5	64	5

Source: LSA Associates, Inc., June 2009.

[1] I.L.: Insertion Loss.

[2] Numbers in bold represent noise levels that approach or exceed the NAC.

[3] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

* Wall along edge of shoulder

** Wall along right of way

*** Wall along residential property line

dBA = A-weighted decibels

dBA L_{eq}= A-weighted noise level

ft = feet

NAC = Noise Abatement Criteria

SB = sound barrier

Table 2.15.O Alternative 2 Sound Barrier Modeling for SB Nos. 3-11A (2,431 ft) and 3-11B (1,048 ft)

SB No.	Existing Wall No.	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-11a*	1**	R-15	**73**[2]	**72**	1	**72**	1	**71**	2	**71**	2	**69**	4	**68**[3]	5
		R-16	**71**	**70**	1	**69**	2	**68**	3	**67**	4	**66**	5	**66**	5
		R-17	**71**	**68**	3	**67**	4	**67**	4	65	6	64	7	64	7
	2**	R-18	**70**	**67**	3	**67**	3	**66**	4	65	5	63	7	62	8
	1**	R-19	**66**	**66**	0	65	1	65	1	64	2	63	3	63	3
		R-20	**66**	65	1	65	1	64	2	63	3	62	4	61	5
	2**	R-21	**69**	**67**	2	**67**	2	**66**	3	63	6	62	7	61	8
	1**	R-22	64	64	0	64	0	63	1	63	1	62	2	62	2
	3**	R-23	**73**	**72**	1	**70**	3	**69**	4	**68**	5	**67**	6	**66**	7
		R-24	**73**	**72**	1	**71**	2	**70**	3	**69**	4	**68**	5	**66**	7
		R-25	**73**	**73**	0	**72**	1	**71**	2	**69**	4	**69**	4	**66**	7
		R-26	**71**	**69**	2	**69**	2	**69**	2	**68**	3	**66**	5	65	6
		R-27	**66**	**66**	0	**65**	1	65	1	65	1	62	4	62	4
		R-28	**67**	**67**	0	**67**	0	**66**	1	**66**	1	65	2	63	4
		R-29	65	65	0	65	0	64	1	63	2	63	2	61	4
	4**	R-30	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	**66**	4
		R-31	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	**66**	4
		R-32	**69**	**69**	0	**69**	0	**68**	1	**68**	1	**67**	2	65	4
		R-33	65	65	0	65	0	65	0	64	1	64	1	63	2
		R-34	63	63	0	63	0	63	0	63	0	62	1	61	2
		R-35	**72**	**72**	0	**70**	2	**69**	3	**68**	4	**67**	5	65	7
	5**	R-36	**69**	**69**	0	**69**	0	**68**	1	**68**	1	**66**	3	65	4
		R-37	**70**	**70**	0	**70**	0	**70**	0	**69**	1	**68**	2	**67**	3
		R-38	**67**	**67**	0	**66**	1	65	2	65	2	64	3	63	4
		R-39	**70**	**70**	0	**70**	0	**69**	1	**68**	2	**68**	2	**67**	3
		R-40	**70**	**70**	0	**68**	2	**66**	4	**66**	4	65	5	63	7
		R-41	**66**	**66**	0	**66**	0	**66**	0	**66**	0	**66**	0	**66**	0
		R-42	59	59	0	59	0	59	0	59	0	59	0	59	0
		R-43	**70**	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0
		R-44	**76**	**76**	0	**76**	0	**76**	0	**76**	0	**76**	0	**76**	0

Table 2.15.O Alternative 2 Sound Barrier Modeling for SB Nos. 3-11A (2,431 ft) and 3-11B (1,048 ft)

SB No.	Existing Wall No.	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	7**	R-45	64	64	64	64	0	64	0	64	0	64	0	64	0
		R-46	57	57	0	57	0	57	0	57	0	57	0	57	0
	6**	R-47	57	57	0	57	0	57	0	57	0	57	0	57	0
		R-48	58	58	0	58	0	58	0	58	0	58	0	58	0
	7**	R-49	65	65	0	65	0	65	0	65	0	65	0	65	0
		R-50	**67**[2]	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0
3-11b*		R-51	**71**	**71**	0	**70**	1	**70**	1	**70**	1	**70**	1	**70**	1
		R-52	**71**	**71**	0	**70**	1	**70**	1	**69**	2	**68**	3	**67**	4
		R-53	**74**	**73**	1	**72**	2	**72**	2	**70**	4	**<u>69</u>**[3]	<u>5</u>	**<u>68</u>**	<u>6</u>
		R-54	**68**	**67**	1	**67**	1	**67**	1	**67**	1	**66**	2	**66**	2
		R-55	61	61	0	61	0	61	0	61	0	61	0	61	0
		R-56	63	63	0	63	0	63	0	62	1	62	1	61	2
		R-57	65	65	0	65	0	65	0	65	0	65	2	63	4
		R-58	59	62	0	61	1	61	1	61	1	61	1	60	2
		R-59	57	57	0	57	0	57	0	57	0	57	0	59	1

Source: *Noise Study Report Addendum*, (LSA Associates, Inc., June 2009).

[1] I.L.: Insertion Loss.

[2] Numbers in bold represent noise levels that approach or exceed the NAC.

[3] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

* Wall along edge of shoulder

** Wall along residential property line

dBA = A-weighted decibels

dBA L_{eq}= A-weighted noise level

ft = feet

NAC = Noise Abatement Criteria

SB = sound barrier

Table 2.15.P Alternative 2 Sound Barrier Modeling for SB No. 3-11A (1,273 ft)

SB No.	Existing Wall No.	Rec No.	Alternative 2 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-11a*		R-15	**73**[2]	**72**	1	**72**	1	**71**	2	**71**	2	**69**	4	**68**[3]	5
	1**	R-16	**71**	**70**	1	**69**	2	**68**	3	**67**	4	**66**	5	**66**	5
		R-17	**71**	**68**	3	**67**	4	**67**	4	65	6	64	7	64	7
	2**	R-18	**70**	**67**	3	**67**	3	**66**	4	65	5	63	7	62	8
	1**	R-19	**66**	**66**	0	65	1	65	1	64	2	63	3	63	3
		R-20	**66**	65	1	65	1	64	2	63	3	62	4	61	5
	2**	R-21	**69**	**67**	2	**67**	2	**66**	3	63	6	62	7	61	8
	1**	R-22	64	64	0	64	0	63	1	63	1	62	2	62	2
		R-23	**73**	**72**	1	**70**	3	**69**	4	**68**	5	**67**	6	**66**	7
		R-24	**73**	**72**	1	**71**	2	**70**	3	**69**	4	**68**	5	**67**	6
		R-25	**73**	**73**	0	**72**	1	**71**	2	**70**	3	**70**	3	**68**	5
	3**	R-26	**71**	**69**	2	**69**	2	**69**	2	**68**	3	**66**	5	65	6
		R-27	**66**	**66**	0	65	1	65	1	65	1	63	3	62	4
		R-28	**67**	**67**	0	**67**	0	**66**	1	**66**	1	**66**	1	63	4
		R-29	65	65	0	65	0	64	1	63	2	63	2	61	4
	4**	R-30	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**68**	2	67	3

Source: *Noise Study Report Addendum*, (LSA Associates, Inc., June 2009).
[1] I.L.: Insertion Loss.
[2] Numbers in bold represent noise levels that approach or exceed the NAC.
[3] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
* Wall along edge of shoulder
** Wall along residential property line
dBA = A-weighted decibels
dBA L_{eq}= A-weighted noise level
ft = feet
NAC = Noise Abatement Criteria
SB = sound barrier

