State Route 57/Lambert Road Interchange Improvement Project

ORANGE COUNTY, CALIFORNIA
DISTRICT 12 – ORA – 57 (PM 20.1/21.8)
EA 0C110_ (EFIS 1200000633)
SCH 2015031005

Initial Study with Mitigated Negative Declaration / Environmental Assessment with Finding of No Significant Impact

Prepared by the
State of California Department of Transportation
and
City of Brea

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 USC 327.

October 2015

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SCH# 2015031005
12-ORA-57-PM 20.1/21.8
EA: 0C110_

Improve the State Route 57 (SR-57)/Lambert Road interchange from post mile (PM) 20.1 to PM 21.8.

INITIAL STUDY with Mitigated Negative Declaration / Environmental Assessment with Finding of No Significant Impact

Submitted Pursuant to: (State) Division 12, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

and

City of Brea

11/12/15
Date of Approval

Ryan Chamberlain
District Director
California Department of Transportation
NEPA Lead Agency/CEQA Lead Agency

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SCH: 2015031005

MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans), in cooperation with the City of Brea (City), proposes to improve the State Route 57 (SR-57)/Lambert Road interchange from post mile (PM) 20.1 to PM 21.8. The SR-57/Lambert Road Interchange Improvement Project (proposed project) would improve traffic operations on SR-57 and Lambert Road, in the interchange area. Improvements would include widening the southbound SR-57 median shoulder, reconfiguring the northbound and southbound SR-57 on- and off-ramps, lowering the Lambert Road profile to provide 15-foot standard vertical clearance under the Lambert Road Undercrossing and widening Lambert Road from 1,000 feet west of State College Boulevard to Pointe Drive, and reconfiguring the north and southbound SR-57 on- and off-ramp/Lambert Road intersections.

Determination

Caltrans has prepared an Initial Study for this project, and following public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on Agriculture and Forestry, Coastal Zone, Wild and Scenic Rivers, Mineral Resources, and Recreation.

In addition, the proposed project would have less than significant effects to Land Use, Growth, Utilities/Emergency Services, Traffic and Transportation/Pedestrian and Bicycle Facilities, Cultural Resources, Hydrology and Floodplain, Water Quality and Storm Water Runoff, Geology/Soils/Seismic/Topography, Hazardous Waste/Materials, and Air Quality.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to Community Impacts, Visual/Aesthetics, Paleontology, and Biological Resources:

VIS-3 The proposed project shall install either an opaque perimeter wall or appropriate landscaping sufficient to screen direct views from the Country Woods Apartment Homes to the proposed project. This architectural feature shall be reviewed and approved by the District Landscape Architect during the Plans, Specifications, and Estimate (PS&E) phase.

VIS-5 The proposed project shall consider implementation of a transparent soundwall, per the Caltrans Traffic Noise Analysis Protocol (TNAP), in order to maintain distant views from the outdoor patio of the El Torito Grill Restaurant. The soundwall design and long-term maintenance shall be approved by the Caltrans Landscape Architect and Caltrans Maintenance staff during the PS&E Phase.

PALEO-1 Prior to final design, a monitoring program (Paleontological Mitigation Plan) will be developed by a qualified paleontologist for the excavation in the Alluvial Fan Deposits, the La Habra Formation, and the Fernando Formation to minimize effects on nonrenewable paleontological resources. It is possible that as details of

the proposed project, such as proposed excavation depths, are better refined, it will be determined that areas identified as having high sensitivity will in fact not require monitoring during excavation, as the ground disturbance will not extend deep enough below the surface to encounter paleontological resources.

TE-1 Habitat replacement and maintenance shall be provided at 1.5 acres for permanent effects and 1.4 acres (replaced in-kind or better after construction) for temporary effects to coastal sage scrub-grassland vegetation, consistent with USFWS standards. For permanent effects, the City will fund the enhancement of coastal CAGN habitat through off-site restoration and/or preservation of conservation lands. For temporary effects, the City will develop appropriate restoration plans for any temporarily affected areas within CAGN suitable habitat.

Ryan Chamberlain
District Director
District 12
California Department of Transportation

11/12/15
Date

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

FOR

State Route 57/Lambert Road Interchange Improvement Project

The California Department of Transportation (Caltrans) in cooperation with the City of Brea (City) has determined that Build Alternative 7A (Preferred Alternative) will have no significant impact on the human environment. This Finding of No Significant Impact (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 Environmental Impact Statement (EIS) is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA (and other documents as appropriate).

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 USC 327.

11/12/15
Date

Caltrans District Director

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List of Technical Studies (Bound Separately)

Air Quality Assessment (May 2013)

Archaeological Survey Report (October 2012)

Community Impact Assessment (October 2012)

Historic Property Survey Report (November 2012)

Natural Environment Study with Jurisdictional Delineation Report (November 2013)

Biological Assessment (May 2015)

Noise Abatement Decision Report (February 2014)

Noise Study Report (April 2013)

Paleontological Resources Identification and Evaluation Report (June 2012)

Phase I Initial Site Assessment (January 2013)

Phase II Subsurface Investigation Report, Brea Auto Spa, 1700 East Lambert Road, Brea, California, 92618 (August 2013)

Preliminary Storm Water Data Report (May 2012)

Relocation Impact Memorandum (June 2012)

Traffic Study (July 2012)

Visual Impact Assessment (January 2014)

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CHAPTER 1 – PROPOSED PROJECT

1.1 INTRODUCTION

The California Department of Transportation District 12 (Caltrans), in cooperation with the City of Brea, proposes to improve the State Route 57 (SR-57)/Lambert Road interchange from post mile (PM) 20.1 to PM 21.8. The SR-57/Lambert Road Interchange Improvement Project (proposed project) would improve traffic operations on SR-57 and Lambert Road, in the interchange area. Figure 1-1, Project Vicinity, and Figure 1-2, Project Location, show the proposed project location and vicinity, respectively. Caltrans is lead agency for both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), as assigned by the Federal Highway Administration (FHWA).

The proposed project is included in the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP) (RTP IDs ORA000107 and 2M0724). The 2008 RTP was founded by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) to conform to the State Implementation Plan (SIP) on June 15, 2008. It should be noted that the SCAG 2012 RTP has recently been adopted; however, it has not yet been determined to conform by FHWA and FTA. The project is also included in SCAG financially constrained 2013 Federal Transportation Improvement Program (FTIP). The SCAG FTIP was determined to conform by FHWA and FTA on December 14, 2012 (FTIP ID ORA120320). The design concept and scope of the proposed project is consistent with the project description in the 2008 RTP and the 2013 FTIP and is intended to meet the traffic needs in the area based on local land use plans. The proposed project is being funded through the following programs:

- The Orange County Transportation Authority (OCTA) M2 Streets and Roads Program: Regional Capacity Program (RCP) – Freeway Arterial/Streets Transition (FAST) funds;
- Federal-aid Demo TEA-21 funds; and
- Local City of Brea funds.

1.2 PURPOSE AND NEED

1.2.1 PURPOSE

The purpose of the proposed project is to provide congestion relief to improve the traffic flow within the interchange. The proposed project would reduce the current congestion, increase signal queue capacity, and better accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards.

1.2.2 NEED

The proposed project is needed because the interchange presently experiences heavy congestion during both the AM and PM peak periods stemming from conflicting traffic movements and inadequate signal queue capacity. Without the proposed project, the congestion within the interchange would continue to increase with the forecasted 20 percent increase in traffic by the year 2040.

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Subject Site

not to scale

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Project Vicinity

3/28/12 JN 10-107792-18226 MAS

Figure 1-1

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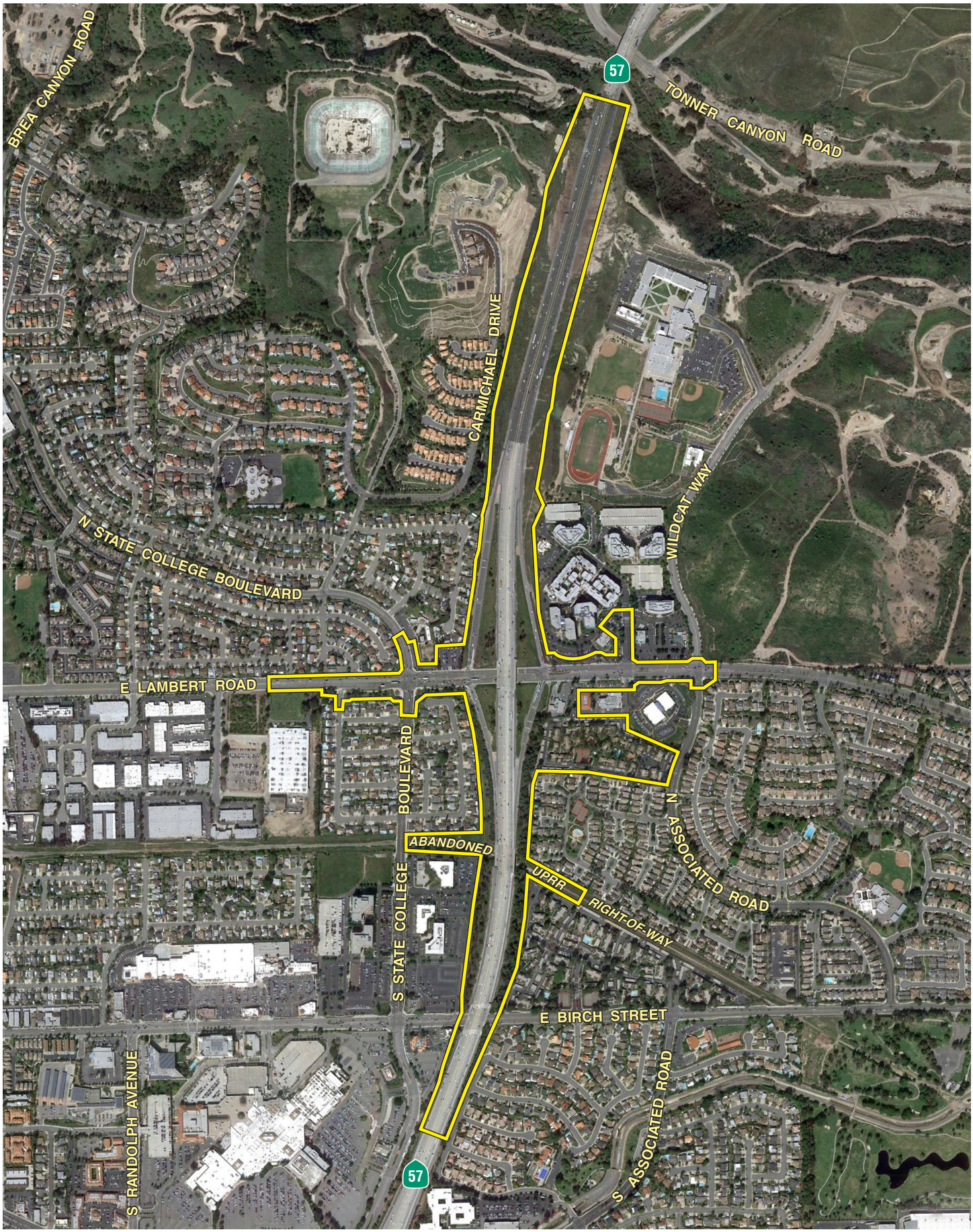