Table 2.15.Q Sound Barrier Modeling within ROWRight of Way for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-118	**67**[2]	65	2	64	3	62[3]	5	62	5	61	6	61	6
		R-119	**67**	**66**	1	65	2	63	4	63	4	62	5	62	5
		R-120	**67**	**66**	1	**66**	1	64	3	63	4	63	4	63	4
2-5*		R-121	**67**	**66**	1	**66**	1	65	2	65	2	64	3	64	3
		R-122	64	63	1	63	1	61	3	60	4	60	4	60	4
		R-123	65	64	1	64	1	62	3	61	4	60	5	60	5
		R-124	63	62	1	62	1	61	2	60	3	59	4	59	4
		R-125	**66**	64	2	64	2	63	3	62	4	61	5	61	5
		R-127	**70**	**67**	3	**66**	4	**66**	4	65	5	63	7	63	7
		R-128	61	59	2	59	2	59	2	58	3	58	3	57	4
	14***	R-129	**74**	**73**	1	**72**	2	**72**	2	**71**	3	**71**	3	**71**	3
		R-130	65	64	1	64	1	63	2	63	2	62	3	62	3
	15***	R-131	61	60	1	60	1	60	1	60	1	59	2	59	2
		R-132	63	62	1	62	1	62	1	62	1	62	1	61	2
	14***	R-292	**69**	**68**	1	**68**	1	**68**	1	**67**	2	**67**	2	**66**	3
		R-293	**67**	**66**	1	**66**	1	**66**	1	65	2	65	2	64	3
		R-294	65	65	0	65	0	64	1	64	1	63	2	63	2
		R-295	62	62	0	62	0	62	0	61	1	61	1	61	1
		R-296	**69**	**68**	1	**67**	2	**66**	3	65	4	64	5	63	6
		R-297	**67**	65	2	64	3	63	4	63	4	61	6	61	6
		R-298	64	63	1	62	2	61	3	61	3	60	4	59	5
		R-299	62	61	1	60	2	60	2	59	3	59	3	58	4
2-9*		R-300	**68**	**66**	2	**66**	2	65	3	64	4	63	5	63	5
		R-301	**66**	64	2	64	2	63	3	63	3	62	4	62	4
		R-302	65	64	1	63	2	63	2	62	3	61	4	61	4
		R-303	65	63	2	62	3	62	3	62	3	61	4	61	4
		R-304	63	62	1	61	2	61	2	61	2	60	3	60	3
		R-305	63	62	1	62	1	62	1	62	1	61	2	61	2
		R-306	63	62	1	62	1	61	2	61	2	61	2	61	2

Table 2.15.Q Sound Barrier Modeling within ~~ROW~~Right of Way for Alternative 3, dBA L_{eq}

SB No.	Existing Wall No.	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
		R-307	64	63	1	63	1	63	1	63	1	62	2	62	2
		R-308	65	64	1	64	1	63	2	63	2	63	2	63	2
		R-309	64	63	1	63	1	63	1	62	2	62	2	62	2
		R-310	58	57	1	57	1	57	1	56	2	56	2	56	2
		R-311	62	61	1	61	1	61	1	61	1	60	2	60	2
2-5*		R-312	**69**	**67**	2	**67**	2	**65**	4	64	5	64	5	64	5

Source: LSA Associates, Inc., June 2009.
[1] I.L.: Insertion Loss.
[2] Numbers in bold represent noise levels that approach or exceed the NAC.
[3] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
* Wall along edge of shoulder
** Wall along right of way
*** Wall along residential property line
dBA = A-weighted decibels
dBA L_{eq} = A-weighted noise level
ft = feet
NAC = Noise Abatement Criteria
SB = sound barrier

Table 2.15.R Alternative 3 Sound Barrier Modeling for SB Nos. 3-11A (2,700 ft) and 3-11B (944 ft)

SB No.	Existing Wall No.	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-11a*	1**	R-15	73[2]	72	1	72	1	71	2	71	2	69	4	67[3]	6
		R-16	72	70	2	69	3	68	4	67	5	66	6	65	7
		R-17	71	68	3	68	3	67	4	66	5	64	7	64	7
	2**	R-18	71	68	3	68	3	67	4	65	6	63	8	62	9
	1**	R-19	66	66	0	65	1	64	2	64	2	63	3	62	4
		R-20	66	65	1	65	1	64	2	63	3	62	4	61	5
	2**	R-21	69	67	2	67	2	66	3	64	5	62	7	61	8
	1**	R-22	64	64	0	63	1	63	1	62	2	62	2	61	3
	3**	R-23	74	72	2	71	3	70	4	69	5	67	7	65	9
		R-24	73	72	1	71	2	70	3	69	4	68	5	66	7
		R-25	73	73	0	72	1	71	2	70	3	69	4	66	7
		R-26	71	69	2	69	2	69	2	68	3	67	4	65	6
		R-27	66	66	0	65	1	65	1	64	2	64	2	62	4
		R-28	67	67	0	67	0	66	1	66	1	66	1	63	4
		R-29	65	65	0	65	0	64	1	63	2	63	2	61	4
	4**	R-30	70	70	0	69	1	69	1	68	2	67	3	66	4
		R-31	70	70	0	69	1	69	1	68	2	67	3	66	4
		R-32	70	69	1	69	1	68	2	68	2	67	3	65	5
		R-33	65	65	0	65	0	65	0	64	1	64	1	62	3
		R-34	63	63	0	63	0	63	0	63	0	62	1	61	2
		R-35	72	71	1	69	3	69	3	68	4	67	5	65	7
	5**	R-36	69	69	0	69	0	68	1	68	1	66	3	65	4
		R-37	71	71	0	70	1	70	1	69	2	68	3	67	4
		R-38	67	67	0	66	1	65	2	65	2	64	3	63	4
		R-39	70	70	0	69	1	69	1	68	2	67	3	67	3
		R-40	70	70	0	67	3	66	4	65	5	64	6	64	6
		R-41	66	66	0	66	0	66	0	66	0	66	0	66	0
		R-42	59	59	0	59	0	59	0	59	0	59	0	58	1
		R-43	70	70	0	70	0	70	0	70	0	70	0	70	0
		R-44	76	76	0	76	0	76	0	76	0	76	0	76	0

Table 2.15.R Alternative 3 Sound Barrier Modeling for SB Nos. 3-11A (2,700 ft) and 3-11B (944 ft)

SB No.	Existing Wall No.	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
	7**	R-45	64	64	0	64	0	64	0	64	0	64	0	64	0
		R-46	56	56	0	56	0	56	0	56	0	56	0	56	0
	6**	R-47	57	57	0	57	0	57	0	57	0	57	0	57	0
		R-48	58	58	0	58	0	58	0	58	0	58	0	58	0
	7**	R-49	65	65	0	65	0	65	0	65	0	65	0	64	1
		R-50	**67**[2]	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0	**67**	0
		R-51	**70**	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0	**70**	0
3-11b*		R-52	**71**	**70**	1	**70**	1	**70**	1	**68**	3	**67**	4	**67**	4
		R-53	**74**	**73**	1	**72**	2	**72**	2	**70**	4	**69**[3]	5	**68**	6
		R-54	**68**	**67**	1	**67**	1	**67**	1	**67**	1	**66**	2	**66**	2
		R-55	61	61	0	61	0	61	0	61	0	61	0	61	0
		R-56	63	63	0	63	0	63	0	62	1	62	1	61	2
		R-57	**67**	**67**	0	**66**	1	**66**	1	**66**	1	64	3	63	4
		R-58	62	62	0	61	1	61	1	61	1	61	1	60	2
		R-59	59	59	0	59	0	59	0	59	0	59	0	59	0

Source: *Noise Study Report Addendum*, (LSA Associates, Inc., June 2009).

[1] I.L.: Insertion Loss.

[2] Numbers in bold represent noise levels that approach or exceed the NAC.