0 1000'
APPROXIMATE

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Project Location

6/14/12 JN 10-107792-18226 MAS

Figure 1-2

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The heavy congestion at the SR-57/Lambert Road interchange can be attributed to a combination of high traffic volumes on the SR-57 mainline and surrounding arterials, conflicting traffic turn-movements, and limitations on interchange improvement alternatives due to the close proximity of major intersections to the SR-57/Lambert Road interchange (Refer to Tables 1-1 through 1-4, above). The accident rate data provided in Tables 1-5 and 1-6 show that collision rates are higher than the state average, for similar facilities, on four SR-57 mainline segments and two Lambert Road ramps, as follows: northbound SR-57 segment PM 20.9 to PM 21.15 and segment PM 21.65 to PM 21.90; southbound SR-57 segment PM 20.65 to PM 20.90 and PM 20.90 to PM 21.15; Lambert Road southbound SR-57 on-ramp; and Lambert Road southbound SR-57 off-ramp. The following traffic movements within the immediate surrounding area of the SR-57/Lambert Road interchange reflect the deficiencies of the interchange and its interaction with the surrounding road system:

- Southbound SR-57 off-ramp to eastbound Lambert Road (AM peak period) experiences intersection blocking and ramp queuing onto the freeway mainline. This is due to the off-ramp traffic volumes (1,380 vehicles) being near capacity of 1,500 vehicles It is also due to high intersection capacity utilization due to conflicting high volume southbound SR-57 left-turn movements onto eastbound Lambert Road and westbound Lambert Road through traffic movements.

- Northbound and southbound SR-57 off-ramps to westbound Lambert Road continuing to southbound State College Boulevard (AM peak period) experiences intersection queuing and blocking caused by high left-turn volumes at the northbound SR-57 off-ramp/Lambert Road intersection (760 vehicles) and the Lambert Road/State College Boulevard intersection (410 vehicles southbound and 510 vehicles northbound) and a heavy weave movement on Lambert Road in the short segment between the SR-57 southbound off-ramp (490 vehicles) and the westbound Lambert Road left-turn lanes at State College Boulevard.

- Northbound State College Boulevard to eastbound Lambert Road to southbound and northbound SR-57 on-ramps (PM peak period) experiences intersection queuing and blocking caused by heavy weave movement created by high volumes at the State College Boulevard/Lambert Road (380 vehicles northbound/520 vehicles southbound) and the Lambert Road/southbound SR-57 on-ramp (860 vehicles) intersections, and the northbound SR-57 on-ramp (360 vehicles). Also contributing to the difficulty of the weave and congestion is the high volume of eastbound through movements (1,320 vehicles) within the interchange.

1.2.3 INDEPENDENT UTILITY AND LOGICAL TERMINI

A transportation project is required by FHWA (923 CFR 771.111) to meet standards that establish a project's "independent utility" and "logical termini." In order for a project to have "independent utility," it must be usable and a reasonable expenditure, even if no additional transportation improvements are made in the area. Regardless of other actions, the project must offer transportation benefits that "stand alone" and are not dependent upon the implementation of other projects. Additionally to be considered of independent utility, a project must not preclude other potential transportation projects from being implemented in the future.

1.2.3.1 Independent Utility

The proposed project satisfies FHWA's regulations for "independent utility" because it would not prevent the implementation of future transportation projects, and, independent of other actions, it would also provide benefits to Lambert Road and SR-57 responsive to the proposed project's purpose and need.

The proposed build alternatives would provide additional turn lanes at the intersections through the project area. This would alleviate current traffic congestion through the interchange and help to accommodate future projected traffic increases on Lambert Road and through the SR-57 on- and off-ramps/Lambert Road intersections. This benefit would be provided by the proposed project and would not require the completion of any other projects.

1.2.3.2 Logical Termini

"Logical termini" are required for project development to establish project boundaries that allow for a comprehensive response to transportation deficiency. Rational end points are required for both transportation improvements and the review of environmental impacts.

The project area adequately addresses transportation issues on Lambert Road, through the interchange from 1,000 feet west of State College Boulevard to Pointe Drive, thus providing appropriate improvements to the intersections and Lambert Road that would enhance operations as well as tying back into the existing roadway. The proposed project adequately addresses SR-57 improvements from PM 20.1 to PM 21.8 to accommodate the ramp reconfigurations, lane and shoulder improvements, and a southbound auxiliary lane to improve traffic operations through the interchange. Therefore, the proposed project meets FHWA logical termini requirements.

1.3 FACILITIES

1.3.1 FACILITIES AND OPERATIONS

1.3.1.1 Existing Facilities and Operations

SR-57 is an interregional and commuter freeway that begins at Interstate 5 (I-5) in Santa Ana, extending northeasterly and traversing the Brea Foothills toward Pomona. Within the City of Brea, SR-57 traverses a developed urbanized area consisting of residential and commercial land uses. The segment has a number of intensive trip generators, and the facility is heavily utilized for interregional travel, commercial/commerce, and commuter use. The average weekday volumes for 2011, collected over a nine month period (January through September), are shown in Table 1-1, Freeway Mainline Peak Hour Volume and LOS for Existing Conditions. Table 1-2, Ramp Volume and Capacity Summary for Existing Conditions, provides a summary of the exiting ramp configurations, capacities, peak-hour volumes and the corresponding volume to capacity ratio. Table 1-3, Ramp Merge/Diverge Summary for Existing Conditions, provides information regarding the merge/diverge existing conditions for the project area. For 2011, SR-57 had an Average Daily Traffic (ADT) volume near the SR-57/Lambert Road interchange of 236,300 vehicles per day. Of this, approximately six percent of the traffic is truck traffic.

Table 1-1 Freeway Mainline Peak Hour Volume and LOS for Existing Conditions

Location	Lanes			AM Peak Hour Volume			PM Peak Hour Volume		
	HOV	GP	Aux	Mainline	LOS	HOV	Mainline	LOS	HOV
Northbound									
Begin Project									
NB SR-57 south of Lambert Road	1	4	0	5,700	C	**1,780**	6,620	D	**1,760**
NB SR-57 south of Tonner Canyon Road	1	4	0	5,340	C	**1,680**	6,750	D	**1,860**
End Project									
NB SR-57 north of Tonner Canyon Road	1	4	0	5,265	C	**1,780**	7,160	D	**1,960**
Southbound									
Begin Project									
SB SR-57 south of Lambert Road	1	4	0	7,040	D	1,340	6,660	D	**1,830**
SB SR-57 south of Tonner Canyon Road	1	4	0	**7,590**	**E**	1,240	6,470	D	**1,930**
End Project									
SB SR-57 north of Tonner Canyon Road	1	4	0	7,270	D	1,140	6,530	D	**1,830**

Source: Traffic Study, 2012
HOV = High Occupancy Vehicle Lane; GP = General Purpose Lane (i.e., mixed-flow lane); Aux – Auxiliary Lane; LOS – Level of Service; NB = Northbound; SB = Southbound
Bold = Level of Service (LOS) E or F (mainline), or exceeds 1,600 vehicles per hour per lane (HOV)

Table 1-2 Ramp Volume and Capacity Summary for Existing Conditions

Location	Lanes			AM Peak Hour Volume		PM Peak Hour Volume	
	R	Aux	Cap	Vol	V/C Ratio	Vol	V/C Ratio
Northbound SR-57							
Imperial NB On-Ramp	1	0	1,500	330	0.22	370	0.25
Imperial NB Loop On-Ramp	1	0	1,500	490	0.33	340	0.23
Imperial NB Off-Ramp	1	0	1,500	1,410	0.94	1,030	0.69
Southbound SR-57							
Imperial SB On-Ramp	1	0	1,500	660	0.44	1,150	0.77
Imperial SB Loop On-Ramp	1	0	1,500	300	0.20	540	0.36
Imperial SB Off-Ramp	1.5	1	2,250	890	0.40	960	0.43
Northbound							
Begin Project							
Lambert NB On-Ramp	1	0	1,500	730	0.49	1,070	0.71
Lambert NB Off-Ramp	1	0	1,500	1,190	0.79	1,040	0.69
End Project							
Tonner Canyon Road NB Off-Ramp	1	1	1,500	25	0.02	510	0.34
Southbound							
Begin Project							
Lambert Road SB On-Ramp	1	0	1,500	930	0.62	1,230	0.82
Lambert Road SB Off-Ramp	1	0	1,500	1,380	0.92	940	0.63
End Project							
Tonner Canyon Road SB On-Ramp	1	1	1,500	420	0.28	40	0.03

Source: Traffic Study, 2012
HOV = High Occupancy Vehicle Lane; R – Ramp termini lanes (1.5 denotes a two-lane off-ramp with one dedicated and one optional lane, or a two-lane on-ramp entering the freeway as one merge lane and an auxiliary lane); Aux – Auxiliary Lane; VOL – Volume; Cap – Capacity; V/C Ratio – Volume to Capacity ratio
NB = Northbound; SB = Southbound
Bold = exceeds V/C ratio of 1.0

Table 1-3 Ramp Merge/Diverge Summary for Existing Conditions

Location	AM Peak Hour				PM Peak Hour			
	Volumes		Density	LOS	Volumes		Density	LOS
	Fwy.	Ramp			Fwy.	Ramp		
SR-57 at Imperial								
NB Merge	5,370	330	22.4	C	6,350	370	26.2	C
SB Diverge	7,040	890	22.0	C	6,660	960	20.5	C
SR-57 at Lambert Road								
NB Merge	4,610	730	23.1	C	5,680	1,070	29.7	D
NB Diverge	5,700	1,190	33.5	D	6,720	1,040	**37.1**	**E**
SB Merge	6,210	930	30.2	D	5,530	1,230	30.2	D
SB Diverge	7,590	1,380	**42.0**	**E**	6,470	940	34.8	D
SR-57 at Tonner Canyon Road								
NB Diverge	5,240	25	25.0	C	6,650	510	33.7	D
SB Merge	7,270	420	29.9	D	6,530	40	24.1	C

Source: Traffic Study, 2012
FWY. = Freeway; **Bold** = Level of service (LOS) E or F
LOS Criteria based on Density (pc/mi/ln):

A	≤ 10	D	> 28-35
B	>10-20	E	> 35
C	> 20-28	F	Demand exceeds capacity (mainline or ramp)

Lambert Road is an east-west roadway serving local and regional traffic needs. Table 1-4, Existing Conditions, provides existing LOS on Lambert Road within the City of Brea and Caltrans jurisdictions. From a local standpoint, the Lambert Road interchange serves as a connection to adjacent residential and commercial uses. From a regional standpoint, Lambert Road effectively serves as an extension of SR-142 due to its direct connection at Valencia Avenue and Carbon Canyon Road.