[3] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

* Wall along edge of shoulder

** Wall along residential property line

dBA = A-weighted decibels

dBA L_{eq} = A-weighted noise level

ft = feet

NAC = Noise Abatement Criteria

SB = sound barrier

Table 2.15.S Alternative 3 Sound Barrier Modeling for SB No. 3-11A (1,548 ft)

SB No.	Existing Wall No.	Rec No.	Alternative 3 (w/o Barrier)	With Barrier H = 6 ft		With Barrier H = 8 ft		With Barrier H = 10 ft		With Barrier H = 12 ft		With Barrier H =14 ft		With Barrier H = 16 ft	
				L_{eq}	I.L.[1]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.
3-11a*		R-15	**73**[2]	**72**	1	**72**	1	**71**	2	**71**	2	**69**	4	**67**[3]	6
	1**	R-16	**72**	**70**	2	**69**	3	**68**	4	**67**	5	**66**	6	**66**	6
		R-17	**71**	**68**	3	**68**	3	**67**	4	**66**	5	64	7	64	7
	2**	R-18	**71**	**68**	3	**68**	3	**67**	4	65	6	63	8	62	9
	1**	R-19	**66**	**66**	0	65	1	64	2	64	2	63	3	62	4
		R-20	**66**	65	1	65	1	64	2	63	3	62	4	61	5
	2**	R-21	**69**	**67**	2	**67**	2	**66**	3	64	5	62	7	61	8
	1**	R-22	64	64	0	63	1	63	1	62	2	62	2	61	3
		R-23	**74**	**72**	2	**71**	3	**70**	4	**69**	5	**67**	7	65	9
		R-24	**73**	**72**	1	**71**	2	**70**	3	**69**	4	**68**	5	**66**	7
		R-25	**73**	**73**	0	**72**	1	**71**	2	**70**	3	**69**	4	**67**	6
	3**	R-26	**71**	**69**	2	**69**	2	**69**	2	**68**	3	**67**	4	65	6
		R-27	**66**	**66**	0	65	1	65	1	64	2	64	2	62	4
		R-28	**67**	**67**	0	**67**	0	**66**	1	**66**	1	**66**	1	63	4
		R-29	65	65	0	65	0	64	1	63	2	63	2	61	4
	4**	R-30	**70**	**70**	0	**69**	1	**69**	1	**68**	2	**67**	3	**66**	4

Source: *Noise Study Report Addendum*, (LSA Associates, Inc., June 2009).

[1] I.L.: Insertion Loss.

[2] Numbers in bold represent noise levels that approach or exceed the NAC.

[3] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

* Wall along edge of shoulder

** Wall along residential property line

dBA = A-weighted decibels

dBA L_{eq} = A-weighted noise level

ft = feet

NAC = Noise Abatement Criteria

SB = sound barrier

Appendix N Public Hearing Handouts and Public Hearing Transcript

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INTERSTATE 5 HIGH OCCUPANCY VEHICLE/TRUCK LANES PROJECT
PUBLIC HEARING
February 5, 2009
5:00 pm- 9:00 pm
George A. Caravalho Activities Center
20880 Centre Pointe Parkway
Santa Clarita, CA 91350

AGENDA

5:00 pm	**Sign-in**
5:00 pm- 6:00 pm	**Display Viewing**
6:00 pm	**Presentation** Introduction Purpose of the meeting **Project Description** Purpose and Need Alternatives Project Schedule **Environmental Process & Impacts** Environmental Document- EIR/EA Environmental Process
6:30 pm- 9:00 pm	**Public Comments & Questions**

**If you wish to speak during the Public Comment period, please fill out a Comment Card. We plan to have as many speakers as time allows.

Interstate 5 High Occupancy Vehicle/Truck Lanes Project
Public Hearing
February 5, 2009

George A. Caravalho Activities Center
20880 Centre Pointe Parkway
Santa Clarita, CA 91350

FACT SHEET

PURPOSE OF THIS PUBLIC HEARING

The purpose of the public hearing is to obtain public comments regarding the proposed project and to ensure that transportation decisions are consistent with the goals and objectives of federal, state, and local entities.

OVERVIEW OF PROPOSED PROJECT

The California Department of Transportation (Caltrans) proposes to widen existing Interstate 5 (I-5) to include high-occupancy vehicle (HOV) lanes, truck climbing lanes, and additional auxiliary lanes from State Route 14 (SR-14) on the south to Parker Road on the north, a distance of approximately 13.6 miles. The project is located within the City of Santa Clarita and unincorporated Los Angeles County. The proposed improvements include extending the existing HOV lanes on I-5 from SR-14 to south of Parker Road, and adding truck climbing lanes from the SR-14 interchange to Calgrove Boulevard (northbound) and to Pico Canyon Road/Lyons Avenue (southbound), a distance of approximately 3 to 4 miles. The proposed I-5 HOV/Truck Lanes Project also proposes adding and/or extending auxiliary lanes in the northbound and southbound direction at several locations.

PROJECT PURPOSE

- Reduce delays to vehicles caused by slower-moving trucks through the hilly southern portion of this segment of I-5.
- Improve operational and safety design features to facilitate the movement of people, freight, and goods on the project segment.
- Reduce existing and forecast traffic congestion on the project segment of I-5 to accommodate planned growth within the study area.

IDENTIFIED ALTERNATIVES/DESCRIPTIONS

Alternative 1: The "No-Build" Alternative

This alternative will maintain the current configuration of the existing freeway, i.e. no mainline improvements only approved/pending local interchange improvements. The HOV and truck lanes will not be added and the congestion and operational problems in this segment will not be alleviated.

Alternative 2: The "Reduced Median" Alternative

Alternative 2 proposes to add one HOV lane in each direction from the I-5/SR-14 interchange to south of the Parker Road interchange. Alternative 2 also proposes to extend one northbound truck lane from where the truck lanes currently merge with northbound I-5 near the Weldon Canyon Road/I-5 interchange to the Calgrove Boulevard/I-5 interchange. Southbound truck climbing lanes are proposed between the Weldon Canyon Road and Calgrove Boulevard interchanges (two truck lanes) and from Calgrove Boulevard to the Pico Canyon Road/Lyons Avenue interchange (one truck lane). This alternative proposes reduced median and shoulder widths that are less than standard widths.

Alternative 3: The "Full Median" Alternative

Alternative 3 proposes the same improvements as Alternative 2, with standard median and shoulder widths and HOV enforcement areas.

COMMON DESIGN FEATURES

- Up to 8 bridges may be widened and up to 2 bridges may be replaced
- Retaining walls to avoid or minimize right-of-way acquisition and/or impacts to local streets
- Ramp modifications
- Roadway improvements to meet standard stopping sight distances
- Utility relocations within local roads and adjacent to state right-of-way

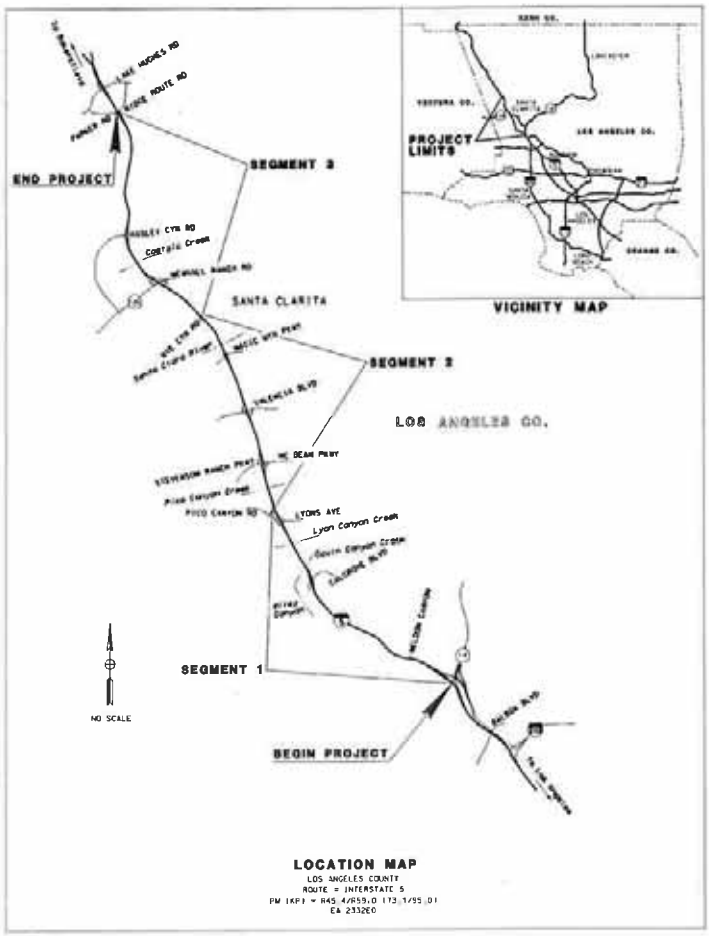
ENVIRONMENTAL PROCESS

Consistent with the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), Caltrans has studied the effects that the proposed project may have on the environment. **A Draft Environmental Impact Report/Environmental Assessment (EIR/EA)** has been prepared, which describes the potential environmental impacts of each of the proposed alternatives, and the proposed avoidance, minimization and/or mitigation measures.