SR-142 serves as one of the few available links for regional travel between Orange and Los Angeles Counties and the Inland Empire, which includes both Riverside and San Bernardino Counties.

Table 1-4 Existing Conditions

Location	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
City of Brea				
3. Brea Blvd & Central/State College Blvd	.68	B	.59	A
6. Brea Blvd & Lambert Road	.69	B	.65	B
7. State College Blvd & Lambert Road	.63	B	.68	B
8. SR-57 SB Ramps & Lambert Road	.69	B	.59	A
9. SR-57 NB Ramps & Lambert Road	.70	B	.61	B
10. Pointe Dr & Lambert Road	.61	B	.60	A
11. Associated & Lambert Road	.70	B	.52	A
12. Kraemer Blvd & Lambert Road	.38	A	.62	B
23. Brea Blvd & Imperial Highway	.71	C	.73	C
25. State College Blvd & Imperial Highway	.61	B	.77	C
26. SR-57 SB Ramps & Imperial Highway	.54	A	.61	B
27. SR-57 NB Ramps & Imperial Highway	.68	B	.64	B

Table 1-4 Existing Conditions (Continued)

Location	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
28. Associated & Imperial Highway	.59	A	.62	B
29. Placentia & Imperial Highway	.46	A	.54	A
32. Brea Blvd & Tonner Canyon Road	.89	D	.89	D
33. Brea Blvd & SR-57 SB On Ramp	.90	D	.90	D
34. SR-57 NB Off Ramp & Tonner Canyon Road	.07	A	.21	A
Caltrans Locations	**Delay**	**LOS**	**Delay**	**LOS**
8. SR-57 SB Ramps & Lambert Road	27.6	C	22.5	C
9. SR-57 NB Ramps & Lambert Road	24.3	C	18.3	B
26. SR-57 SB Ramps & Imperial Highway	28.2	C	26.2	C
27. SR-57 NB Ramps & Imperial Highway	29.1	C	26.4	C
33. Brea Blvd & SR-57 SB On Ramp	10.1	B	14.0	B
34. SR-57 NB Off Ramp & Tonner Canyon Road	9.3	A	13.4	B

Source: Traffic Study, 2012

LOS Criteria based on Average Delay (sec/veh):

LOS	Average Delay	ICU V/C	LOS	Average Delay	ICU V/C
A	0.0 – 10.0	.00 –.60	D	35.1 – 55.0	.81 –.90
B	10.1 – 20.0	.61 –.70	E	55.1 – 80.0	.91 – 1.00
C	20.1 – 35.0	.71 –.80	F	>80.0	>1.00

Bold = exceeds performance standard of level of service (LOS) D

[1]All-way stop – delay represents the intersections average vehicle delay

[2]Yield – delay represents the yielding movement with highest approach delay

[3]Two-way stop – delay represents the movement with highest control delay

SR-57 mainline is a ten-lane freeway (four mixed flow lanes and one high occupancy vehicle [HOV] lane in each direction); however, the SR-57 Northbound Widening Project is recently constructed and widened northbound SR-57 in the vicinity south of Lambert Road to one HOV lane, five mixed-flow lanes, and one auxiliary lane and a two-lane off-ramp to Lambert Road. For the purposes of this analysis, the existing conditions, discussed under the No Build Alternative are considered to be the conditions resulting after the completion of the SR-57 Northbound Widening Project. The northbound off-ramp is a two-lane exit ramp that widens to three lanes. The southbound off-ramp is a single lane exit ramp that widens to three lanes. The on-ramps are two lanes merging to one lane and have metering signals during peak hours. Lambert Road is a six-lane arterial road, widening to allow for turn-lanes at the intersections to the SR-57 ramps, State College Boulevard, and Pointe Drive.

1.3.1.2 Future (2040) Facilities and Operations

The average projected weekday volumes for 2040, are shown in Table 1-5, Freeway Mainline Peak Hour Volume and LOS for 2040 Conditions. The forecast volumes are demand volumes which exceed the capacity for both mainline and HOV segments. Queues would form because the demand volume cannot be served, resulting in congestion occurring outside of the peak hours. Table 1-6, Ramp Volume and Capacity Summary for 2040 Conditions, provides a summary of the future ramp configurations, capacities, peak-hour volumes and the corresponding volume to capacity ratio. Intersection LOS and ramp V/C ratios would continue to worsen in year 2040. Table 1-7, Ramp Merge/Diverge Summary for 2040 Conditions, provides information regarding the merge/diverge future conditions for the project area. For 2040, SR-57 had an Average Daily Traffic (ADT) volume near the SR-57/Lambert Road interchange of 313,700 vehicles per day, an increase of approximately 33 percent from the ADT volumes for 2011.

Table 1-5 Freeway Mainline Peak Hour Volume and LOS for 2040 Conditions

Location	Lanes			AM Peak Hour Volume			PM Peak Hour Volume		
	HOV	GP	Aux	Mainline	LOS	HOV	Mainline	LOS	HOV
Northbound									
Begin Project									
NB SR-57 south of Lambert Road	1	4	2	7,600	C	**2,400**	8,140	C	**2,200**
NB SR-57 south of Tonner Canyon Road	1	4	0	7,300	D	**2,300**	**8,400**	**E**	**2,300**
End Project									
NB SR-57 north of Tonner Canyon Road	1	4	0	7,230	D	**2,400**	**7,780**	**E**	**2,400**
Southbound									
Begin Project									
SB SR-57 south of Lambert Road	1	4	0	**8,450**	**F**	**1,640**	7,270	D	**2,080**
SB SR-57 south of Tonner Canyon Road	1	4	1	**9,450**	**F**	1,540	7,320	C	**2,180**
End Project									
SB SR-57 north of Tonner Canyon Road	1	4	0	**9,120**	**F**	1,440	7,360	D	**2,080**

Source: Traffic Study, 2012
HOV = High Occupancy Vehicle Lane; GP = General Purpose Lane (i.e., mixed-flow lane); Aux – Auxiliary Lane; LOS – Level of Service;
NB = Northbound; SB = Southbound
Bold = Level of Service (LOS) E or F (mainline), or exceeds 1,600 vehicles per hour per lane (HOV)

Table 1-6 Ramp Volume and Capacity Summary for 2040 Conditions

Location	Northbound						
	Lanes		Cap	AM Pk Hr		PM Pk Hr	
	R	Aux		Volume	V/C Ratio	Volume	V/C Ratio
No-Build - Northbound							
Imperial NB On-Ramp	1	0	1,080	740	.69	710	.66
Imperial NB Loop On-Ramp	1	0	900	780	.87	500	.55
Imperial NB Off-Ramp	1	1	2,250	1,500	.67	1,060	.47
Lambert NB On-Ramp	1	0	1,500	950	.63	1,379	.91
Lambert NB Off-Ramp	2	2	3,000	1,350	.45	1,210	.40
Tonner Canyon NB Off-Ramp	1	1	1,500	30	.02	520	.35

Table 1-6 (Continued)
Ramp Volume and Capacity Summary for 2040 Conditions

Location	Northbound						
	Lanes		Cap	AM Pk Hr		PM Pk Hr	
	R	Aux		Volume	V/C Ratio	Volume	V/C Ratio
No Build - Southbound							
Imperial SB On-Ramp	1	0	1,500	680	.45	1,170	.78
Imperial SB Loop On-Ramp	1	0	900	310	.34	560	.62
Imperial SB Off-Ramp	1.5	1	2,250	1,130	.50	1,440	.64
Lambert SB On-Ramp	1	0	1,500	1,200	.80	1,360	.91
Lambert SB Off-Ramp	1	0	1,500	2,100	**1.40**	1,310	.87
Tonner Canyon SB On-Ramp	1	1	1,500	430	.29	60	.04

Source: Traffic Study, 2012
HOV = High Occupancy Vehicle Lane; R – Ramp termini lanes (1.5 denotes a two-lane off-ramp with one dedicated and one optional lane, or a two-lane on-ramp entering the freeway as one merge lane and an auxiliary lane); Aux – Auxiliary Lane; VOL – Volume; Cap – Capacity; V/C Ratio – Volume to Capacity ratio; NB = Northbound; SB = Southbound
Bold = exceeds V/C ratio of 1.0

Table 1-7 Ramp Merge/Diverge Summary for 2040 Conditions

Location	AM Peak Hour				PM Peak Hour			
	Volumes		Density	LOS	Volumes		Density	LOS
	Fwy	Ramp			Fwy	Ramp		
SR-57 at Imperial								
NB Merge	6,860	740	21.5	C	7,430	710	22.5	C
SB Diverge	8,450	1,130	--	**F**	7,270	1,440	23.2	C
SR-57 at Lambert								
NB Merge (7a Loop)	6,350	430	26.0	C	7,030	520	29.1	D
NB Merge (7a Direct)	6,780	520	28.2	D	7,550	850	33.7	D
NB Merge (9)	6,350	950	30.2	D	7,030	1,370	**36.1**	**E**
NB Diverge	7,700	1,350	<1.0	A	8,240	1,210	<1.0	A
SB Merge	7,350	1,200	--	**F**	6,010	1,360	32.4	D
SB Diverge (No Build)	9,450	2,100	**53.8**	**F**	7,320	1,310	**40.4**	**E**
SB Diverge (7A and 9)	9,450	2,100	**44.4**	**F**	7,320	1,310	31.0	D
SR-57 at Tonner Canyon								
NB Diverge	7,200	30	33.4	D	8,300	520	**40.8**	**E**
SB Merge	9,120	430	--	**F**	7,360	60	27.2	C

Source: Traffic Study, 2012
FWY. = Freeway; **Bold** = Level of service (LOS) E or F
LOS Criteria based on Density (pc/mi/ln):

A	≤ 10	D	> 28-35
B	>10-20	E	> 35
C	> 20-28	F	Demand exceeds capacity (mainline or ramp)

Table 1-8, 2040 Conditions, provides Future (2040) LOS on Lambert Road within the City of Brea and Caltrans jurisdictions.

Table 1-8 2040 Conditions

Intersection	No-Build			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
3. Brea Blvd and Central/State College	.73	C	.74	C
6. Brea Blvd and Lambert Road	.85	D	.79	C
7. State College and Lambert Road	.69	B	.79	C
10. Pointe Dr and Lambert Road	.64	B	.69	B
11. Associated and Lambert Road	.78	C	.55	A
12. Kraemer Blvd and Lambert Road	.55	A	.85	D
23. Brea Blvd and Imperial Hwy	.83	D	.79	C
25. State College and Imperial Hwy	.75	C	.87	D
26. SR-57 SB Ramps and Imperial Hwy	.70	B	.71	C
27. SR-57 NB Ramps and Imperial Hwy	.83	D	.80	C
28. Associated and Imperial Hwy	.73	C	**.97**	**E**
29. Placentia and Imperial Hwy	.73	C	.76	C
32. Brea Blvd and Tonner Canyon	**.93**	**E**	**1.02**	**F**
33. Brea Blvd and SR-57 SB Ramp	**.92**	**E**	**1.02**	**F**
34. SR-57 NB Off and Tonner Canyon	.07	A	.35	A
Intersection	**Delay**	**LOS**	**Delay**	**LOS**
7. State College and Lambert Road	**61.2**	**E**	**57.3**	**E**
8. SR-57 SB Ramps and Lambert Road	**80.0**	**F**	46.4	D
9. SR-57 NB Ramps and Lambert Road	29.2	C	28.8	C

Source: Traffic Study, 2012

LOS Criteria based on Average Delay (sec/veh):

LOS	Average Delay	ICU V/C	LOS	Average Delay	ICU V/C
A	0.0 – 10.0	.00 –.60	D	35.1 – 55.0	.81 –.90
B	10.1 – 20.0	.61 –.70	E	55.1 – 80.0	.91 – 1.00
C	20.1 – 35.0	.71 –.80	F	>80.0	>1.00

Bold = exceeds performance standard of level of service (LOS) D

1.3.2 ACCIDENT INFORMATION

Collision data reports from the Traffic Accident Surveillance and Analysis System (TASAS) were run by Caltrans District 12 on May 6, 2013. The TASAS data includes collisions that occurred during the thirty-six (36) month period between July 1, 2008 and June 30, 2011 on SR-57 from post mile (PM) 20.15 to PM 21.90. Table 1-9, TASAS SR-57 Mainline Collision Rates, and Table 1-10, TASAS Ramp Collision Rates, summarize the collision data for SR-57 and the ramps to Lambert Road.

Table 1-9 TASAS SR-57 Mainline Collision Rates

Location		Number of Collisions					Actual Rates[1]			Average Rates[1]		
Begin PM	End PM	Total	Fatal	Injury	Wet	Dark	Fat	F+I	Tot[5]	Fat	F+I	Tot[5]
Northbound												
20.15	20.40	11	0	4	3	1	0.000	0.13	0.35	0.003	0.26	0.90
20.40	20.65	4	0	1	0	2	0.000	0.03	0.13	0.004	0.30	0.97
20.65	20.90	19	0	5	2	4	0.000	0.16	0.61	0.004	0.30	0.97
20.90	21.15	38	0	7	3	11	0.000	0.23	**1.26**	0.004	0.29	0.94
21.15	21.40	12	0	1	0	2	0.000	0.03	0.40	0.005	0.28	0.90
21.40	21.65	6	0	2	1[3]	3	0.000	0.07	0.20	0.005	0.28	0.90
21.65	21.90	30	0	8	4[3]	14	0.000	0.27	**1.00**	0.005	0.28	0.90
Southbound												
20.15	20.40	18	0	6	1	2	0.000	0.19	0.57	0.003	0.26	0.90
20.40	20.65	23	0	7	1	2	0.000	0.22	0.73	0.004	0.30	0.97
20.65	20.90	47[2]	0	12	2	7	0.000	**0.38**	**1.50**	0.004	0.30	0.97
20.90	21.15	53	0	18	13	14	0.000	**0.60**	**1.76**	0.004	0.29	0.94
21.15	21.40	22	0	6	2	3	0.000	0.20	0.73	0.005	0.28	0.90
21.40	21.65	27	0	5	2	5	0.000	0.17	0.90	0.005	0.28	0.90
21.65	21.90	26	0	5	2	6	0.000	0.17	0.87	0.005	0.28	0.90

PM = Post Mile; Fat = Fatality; F+I = Fatality and Injury; Tot = Total; Wet = driving conditions were wet; Dark = driving conditions were dark

1. For mainline sections, the collision rate is the number of collisions per million vehicle-miles. For ramps, the collision rate is the number of collisions per million vehicles.
2. Table C location
3. Wet Table C location
4. **BOLD** indicates a collision rate that is higher than the statewide average collision rate for similar facilities.
5. Tot = Total = F + I + Property damage only.

In general, the collision rates on SR-57 between PM 20.15 and PM 21.65 during the 36-month period are lower than the statewide average for similar facilities; however, four segments on SR-57 have collision rates that are higher than the statewide average for the same time period. Collision types include rear end, sideswipe, hit object, and overturn. Rear end and sideswipe collisions are considered congestion-related accidents.

- Northbound SR-57 PM 20.90 to 21.15: The following collision types were reported: rear end (31.6 percent); sideswipe (42.1 percent); hit object (18.4 percent); and overturn (2.6 percent). The primary collision factors for the SR-57 segment included: speeding (36.8 percent); improper turn (13.2 percent); and other violations (42.1 percent). The majority of the collisions (55.3 percent) occurred during the heavily congested afternoon peak period.

- Northbound SR-57 PM 21.65 to 21.90: The following collision types were reported: rear end (60.0 percent); sideswipe (26.7 percent); and hit object (6.7 percent). The primary collision factors for the SR-57 segment included: speeding (63.3 percent); improper turn (13.3 percent); and other violations (20.0 percent). The majority of the collisions (43.3 percent) occurred during the heavily congested afternoon peak period. This segment is also identified as an area with ponding, thus resulting in wet conditions.

- Southbound SR-57 PM 20.65 to 20.90: The following collision types were reported: rear end (63.8 percent); sideswipe (27.7 percent); and hit object (6.4 percent). The primary collision factors for the SR-57 segment included: speeding (61.7 percent); improper turn (10.6 percent); and other violations (23.4 percent). The collisions occurred across all lanes on this SR-57 mainline segment. The majority of the collisions (44.6 percent) occurred during the heavily congested morning peak period.

- Southbound SR-57 PM 20.90 to 21.15: The following collision types were reported: rear end (62.3 percent); sideswipe (17.0 percent); and hit object (17.0 percent). The majority of hit object collisions (78 percent) involved the median barrier. The primary collision factors for the SR-57 segment included: speeding (75.5 percent); improper turn (5.7 percent); and other violations (13.2 percent). The majority of the collisions (56.6 percent) occurred during the heavily congested morning peak period. The majority of the collisions (86.8 percent) occurred in the left and interior lanes. This area contains nonstandard stopping sight distance condition, created by a median barrier sight obstruction, and nonstandard median shoulder width.

Table 1-10 TASAS Ramp Collision Rates

Location	Total	Actual Rates[1]			Average Rates[1]		
		Fat	F+I	Tot[4]	Fat	F+I	Tot[4]
Northbound Off-ramp to Lambert Road (PM 20.730)	15	0.000	0.05	0.78	0.003	0.35	1.01
Southbound On-ramp from Lambert Road (PM 20.741)	29	0.000	0.16	**1.58**	0.002	0.22	0.63
Northbound On-ramp from Lambert Road (PM 21.158)	12	0.000	0.00	1.00	0.002	0.22	0.63
Southbound Off-ramp to Lambert Road[2] (PM 21.204)	39	0.000	**0.70**	**2.09**	0.003	0.35	1.01

PM = Post Mile; Fat = Fatality; F+I = Fatality and Injury; Tot = Total
1. For mainline sections, the collision rate is the number of collisions per million vehicle-miles. For ramps, the collision rate is the number of collisions per million vehicles.
2. Wet Table C location
3. **BOLD** indicates a collision rate that is higher than the statewide average collision rate for similar facilities.
4. Tot = Total = F + I + Property damage only.

The collision data indicates that collisions occurred at a lower rate than statewide average for similar facilities on the Lambert Road northbound on- and off-ramps. Collisions occurred at a higher rate on the Lambert Road southbound on- and off-ramps. Collision types include rear end, sideswipe, hit object, and overturn. Rear end and sideswipe collisions are considered congestion-related accidents.

- Lambert Road Southbound On-ramp (PM 20.741): The following collision types were reported: rear end (27.6 percent); sideswipe (41.4 percent); hit object (10.3 percent); and broadside (17.2 percent). The primary collision factors for the southbound on-ramp included: speeding (24.1 percent); improper turn (27.6 percent); and other violations (37.9 percent). The majority of collisions (51.7 percent) occurred within the ramp intersection area. The majority of collisions (58.5 percent) were equally balanced between the heavily congested morning and afternoon peak periods.