A hard copy of the document may also be viewed at the following locations:

- Caltrans District 7, 100 South Main Street, Los Angeles
- City of Santa Clarita – Department of Community Development
  23920 West Valencia Boulevard, Suite 302, Santa Clarita
- Los Angeles County Library – Valencia Branch
  23743 West Valencia Boulevard, Santa Clarita
- Los Angeles County Library – Newhall Branch
  22704 West 9th Street, Newhall
- Los Angeles County Library – Canyon Country Branch
  18601 Soledad Canyon Road, Santa Clarita

The Draft EIR/EA may also be viewed on our website:
http://www.dot.ca.gov/dist07/resources/envdocs/



PROJECT SCHEDULE

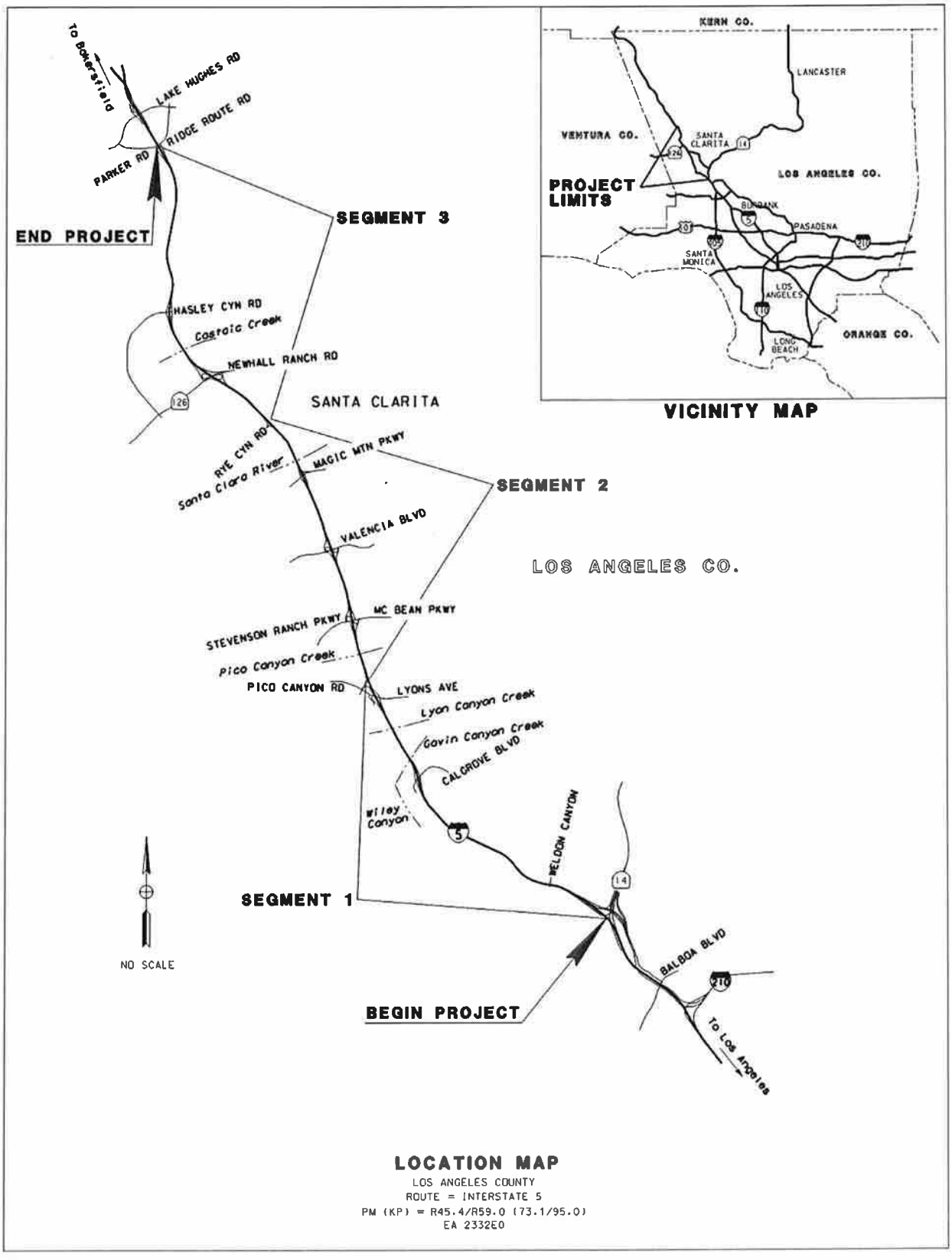
Scoping Meeting	June 4, 2007
Public Review of Draft EIR/EA	12/17/2008-02/17/2009
Public Hearing	February 5, 2009
Comments Due	February 17, 2009
Final EIR/FONSI	Spring 2009
Start Construction	December 2012
Complete Construction	December 2015

WHAT YOU SHOULD DO?

We welcome your comments on the proposed project and the Draft EIR/EA. Please provide written comments on the comment cards available at this meeting or send your written comments to Caltrans via postal mail to:

Ronald Kosinski, Deputy District Director
California Department of Transportation, District 7
Division of Environmental Planning
100 South Main Street, MS-16A
Los Angeles, CA 90012-3712

The close of the comment period is February 17, 2009.



LOCATION MAP

LOS ANGELES COUNTY
ROUTE = INTERSTATE 5
PM (KP) = R45.4/R59.0 (73.1/95.0)
EA 2332E0

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME:_____ DATE:_____

ADDRESS:_____ PHONE:_____

CITY, STATE, ZIP:_____

E-MAIL ADDRESS:_____

☐ I wish to speak. ☐ I would like to have the following statement filed for the record.

☐ I would like to have the following question answered:

COMMENT:

Comments must be received by the close of business on February 17, 2009. Comment cards may be mailed to California Department of Transportation – Carlos Montez, Branch Chief, Division of Environmental Planning (I-5 HOV/Truck Lane), 100 South Main Street, MS-16A, Los Angeles, CA 90012.

COMMENT CARD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
INTERSTATE 5 HOV/TRUCK LANES PROJECT – PUBLIC HEARING
February 5, 2009

NAME:_____ DATE:_____

ADDRESS:_____ PHONE:_____

CITY, STATE, ZIP:_____

E-MAIL ADDRESS:_____

☐ I wish to speak. ☐ I would like to have the following statement filed for the record.