- Lambert Road Southbound Off-ramp (PM 21.204): The following collision types were reported: rear end (53.8 percent); sideswipe (15.4 percent); hit object (7.7 percent); and broadside (17.9 percent). The primary collision factors for the southbound off-ramp included: speeding (46.2 percent); improper turn (12.8 percent); and other violations (20.5 percent). The ramp exit from SR-57 experienced 53.8 percent of the collisions, while 41.0 percent of the collisions occurred within the ramp intersection area. The majority of collisions (51.3 percent) were equally balance between the heavily congested morning and afternoon peak periods.

1.4 PROJECT DESCRIPTION

This section describes the proposed project and the design alternatives that were developed to meet the identified need through accomplishing the defined purpose, while avoiding or minimizing environmental impacts. The range of reasonable alternatives was identified based on vehicle

delays, level of service (LOS), queuing, and conflicting turning movements at the ramp intersections. There are currently two Build Alternatives that will be analyzed, Build Alternative 7A (Preferred Alternative) and Build Alternative 9, as defined in the approved May 2007 Project Study Report (PSR), as well as the No Build Alternative. Build Alternative 9 was an alternative considered but rejected in the 2007 PSR; however, the Project Development Team (PDT) evaluated the year 2040 traffic forecast volumes and has determined that the year 2040 traffic forecasts are substantially lower than the year 2040 forecast volumes in the approved 2007 PSR. This reduction in forecast traffic volumes for year 2040 allows Build Alternative 9 to adequately accommodate the year 2040 forecast traffic and again be a viable alternative.

1.4.1 BUILD ALTERNATIVES

Both Build Alternatives include a diamond configuration for the SR-57 southbound ramps/Lambert Road intersection from PM 20.1 to 21.8 as depicted in Figure 1-3, Project Limits. The common design features for both Build Alternatives 7A and 9 are as follows:

- The southbound SR-57 median shoulder would be widened to 10 feet through the left-hand curve north of Lambert Road to provide standard horizontal sight distance.
- Three southbound SR-57 general purpose lanes would be widened to 12 feet through the left-hand curve north of Lambert Road to provide standard lane width.
- The southbound SR-57 off-ramp would be reconfigured from a single lane to a two-lane off-ramp that widens to four lanes at the intersection with Lambert Road. This widening would provide an auxiliary lane on southbound SR-57.
- A third receiving lane would be added to the southbound on-ramp at the intersection with Lambert Road. The ramp would merge from three lanes to one lane as it approaches SR-57. This results in the widening of the Brea overhead bridge.
- Widen the eastbound side of Lambert Road from 1,000 feet west of State College Boulevard to the southbound SR-57 ramp intersection in order to provide two right-turn lanes from eastbound Lambert Road to the SR-57 southbound on-ramp.
- The Lambert Road profile would be lowered between the southbound and northbound SR-57 ramp intersections to provide 15-foot standard vertical clearance under the Lambert Road Undercrossing.
- Tie-back retaining walls would be constructed on the eastbound and westbound sides of Lambert Road under the Lambert Road Undercrossing to accommodate roadway widening.
- The Lambert Road crosswalk at the northbound SR-57 ramp intersection would be removed. Pedestrians would continue to have access across Lambert Road at the Lambert Road/Pointe Drive and Lambert Road/State College Boulevard intersections, east and west of SR-57, respectively. This crosswalk removal would enhance traffic operations of the ramp and not compromise safe pedestrian travel on Lambert Road, through the SR-57/Lambert Road interchange and intersection.

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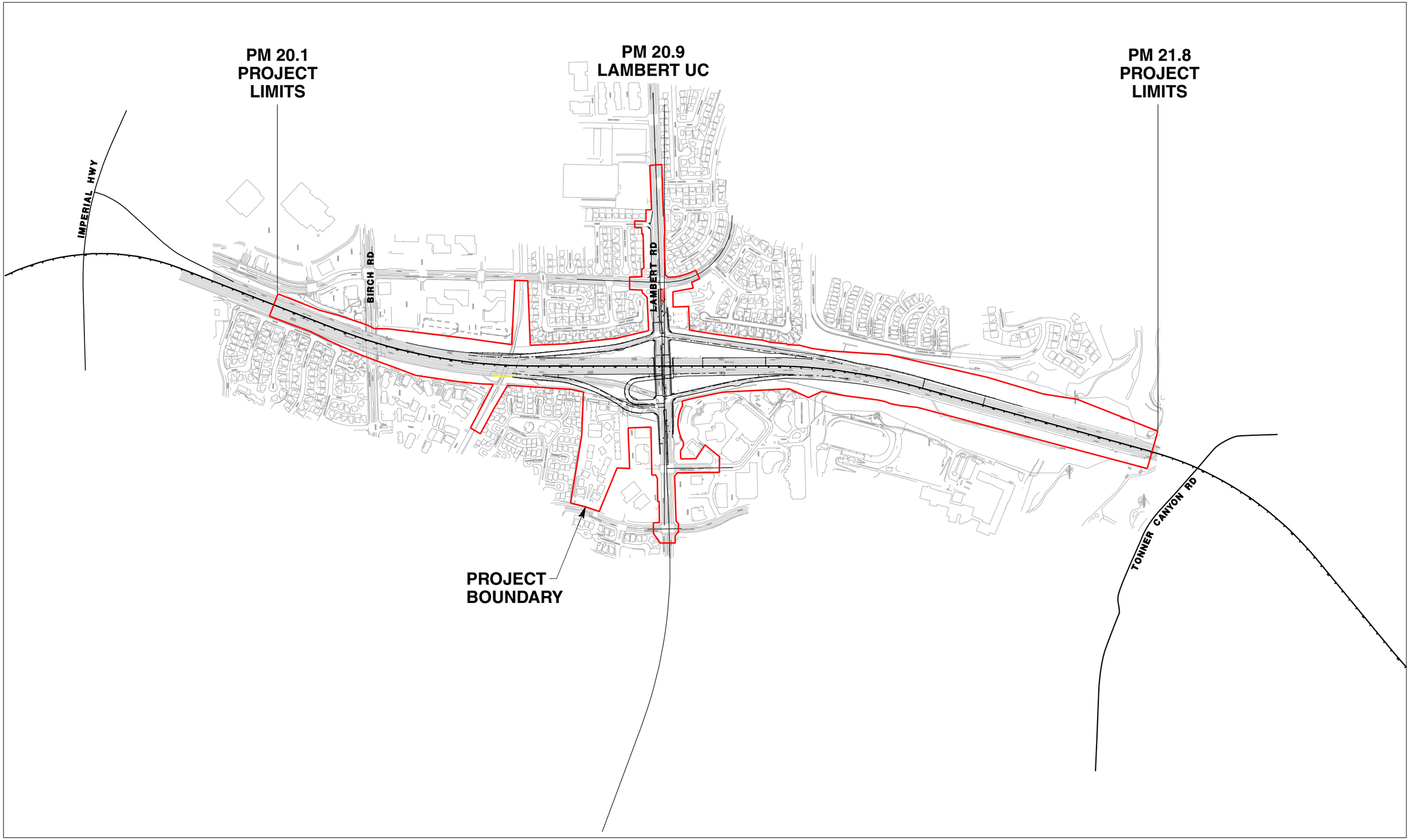

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Project Limits

Figure 1-3

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Within and along Lambert Road are a number of utilities which would be relocated by either build alternative. The two main construction efforts affecting the utilities would be the widening of Lambert Road and the lowering of Lambert Road between State College Boulevard and Pointe Drive. The widening of Lambert Road would directly impact the SCE overhead power distribution lines along the eastbound and westbound curb line. The power lines would be relocated to the back of sidewalk along their respective sides. The relocation would affect 16 power poles. The lowering of Lambert Road is required to meet the vertical clearance standard for the bridge structure. Lowering of Lambert Road would reduce the cover over the existing utilities. For those owners not allowing the encasement of their facilities or the reduction in cover caused by the lowering, new pipelines or conduits would be constructed at the appropriate depth. The owners with potential relocation (lowering in place) are AT&T, Chevron Pipe Line, Crimson Pipeline, ExxonMobil Pipeline, Plains All American Pipeline, SCE Fuel Operations, and SoCal Gas. The impacted length of each utility affected by the lowering of Lambert Road is approximately 450 feet. Additional coordination with owners to determine relocation or protection requirements would commence with the selection of the design alternative.

Existing lighting would be relocated as necessary within the project limits. Additional lighting would be provided where required per Caltrans standard design. Existing landscaping would be replaced to maintain the existing character. The details for replacing the existing landscaping would be coordinated with Caltrans and the City during final design.

Two staging and storage areas are proposed for the project: 1) City right-of-way (ROW) for the former railroad at Brea Overhead, and 2) the infield area of the northbound loop on-ramp (only available for Alternative 7A). Access points to the proposed project site would be on State College, Lambert Road, Pointe Drive, and Associated Way (Alternative 7A only).

Lambert Road would require temporary closures throughout the construction period, for staging, equipment movement, grading, and other construction activities. These full closures would be short term and conducted at night to minimize impacts to peak-hour traffic. Ramp closures would be conducted at night, and all ramps would re-open the following morning. The longest anticipated ramp closure would be a weekend closure. Detoured traffic would make use of State College Boulevard, Associated Road, Kraemer Boulevard, and Birch Street. No traffic would be diverted to the north along State College Boulevard because there is no link between Tonner Canyon Road and Lambert Road east of SR-57. Alternatively, traffic would be detoured along the SR-57 mainline to adjacent interchanges. Westbound traffic east of SR-57 would use the Lambert Road northbound on-ramp, exit and re-enter on Tonner Canyon Road, and then finally exit at the Lambert Road southbound off-ramp to continue westbound. Eastbound traffic west of SR-57 would be detoured to the Lambert Road southbound on-ramp, exit and re-enter at Imperial Highway, and exit at the Lambert Road northbound off-ramp.

SR-57 would not require closures, and thus, mainline freeway traffic would not be detoured as part of the proposed project; however, during SR-57/Lambert Road ramp closures, traffic would be detoured to Imperial Highway and would use State College, Kraemer Boulevard, Associated Road, and Birch Street to reach destinations east and west of the interchange. Ramp closures would be short term at night to minimize impacts to peak-hour traffic.

1.4.1.1 Build Alternative 7A (Preferred Alternative)

Build Alternative 7A (Preferred Alternative) includes all common design features discussed above. Build Alternative 7A (Preferred Alternative) would also include the following design features in addition to the common design features. Refer to Figures 1-4a through 1-4f, Site Plan –

Alternative 7A, for a graphical representation of proposed project features. Figure 1-5, Existing Wall Features, provides a graphical representation of existing sound and retaining walls, including those completed from the SR-57 Northbound Widening Project. No retaining walls, beyond replacing existing walls, are proposed under Build Alternative 7A (Preferred Alternative). One new soundwall is proposed in the northeast quadrant of the proposed project, at the El Torito Grill Restaurant.

- The northbound SR-57 ramps would be reconfigured to provide a loop on-ramp for eastbound Lambert Road travelers in the southeast quadrant of the interchange. This would eliminate the left-turn movement from eastbound Lambert Road to the northbound SR-57 on-ramp. The loop on-ramp would require the Lambert Road undercrossing to be widened to accommodate the new ramp.
- The northbound SR-57 off-ramp would be realigned to allow for the new eastbound Lambert Road to northbound SR-57 loop on-ramp.
- The northbound SR-57 median shoulder would be widened to a standard 10 feet and all travel lanes would be widened to a standard 12 feet.
- The current northbound SR-57 on-ramp would remain to provide northbound SR-57 access for westbound Lambert Road travelers. The existing on-ramp would be widened to provide for standard inside and outside shoulders.
- Additional right-of-way would be acquired within the southeast quadrant of the SR-57 / Lambert Road interchange to allow for the construction of the new eastbound Lambert Road to northbound SR-57 loop on-ramp and the realignment of the northbound SR-57 off-ramp.
- 78,800 square feet of ROW would be permanently acquired under this alternative.
- Retaining walls would be required for the northbound off-ramp, southbound on-ramp, northbound loop on-ramp, and southbound off-ramp auxiliary lane. Wall heights would vary based on location.
- Storm water best management practices (BMPs) are proposed for ramp infield areas where slopes are 4:1 (horizontal to vertical) or flatter. Existing storm drain facilities would be relocated where necessary. Additional drainage facilities would be added where necessary, which are to be identified during final design.

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 7A - Index

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Figure 1-4a

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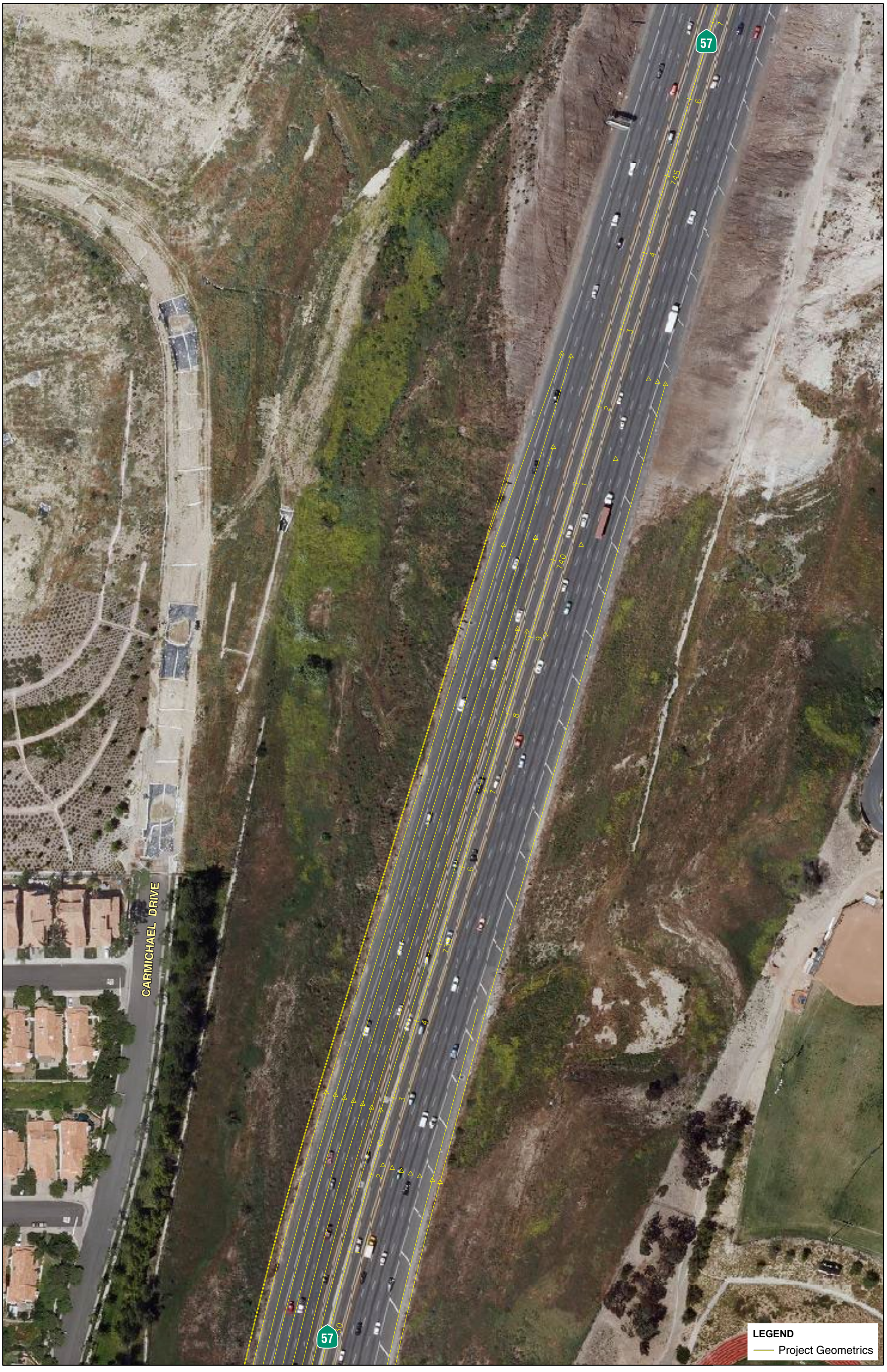

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 7A - Sheet A

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Figure 1-4b

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 7A - Sheet B

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Figure 1-4c

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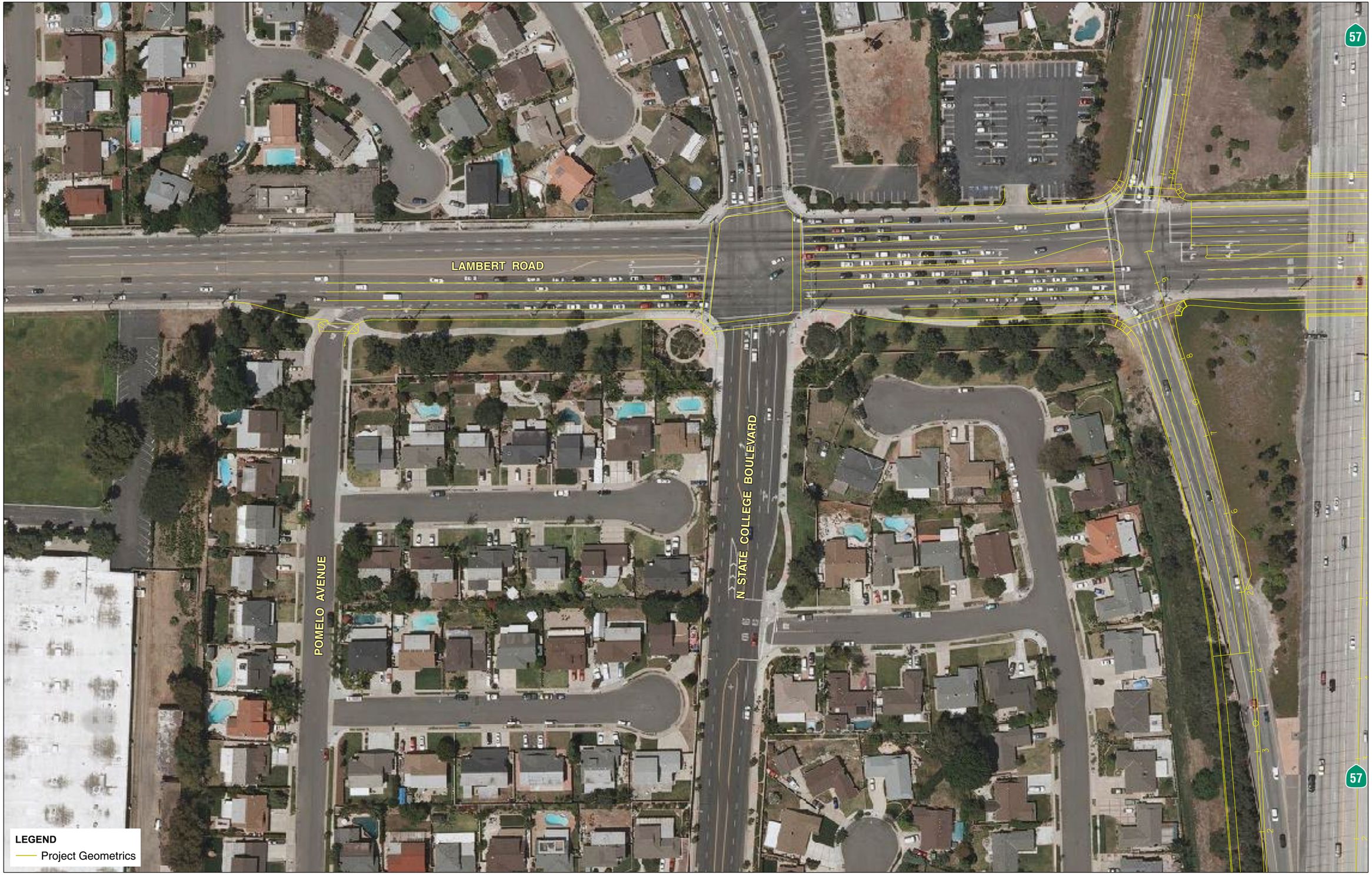