☐ I would like to have the following question answered:

COMMENT:

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Public Hearing Transcript

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ORIGINAL

INTERSTATE 5 HIGH OCCUPANCY VEHICLE/TRUCK LANES PROJECT

PUBLIC HEARING

THURSDAY, FEBRUARY 5, 2009

George A. Carvalho Activities Center

20880 Centre Pointe Parkway

Santa Clarita, California 91350

FILE NO. 090205KVC

REPORTED BY: KRISTIN VARGAS
CSR NO. 11908, RPR

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INTERSTATE 5 HIGH OCCUPANCY VEHICLE/TRUCK LANES PROJECT

PUBLIC HEARING

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PUBLIC HEARING RE INTERSTATE 5 HIGH OCCUPANCY VEHICLE/TRUCK LANES PROJECT taken at 20880 Centre Pointe Parkway, Santa Clarita, California 91350, on Thursday, February 5, 2009, at 6:02 P.M., before Kristin Vargas, CSR No. 11908, RPR.

APPEARANCES OF COUNSEL:

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Santa Clarita, California;

Thursday, February 5, 2009;

6:02 P.M.

-oOo-

MR. KOSINSKI: Okay. It's now about 6:00 o'clock on February 5, 2009. And I'm going to call this public hearing to order.

Good evening, ladies and gentlemen. Welcome to the Caltrans public hearing on the proposal to make improvements to the I-5 corridor between SR-14 and Parker Road.

My name is Ron Kosinski. I'm the Deputy District Director for Environmental Planning. And I'm going to be the presiding officer at this hearing today. I'm going to try to move things forward in a fair and orderly fashion. And we'll also try to keep it as informal as possible.

I would like you to hold your questions until the end of the presentation. If you look at the agenda, we have two presentations here. And we're going to try to move this through and get you back out there in the rain as soon as we can.

There is one representative, or elected official, here I'd like to acknowledge. Jackie Bick

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from Senator George Runner's office is here.

Hi, Jackie.

Are there any other representatives of elected officials here?

Okay. The purpose of the hearing today is to receive public comment and discuss the need for the project, the alternatives that we're looking at, the engineering features and their potential environmental effects.

Notices of the hearing were published in various newspapers. Letters were also sent to a variety of national, state, county, local and elected officials. And there were about 500 letters sent out to interested parties who have been either involved in the earlier aspects of this project or are in the hills there that are potentially impacted by the proposals.

The proceedings are being recorded here by a shorthand court reporter. So when it gets to your time to speak, I would appreciate that you would speak slowly so that she can record this as accurately as possible.

No decision will be made on the project or what to do until after this public hearing, after we have reviewed the comments and all of the written reports and information that we have received.

The last date to make comments on this project

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is February 17. So please get your comments in by then.

Each of you should have a project agenda. And there's an informational handout and comment cards. Comment cards are probably the most important thing in this handout because, if you have any questions or comments, we would appreciate it if you would fill those comment cards out, hand them in to one of the staff here, and they will collect them. And then once we are done with the presentations, we'll go through those comment cards to see what we can do in terms of addressing your comments.

After the presentations, as I mentioned, we will take the opportunity to hear the public speak.

If we can't get to your question today, then rest assured, it will be provided in writing to us. That information will be addressed in the environmental document that we have.

Written statements will be considered equally with verbal comments that we have from you today. And you can always send those comments to me at the address we have in the handout.

It's basically Ron Kosinski, Division of Environmental Planning, Caltrans District 7, 100 South Main Street, Los Angeles, California 90012.

Again, you have this information in your

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handout.

We also have CDs of the environmental document. It's a pretty hefty document. I don't know if you've seen it. It's over there. It's a nice 3 inches of meaningful useful information. It makes a great doorstop. But we have the CDs which are smaller and more usable for people who have computer skills. And I'm not one of those.

The documents are also available at the local libraries. If you looked at the newspaper ad, it lists those. And also down here at the City Hall facility.

We have this facility until 9:00. So I'm assuming that we're going to be able to make it through without pressing on that time frame.

As you can see from the agenda, the first stop is to have Robert Blume give us a presentation on the engineering for this project.

And with that, I'm going to hand this over to Robert.

ROBERT BLUME: As mentioned, I want to give an overview of the project. And just to familiarize everybody, everybody has been looking at the displays hopefully, and they have been able to see that there's more detailed information back there. So this is not intended to be a detailed description.

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Okay. Caltrans is looking to widen I-5 through the corridor between SR-14 and Parker Road. The improvements -- the project limits are from 14 and Parker and the improvements are to add an HOV lane, extend the HOV lane out from where Kern terminates and recently constructed just south of the 14 interchange and go up through the 126 that has the interchanges and then transition, the HOV lane.

Also, the extension of the truck lanes through where they currently terminate right at the crest by Weldon Canyon to the north.

None of those will -- the northbound lane will terminate at Calgrove. The southbound lane will actually pick up one lane at Pico/Lyons, pick up a second truck lane as you go through Calgrove and basically tie in to where the current truck lanes subverge just south of Baldwin Canyon.

Another feature of the project is the extension of auxilliary lanes at six various locations. It's either an extension or addition for operational benefits within the project corridor.

There are two build alternatives for the project identified as a reduced median, Alternate 2; and a full median, Alternative 3. And the displays depict those various alternatives of sections and layouts.

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There is a no-build alternative, which is Alternative 1.

This is a map, and more detailed maps are in the back. But the yellow -- if you can see it -- and if you can't, please look at the exhibits in the back -- depict the limits that I've just mentioned for the truck lanes. And the red shows the extension all the way up to just south of the Parker interchange.

Both alternatives have the same types of improvements. But there are some differences I would like to go over with you.

The project purpose, as stated, is to reduce delays to vehicles caused by slower moving vehicles through the hilly southern portion of the segment of I-5.

And it's to improve operational and safety design features, facilitate movement of people and goods on the project segment, to reduce existing and forecasted traffic congestions on the project segment of I-5 to accommodate the planned growth within the study area.

Alternative 1, as mentioned, will basically keep the same configuration of the main line and will not have any improvements to the main line capacity other than the planned interchanges and local

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improvements that are already planned.

Congestion will continue to get worse. Delays will increase. And it does not address the purpose and need of the project, to improve mobility and increase safety by providing the HOV and truck lane.

So basically, Alternative 1 is no HOV and no truck lanes and no build alternative.

This depicts generally the typical section in the area. More accurate depictions are in the back for the various segments. But this is a good representation for mixed-flow lanes through the corridor.

Alternative 2 provides the same HOV and truck lane extensions as Alternative 3. It does require some reduced medians.

The intent was to provide the benefit and try to fit that in within the existing right-of-way as much as possible. So the reduced median was proposed, and that is what Alternative 2 is included.

This depicts the 20-foot median which provides -- a 22-foot median which provides 10-foot inside shoulders, which is the minimum determined acceptable for this alternative.

Alternative 3 is the full-median alternative. Similar improvements as mentioned. But the full median provides continuous CHP enforcement. That's a 14-foot

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median inside shoulder, which provides that ability to enforce the HOV use in the median safely.

There are some additional impacts with the additional widening that I want to point out. The impacts are the Santa Clara River Bridge with Alternative 3 if it's required to be widened.

Biscailuz Drive overcrossing needs to be replaced.

The CHP weigh station is impacted, and there has to be improvements to the entrance and exits there. And The Old Road has some impacts where there's going to be some shifting of the improvements.

In general, more right-of-way is required to complete Alternative 3.

Here is a section that shows the 30-foot median, which provides the 14-foot beam side shoulders.

The project schedule. The scoping meeting was held back in June of '07.

Tonight we have our public hearing during the review of the document. The close of the document is February 17.

The FONSI -- Final EIR/FONSI is scheduled for the spring of 2009, with construction starting in 2012, December; with the end of construction in December 2015.

With that, I'm going to hand it over to Carlos

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to talk about the environmental process and some of the impacts.

MR. MONTEZ: Good evening, everyone. My name is Carlos Montez. I'm a Senior Environmental Planner for Caltrans. I'm here to present the environmental portion of the environmental process.

In conforming with the National Environmental Policy Acts, NEPA, and California Environmental Quality Act, we have studied the effects of the project. And as a result, we prepared an Environment Impact Report and Environmental Assessment.