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 7A - Sheet C

Figure 1-4d

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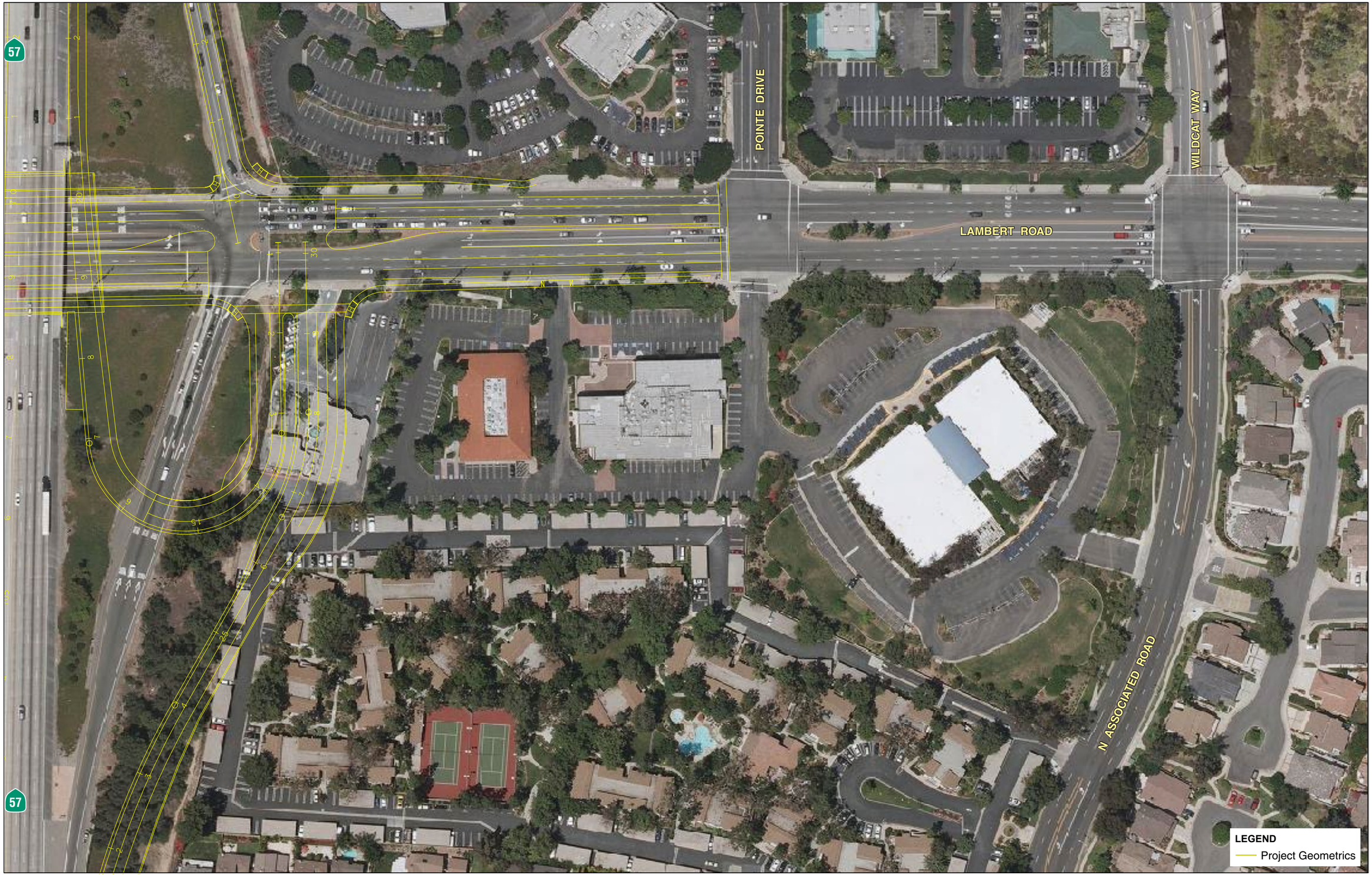

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 7A - Sheet D

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Figure 1-4e

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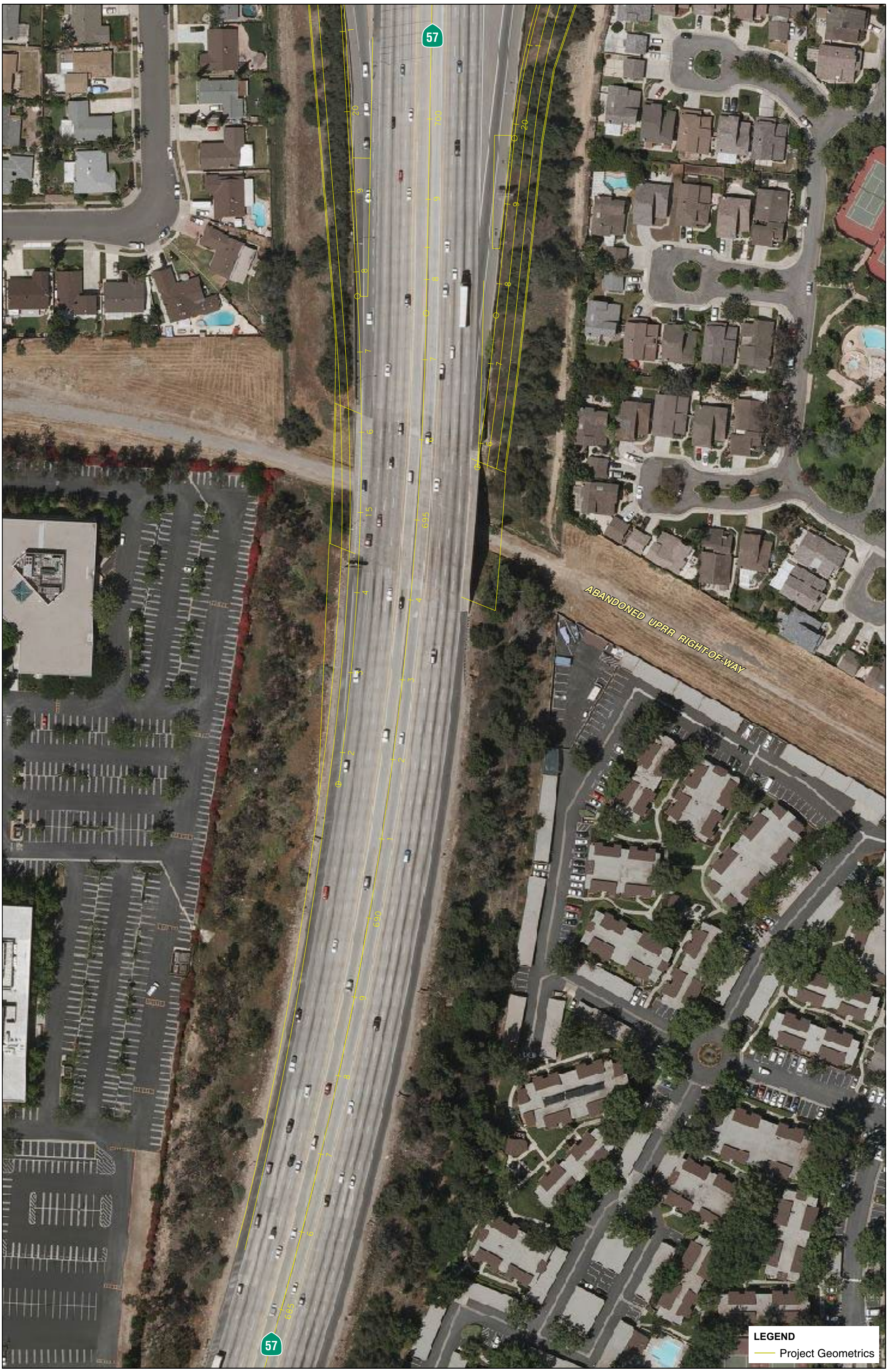

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 7A - Sheet E

Figure 1-4f

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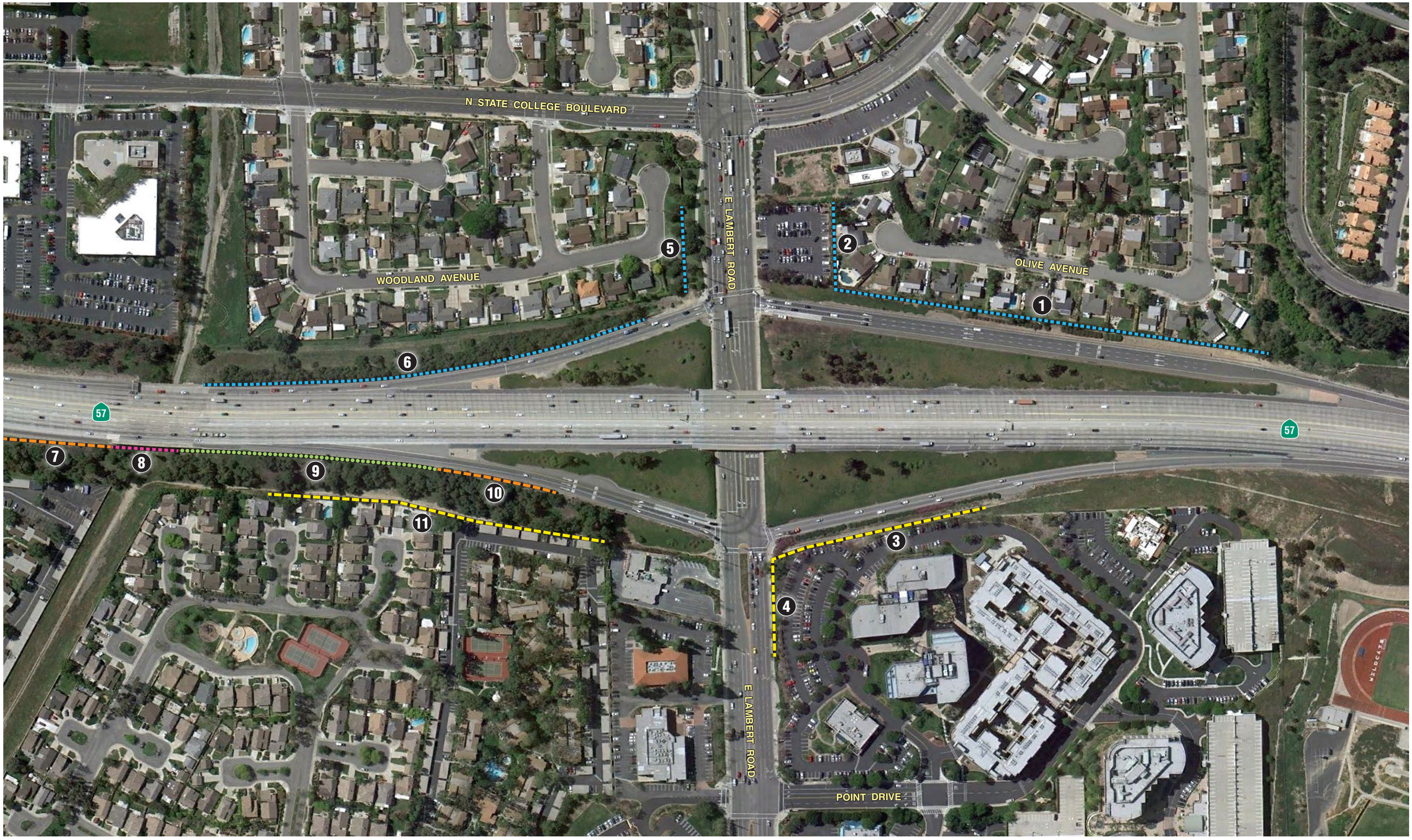