The purpose of NEPA and CEQA is to disclose the project to the public. And as a result, we have a public hearing, and we get to obtain comments from you.

The document was circulated to everyone coming in on our list. And later today, we will be provided comments for us on the effects or the alternatives and whatnot.

The next slides will show the impacts -- no impacts/significant impact -- significant impacts. These three, mineral resources, population and housing, utilities and service systems indicated that we did not have any impact.

Just to explain further, the population, housing -- that really results more in acquiring homes,

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displacing people from their homes. And there would not be any of that in this project.

Effects that had less significant impacts were the esthetics, agricultural resources, air quality, cultural resources, geology and soils, hazardous waste, hydrology, water quality issues, land use and planning, noise, public services, recreation, transportation and traffic.

Significant impacts mostly focus on biological impacts. We're going to have permanent and temporary acts on oak trees along the corridor. And that's about -- that was the only significant impact.

Go to the next one. Oh, here we go.

So the next slide shows the process of where we are at. We prepared a notice of preparation, I think, in June. And we prepared the studies.

We're right now in the public circulation. That circulation period will end February 17.

After that, we will collect all the comments. They will be addressed in the final environmental document, your comment letter with our response in the appendix, and then they will be distributed to all the individuals that sent us comments.

After that, we would -- we're going to finalize the document. The document will become an

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Environmental Impact Report and the EA will become a binding final (inaudible) impact notice of determination.

As a result of some of the biological impacts, we will be obtaining all these biological permits from other agencies that we coordinate with for this project.

And that's the end of my presentation. Thank you.

MR. KOSINSKI: Okay. Now, it's going to be your opportunity to speak. And usually, we have a little microphone here for people to come up to. But I think in this situation, we're going to take that microphone and roam around like Phil Donahue to the individual who wants to get up and speak.

And we have first Jackie Bick as our first individual.

And then Victor Landenham. Victor would be second.

And then again, if you have cards, please turn them in so we can put you on our speaker's list.

JACKIE BICK: My name is Jackie Bick. And I'm the field representative for the Santa Clarita Valley for Senator George Runner. George has expressed his support of this project a year ago with a letter to the agency. He is in favor and has, as I said, been -- he

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continues to be -- this continues to be one of his driving forces. He supports the infrastructure repair and improvement that this will represent.

And this is a culmination of B1, which we all voted on back in, I think it was, 2006. Correct me if I am wrong.

But, at any rate, we are in favor of this. We want to see this improvement here to the I-5 corridor here through the Santa Clarita Valley.

Thank you.

Thank you. And, Victor.

VICTOR LINDENHEIM: Thank you. My name is Victor Lindenheim. I represent the Golden State Gateway Coalition. We're a transportation advocacy and education group based in Santa Clarita.

And we want to thank Caltrans for the hard work on this. We have been following closely and know what has been involved in it. We appreciate what you have accomplished, and we endorse completion of this process, the environmental studies and moving forward with design and construction on Alternative 2.

I want to point out that the study was rather thorough, as people have already seen, in things like air, noise, water, biology, traffic, esthetics, even looked at potential disturbances to burial sites,

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dinosaur bones. We appreciate what has been done. And it's been done very effectively and very efficiently.

We have seen original estimates of costs and time and dollars in this project that is somewhere in the range of $10 to $11 million. And I think you came in about -- it looks like you've come in about more than $3 million less than that.

Estimates were that it would take four to five years. It looks like this is being completed in about two and a half years. So kudos on that.

The benefits of the project, we think, are huge. Congestion, traffic congestion relief, obviously, improved safety. We have already pointed some of that out. Cleaner air. There are substantial reduction in emissions and particulates.

And some economic -- a lot of economic -- much needed economic opportunities will be created with the construction of this project.

So, again, congratulations to Caltrans on getting it this far. And you certainly have our support for what remains to be done. I hope I haven't spoken too fast.

MR. KOSINSKI: How did he do?

THE REPORTER: He's fine.

MR. KOSINSKI: Thank you very much.

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Next, we have a question from "Merhad" Malig.

Would you like to ask that? Or do you have a question dealing with "Is there any effective alternative sound wall other than the one built in the backyard of the property line?"

And I'm going to ask Arnold to come up and answer that question.

Generally speaking, the sound walls on the property line are the most effective. But it really depends on the topography of the area.

Arnold.

ARNOLD: And I believe in your area -- I'm sorry. I'm Arnold. I'm with Caltrans Noise and Vibration Branch.

And we were discussing this earlier that the only effective location for your community, the only effective location for a sound wall in your community is a private property. So that's where we have recommended it.

And it will be contingent upon 100 percent agreement from all the homeowners for us to be able to go forward with the construction of the wall at that point. And I believe all of those who are affected by having a sound wall on the private property have received a letter in the mail pointing out the

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agreement.

And we will be sending out a follow-up letter and ask the residents who we are recommending sound walls on private property how many are in favor or against having the sound wall on the property.

So we'll let the process take its own course up to this point.

MR. KOSINSKI: Sound walls are an important component of any project if we can build them feasibility and if they have public support and they're obviously going to be effective.

I suggest that on sound walls, if you have specific issues, the best thing to do is to talk to Arnold after the meeting. And he can go specifically to the map location where you are and talk with you with that visual aid that's of major assistance.

Then, Ann Kerman. Give her the mike.

ANN KERMAN: Good evening. My name is Ann Kerman. I am representing the Los Angeles County Metropolitan Transportation Authority, Metro, and speaking on behalf of the project.

This project is listed in our long-range transportation plan. It's one that we hope to see someday. And that on a personal note and as a resident of Santa Clarita and one who traverses the I-5 on a

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regular basis, I do hope in my lifetime to see this project. So thank you.

MR. KOSINSKI: Thank you, Ann.

And that's a nice segue into the next comment card, which has a question dealing with funding.

And Giovanni Dorin asks: "How is the project going to be funded? What are the funding sources? And are any of these sources a rush towards funding --

GIOVANNI DORIN: Are they at risk?

MR. KOSINSKI: Oh, at risk. Okay. I'm sorry. "Are any of these sources at risk of funding?"

And briefly, everything right now is at risk of funding. But we're looking at things in long-term.

MR. HABBAK: Good evening. I'm Ashraf Habbak. I'm a project manager with Caltrans for this project.

And regarding the funding question, basically we are fully funded for this process, for the environmental document and the project report. So we have the funds to complete this phase of the project.

The next phase will be design. And we do not have any funding as of the design and construction at this point.

But as basically was mentioned, that Metro has this project in the long-range plan. And it's also included in the Measure R that recently passed in

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November.

So this project is -- basically has a good potential of getting funding. Nothing has been identified at this time at this point. But, again, there is good potential for getting funding for design and then construction.

Thank you.

MR. KOSINSKI: And just another additional information on funding. What we try to do is move projects through this process. The process takes several years starting from when you start scoping and get the public involved, get the engineering involved, look at the environmental impact so that once you get through that process, it's in a position to be funded.

And a lot of times that is an important position compared to other projects.

Okay. So the next person is Ian Pari, Senior Traffic Engineer from the city here.

IAN PARI: Yes. My name is actually Ian Pari. I'm a senior traffic engineer with the City. And I'm speaking on behalf of the city tonight.

We are in full support of the project. We appreciate the fact that it is consistent with Metro's North County Combined Highway Corridor Study and actually goes a little bit farther than the short-range

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plan in that document.

And our only comment is that whatever is done as part of this project doesn't preclude the long-range plan in that document from being done at some point in the future.

MR. KOSINSKI: Good point. Thank you, Ian.

Then Andie Bogdan.

ANDIE BOGDAN: Thank you. My name is Andie Bogdan. I'm here representing Henry Mayo Newhall Memorial Hospital. We're in definite support of this plan.

I would like to recognize and express some appreciation for the safety features that you have put into this project, and also in terms of the congestion relief. Very, very important because we're a trauma center. Ground transportation is very important to our trauma victims. Time is of great importance to them.

But also, on another note besides the trauma center connection, as a benefit for the community, this is a major artery for supply to all health care facilities in our valley. And, you know, anybody who's experienced the fire in the tunnel and other things that have impeded traffic, this is a definite improvement to health care for the community. And we're very much in support.

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MR. KOSINSKI: And thank you.

And Andie's written some additional comments on this card which will be, again, incorporated in the record.

If anybody is here that is a little too shy and just would like to fill out one of these cards so we can put it in the record, feel free to do that.

The next person is Luis Bernal from Castaic -- has concerns regarding noise.

LUIS BERNAL: Yeah. I just want to say that first off, I think this project is a long time coming because the valley as a whole is just so impacted with traffic.

But on another note is the noise considerations. Back when the -- before they started building that Hasley Canyon Interchange that's presently going on, they tried to give a sound wall on the property line. It failed. Most neighbors do not want a sound wall on their property line, being blocked out completely.

All the neighbors to the south got a sound wall right on the freeway. That's where Caltrans is putting it in.

I don't understand why we cannot get a sound wall going north. I have already made some proposals to

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the sound people here on things that we can do. Trying to get a sound wall on neighborhood -- on people's property, I think, is just a recipe for failure. It's not going to happen. Most neighbors do not want to be jailed behind a big block wall that's 14 feet tall.

I made proposals. I will work with your sound engineers, if you'd like. But don't shut us out. Don't close us in. We would really like to see sound walls down at the freeway level.

MR. KOSINSKI: Okay. Thank you very much.

And let me just add that, if you drive around, you'll notice that Caltrans likes to build sound walls. We think they're important. It's really basically an engineering issue. So I'm glad that you are going to work with our acoustical engineer to see if we can come up with a plan that is effective.

I have no more cards. Oh, here we go.

CANDY JOHNSON: It's the same thing.

MR. KOSINSKI: Candy Johnson would just like to have the statement read into the record. Is that it?

CANDY JOHNSON: Sure.

MR. KOSINSKI: Okay. This resident, Vista Ridge, in the Vista Hills Association, has "requested sound walls along I-5 on both sides, the north and the south, between Lyons and McBean for the last two

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decades." That's 20 years.

"And we want to have them install outside walls. After the shopping center on Stevenson Ranch went up, our freeway noise went up exponentially. We paid a premium for our view also."

CANDY JOHNSON: We paid a premium for our view lot.

MR. KOSINSKI: Right.

CANDY JOHNSON: So we don't want to put sound walls to block our lots. And everybody in our association is in the same boat.

MR. KOSINSKI: Okay. Got ya. Thanks.

CANDY JOHNSON: I bought my home from an attorney. He had been fighting it for years before me.

MR. KOSINSKI: All right.

Okay. Arnold has got his work cut out for him.

Okay. I've got another comment card from Larry Mankin. I will have the following statement read into the record:

"I am president and the CEO of the Santa Clarita Valley Chamber of Commerce. And I represent 1,500 businesses. The Chamber has and continues to support the I-5 improvement project. The valley has become a significant job center to L.A. County, and this

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improvement project is imperative to the long-term business health of the region. Our organization supports Alternative 2. The additional HOV lane and truck lane will do much to allow for freer movement of goods and services into and out of the Santa Clarita Valley."

Any other comment cards?

Tom Surak. "I wish to speak."

TOM SURAK: Thank you. Okay. Great. I don't have anything prepared. But I just want to make a few comments here.

We're looking at the area near Calgrove. It has the highest average daily number of vehicles other than any other part of the study area. A truck is currently going by every 4.6 seconds on average.

To expect us to tolerate an expansion of this freeway without protection of our neighborhood with respect to increased sound is a nonstarter. And I think I would make those comments verbally, and we're going to coordinate on that. But I will tell you right now, it will be a nonstarter.

We disagree -- and I say "we" -- I represent others -- on the conclusion that the proposed project will not generate traffic. Okay. Everyone knows that a reduction in commute time encourages freeway use versus

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bus, train, carpool, van pool alternatives and vice versa.

We disagree with the conclusions that the expansion does not produce or attract (inaudible). All the studies which are based on these conclusions need to be revised.

There is a section in here on wall treatments. It says, "Wall treatments will be evaluated for esthetic treatments during the final design. These wall treatments should be more of an upfront commitment for all walls, both retaining and sound walls, and not put towards the back of the project."

There's a conclusion that tire wear, brake wear and road testing issues are vehicle-model dependent and not affected by the expansion. Definitely they will increase with the increased amount of traffic.

There is a requirement that excavation and grading activity will be suspended when winds exceed 20 miles per hour. As you know, the construction area has high Santa Ana winds. I'm wondering how that will be enforced.

There is mention of construction going on around the clock. This is unacceptable.

There's a statement in here that construction trucks -- that some of them or equipment emit roughly

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90 decibels of noise at 50-foot. Nighttime construction should be limited to the evening hours and not overnight.

We wonder why there's no mention of additional park and ride facilities. You would think that that's something that the governor would be supporting.

That would be the extent of my verbal comments. And I look forward to working with you folks regarding the noise issue.

I do want to add one thing. I made comments two years ago regarding the sound wall, and I'm disappointed they were not taken seriously.

We have a very serious issue with respect to trucks using Jake brakes on the decline going northbound into the Valley. There has been no enforcement of that. And that is the major source of the noise. And whether or not your sound studies properly fix that up because most of that noise, obviously, occurs during the nighttime, I don't know.

But that's what we expect this project to do is take care of that issue because it is extreme. Thank you.

MR. KOSINSKI: Okay. Thank you.

I would also like to mention that Bob Haueter from Congressman Buck McKeon's office is here also.

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Thanks for your attendance.

I have one more card which is from Bob Haueter, who represents Buck McKeon's office.

BOB HAUETER: Thank you very much for your attention.

I'm here today to enter some comments with regard to the Congressman's position with respect to this project.

We understand this is very important. The Congressman has been working very long and hard to try and advance this project through federal government assistance and funds. We understand the importance of this.

The I-5 is not just a freeway that runs through our district. It connects the state and the nation with goods and services from the allocated corridor. And it's very important. And this project would alleviate a lot of problems that we have that our constituents have brought to us. And we would urge that it be moved forward with all due haste.

MR. KOSINSKI: Thank you very much. Excellent comments.

Do we have any more cards?

Going once, going twice -- okay. Adam.

And as always happens, you will leave --

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SPEAKER: We have a couple more back here, I think, Richard.

MR. KOSINSKI: I don't have any cards from him.

I need to have these cards filled out so that we have a record for our court reporter. Okay. So I will stall for time here.

What often happens is that on your way home or in the next couple days, you will think of an additional comment or question. Keep in mind that you do have until February 17 to provide comments.

Clearly, the sound wall issue is a very important issue. And so we're going to make sure that we are looking at every possible alternative to get walls out there. That's going to be obviously, from the community's standpoint, our top priority.

And, again, I am serious. If you drive around Los Angeles, you will see that we put up walls wherever we can. And it's an issue where a lot of times, because of the topography, there's a problem with them being effective. So we want to make sure that we are putting up walls that are effective, not just up there for cosmetic purposes.

And don't forget that these comment cards also, if you take them home, you have our address here.

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This will either go to me or to Carlos Montez. And we will make sure that we get all these comments, again, incorporated into the record.

Okay. I have a comment card from -- I'm sorry to say I can't read this name.

FLO LAWRENCE: Flo Lawrence.

MR. KOSINSKI: Flo Lawrence. I'm sorry.

And we will give this card to our court reporter so she has a spelling on it.

FLO LAWRENCE: Fantastic. I just -- I'm from the other end of the Valley. I'm from Castaic. I moved out here in 1998, and I have been watching them build homes on either side of the freeway since I got here. And every day I get on the 5 Freeway, and I count one, two, three, four, same number of lanes.

And the fact that we're going to add an additional lane, whether it be an HOV lane, is the most exciting news I have heard this year because it will help alleviate not only those of us that have to commute -- I appreciate the gentleman that mentioned public transportation, but if you work on the Westside, Beverly Hills, Santa Monica, Culver City, there's no public transportation. The trains go downtown, not to the Westside. And so, unfortunately, we're forced to use the 5 and the 405.

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And I also live in Castaic. And what that means is that on any given holiday weekend, we are held hostage. We can't go to the movies. We can't go out to dinner because the 5 Freeway is just jammed with cars with people coming back after Christmas or Thanksgiving or the Fourth of July or Memorial Day or Labor Day.

And any relief we can get for this major artery, as the person from Congressman McKeon's office pointed out, that goes from the Mexican border up to Oregon, any relief we can get and as soon as we can get that relief is absolutely great news.

And I just want to say as a dad and a businessman who has to take my kids places and who has to travel up and down this 5 Freeway to do business, this is so great.

I understand there are noise issues. I understand there are environmental issues. But I hope that Caltrans and the state and the federal government will work as quickly as possible to get this thing going and to get it completed.

And I'm just really -- I'm very grateful, Carlos, for all your hard work and that this is happening because it's long, long, long overdue. Thank you.

MR. KOSINSKI: Thank you very much. And I do

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know on Measure R that there is a plan to run some type of transit facility down the 405 through the Westwood Hills area down to Route 10, I think it is. So there is a plan at least. So one of these days.

FLO LAWRENCE: I'll have my walker when it happens.

MR. KOSINSKI: Okay. We have Mr. and Mrs. Valindo from Castaic who would like to have the following statement provided for the record.

"I will not sign for this sound wall. No to sound walls."

I certainly understand that -- and I am assuming this is a situation where the walls would be blocking views. We certainly have this delicate balance of wanting to put up sound walls but making sure that we put them up and that we get uniform support for people. And if the people don't want their views blocked, then certainly, we can't put up a sound wall.

I know we -- down in Orange County and down along the coast, we've put Lexan panels and see-through sound walls. So there are positives and negatives associated with that.

One of the negatives is that we then require a maintenance agreement that the homeowners have to be involved in or the community has to be involved in.

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The positive thing, obviously, is that it reduces noise and you can see.

So that's something, I think, we will pursue with the community in terms of this particular difficult issue.

Then we have Nickie Parchit who also makes the same basic comment, which is, "No to sound walls and no to this."

"No to this," I guess, is that this project -- Nickie?

Okay. I have no more comment cards. Last chance.

We have one more comment card coming our way.

FLO LAWRENCE: His handwriting is better than mine.

MR. KOSINSKI: Ah. Michael Canofer. I can read this, Michael. Thank you.

Sorry, Flo.

DAVID PERRY: Actually, my name is David Perry. I'm a field deputy for L.A. County Supervisor Michael Antonovich out here in the Santa Clarita Valley.

Michael Canofer is our transportation policy deputy downtown. Unfortunately, he hasn't been able to get here yet perhaps because of the traffic due to this very issue we're here to try to solve.

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So without him here, I can't speak the same depth that he could.

I will say that the Supervisor is in support of this project as this is a vital corridor for goods and services for all the country. So we will submit official comments at a later time from Deputy Canofer.

MR. KOSINSKI: Okay. Thank you very much. You do a very fine impression of Michael.

Any more comment cards?

TIMOTHY TROTTER: Hi. My name is Timothy Trotter, and I'm here with my wife Janet and my neighbor Luis.

And we have all lived in Castaic in North Bluffs for 20 years. And I think this project has come up before where they want to put the sound wall in the hillside where people on Saguaro on the hill. And I think it's going to be ugly. I don't think it's going to look good. I don't think it's going to stop the sound.

What we have really been pushing for with Caltrans, with City Council and highway department -- Los Angeles County Highway Department ever since we moved in was to have a K-Rail put on the southbound lane, emergency lane, of The Old Road from Parker all the way down past Live Oak tract.

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And we have seen many vehicles go through there, fatalities over 20 years. And just as important as the K-Rail, we would like the sound wall built on top of that.

And I keep hearing you say we have got sound walls all around Los Angeles County, which I agree because I drive all over the place and they're all there. And there's K-Rails underneath there.

And that's where I would like to see, and I know my neighbors and my wife. And I'm sure a lot of people, if they really thought about it, would rather see some of this -- I think the expression is puny sound wall that you are suggesting, but more of a safety K-Rail that blocks the whole freeway noise. Because as you come up Saguaro also in that tract of North Bluffs, that might be fine for a few of the homes. But there's a lot of homes that sit above those on the west side of Saguaro. We're talking about the east side of Saguaro where it backs up to the freeway.

And the homes like mine is just like prime position for the noise coming off the freeway past the Hasley exit from the trucks coming out of the scales and the traffic coming up, people in the fast lane. You can hear them go past at least 90 seconds. So they have got to be going a mile or two as they go past our tract

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there at North Bluffs southbound.

If they go north, we don't hear as much. But the homes get higher. I know that sound from the freeway, if you are above it, you'll hear it and if you below it, you won't hear it.

So a lot of people I know, Maria, Darra and Tracy used to complain because they are in the next block up, same position our house is, and they would complain it's fine until they get out in the backyard or they're up above their 5-foot garden fence.

And I know Luis down the street, the other outside, there's a lot of noise that I don't think would be blocked.

So what I would ask mostly is that the K-Rail be put up along this with the additional traffic, which I think is just as important as opening up the lanes because I don't think anybody disagrees with relieving congestion.

But one thing that's been missing for a long time, especially with the amount of traffic -- I heard what the gentleman said before, on the last ten years held hostage on the weekends. It's gotten worse and worse and worse. And there is a boatload of traffic going through there.

And I think that the opening up of the lane

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deserves to spend the extra money. I have heard estimates from a million dollars a foot to a million dollars a mile. I don't know what it costs. But I think it's worth it to keep the freeway separated from The Old Road with the K-Rail and wire there, put the sound wall at that point eight or 10 feet up.

I think that would really reflect a lot of the noise back east where there's really no development. There's a sod farm and the detention center, which is still about a good half-mile setback, rather than homes at North Bluffs and Hillcrest Park and Live Oak are within throwing distance of the freeway.

That's what I would ask for.

MR. KOSINSKI: Okay. Thank you very much.

And it is -- well, about five years ago it was a million dollars a mile. And you might check with Arnold to see what the cost is currently. And that's varied because you might have drainage issues and other things that might like raise it up.

Okay. Any other comment cards?

Feeling like -- like we're closing this meeting.

Any other comment cards?

And if we don't have any other additional cards, I'm going to close. But keep in mind we do have

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the staff here. And we will stay here for a while until we can interact with whatever issues you have.

Clearly, the noise is a critical issue. And we're not going to be satisfied unless we can address this issue or at least explain why we can't address this issue in the available time.

This is really -- when we come up with these projects, it's really the best opportunity for us to come up with the mitigation because when we come up with the cost of the project, it includes the mitigation versus a situation where we're just going back to retrofit communities with sound walls, which is much more difficult to do.

So we take this charge very seriously, and we'll work very diligently to see if we can, in fact, get as many walls up there as possible.

So with that, I'm closing the meeting. And don't forget we have until February 17.

On behalf of Caltrans and our consultant team and our participants, I really appreciate your very thoughtful comments and your participation.

So drive carefully. And this hearing is closed.

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CERTIFICATE

I, Kristin Vargas, C.S.R. No. 11908, in and for the State of California, do hereby certify:

That the foregoing 38-page proceedings were taken down by me in shorthand at the time and place stated herein, and represent a true and correct transcript of said proceedings.

I further certify that I am not interested in the event of the action.

Witness my hand this 26th day of February, 2009.

Certified Shorthand
Reporter in and for the
State of California