Existing Retaining Wall
Existing Soundwall
SR-57 Northbound Widening Project Retaining Wall
SR-57 Northbound Widening Project Soundwall
SR-57 Northbound Widening Project Combination Retaining Wall / Soundwall

not to scale

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Existing Wall Features

Figure 1-5

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1.4.1.2 Build Alternative 9

Build Alternative 9 would provide a diamond configuration which includes all common design features discussed above. Build Alternative 9 would also include the following design features in addition to the common design features. Refer to Figures 1-6a through 1-6f, Site Plan – Alternative 9, for a graphical representation. Refer to Figure 1-5, Existing Wall Features, which provides a graphical representation of existing sound and retaining walls, including those completed from the SR-57 Northbound Widening Project. No new retaining walls, beyond replacing existing walls, are proposed under Build Alternative 9. One new soundwall is proposed in the northeast quadrant of the proposed project, at the El Torito Grill Restaurant.

- Widen northbound SR-57 on-ramp from two lanes to three lanes.
- Continue to allow left-turn movements from eastbound Lambert Road to the northbound SR-57 on-ramp.
- 26,720 square feet of ROW would be permanently acquired under this alternative.
- Replacement of existing retaining walls would be required for the northbound SR-57 off-ramp, southbound SR-57 on-ramp, and southbound SR-57 off-ramp auxiliary lane. Wall heights would vary based on location.
- Storm water BMPs are proposed for ramp infield areas where slopes are 4:1 (horizontal to vertical) or flatter.
- Existing storm drain facilities would be relocated where necessary; specific locations would be identified during final design.

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Site Plan • Alternative 9 - Index

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Figure 1-6a

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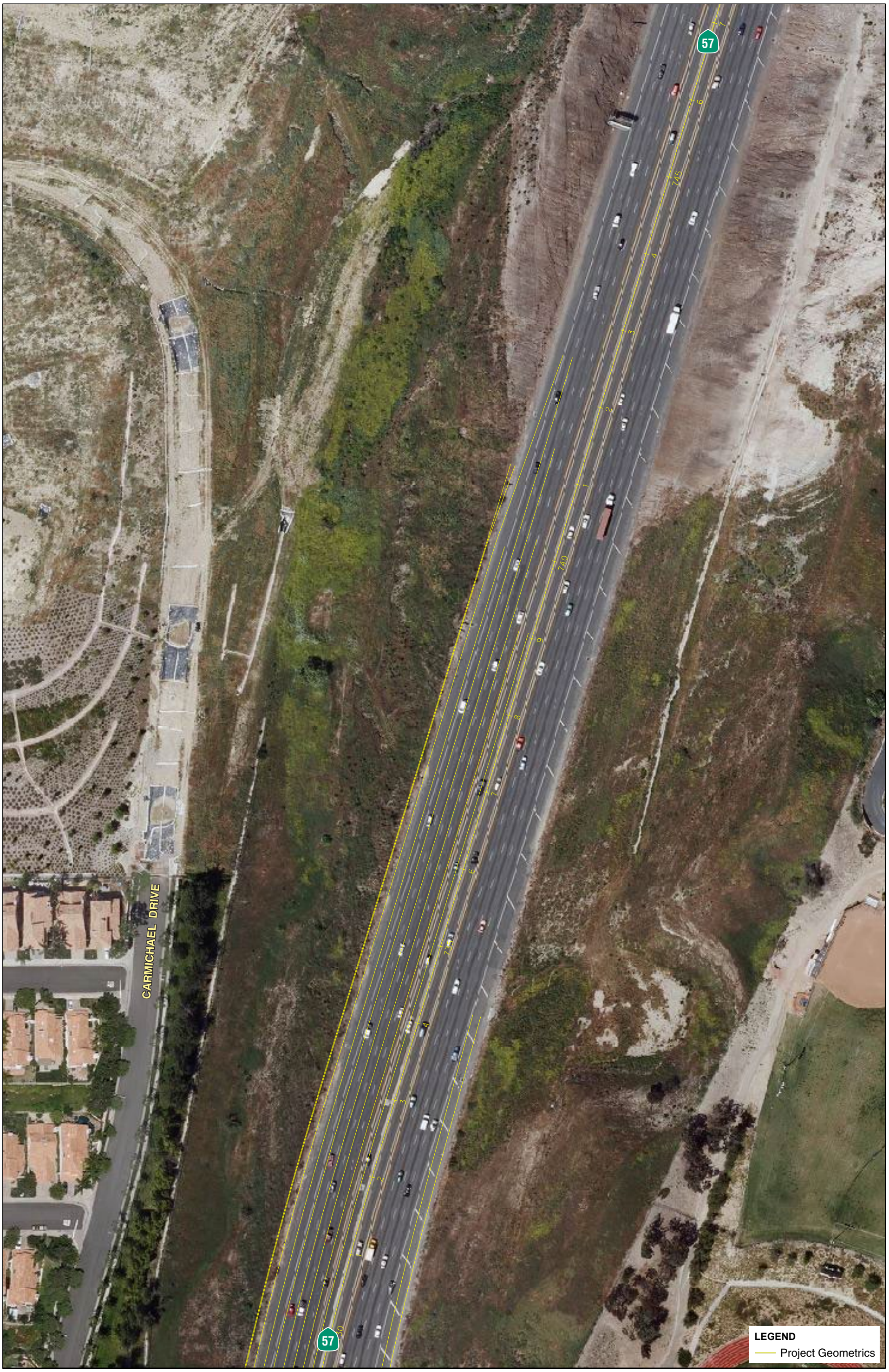

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 9 - Sheet A

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Figure 1-6b

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 9 - Sheet B

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Figure 1-6c

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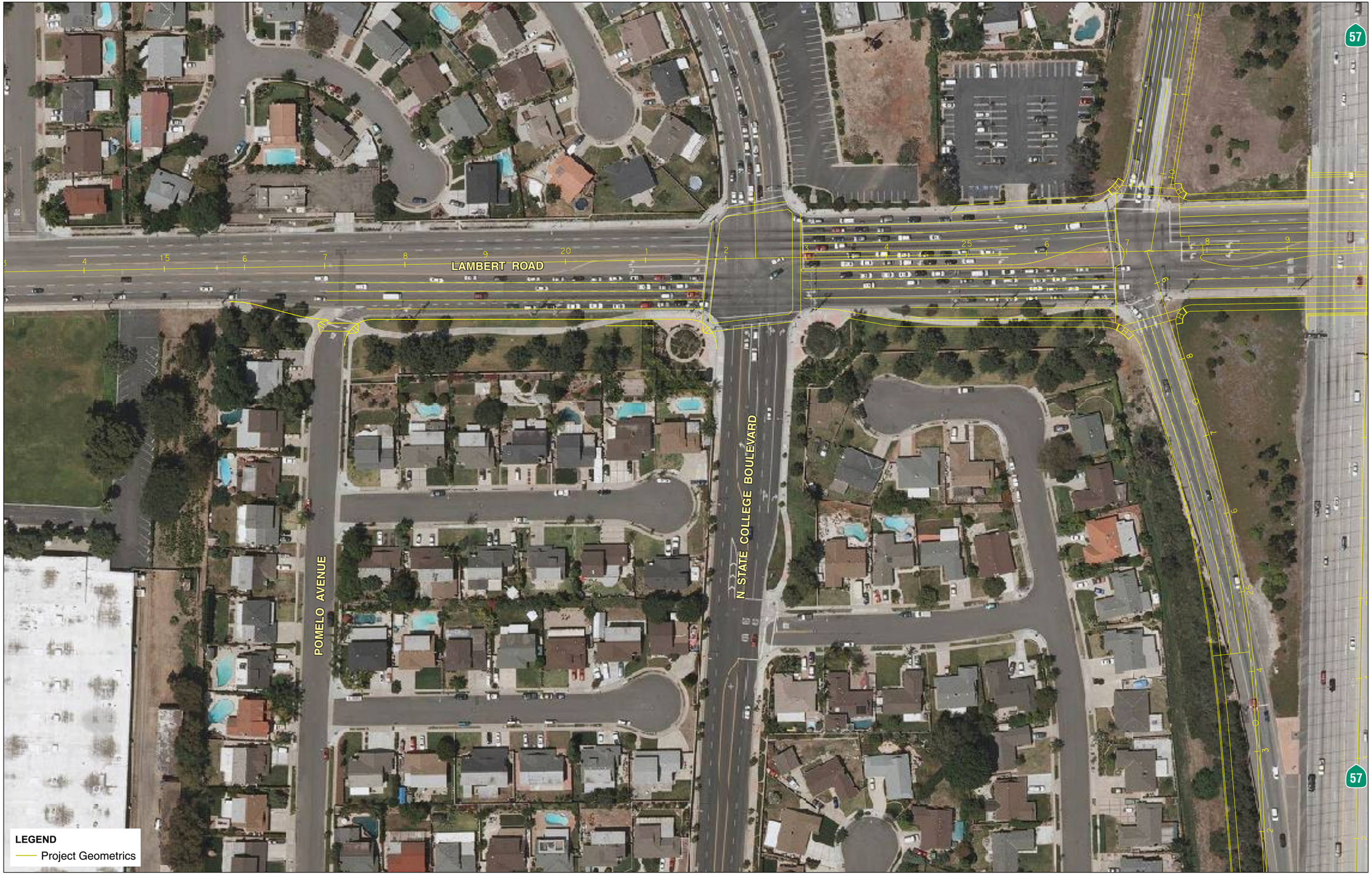

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 9 - Sheet C

Figure 1-6d

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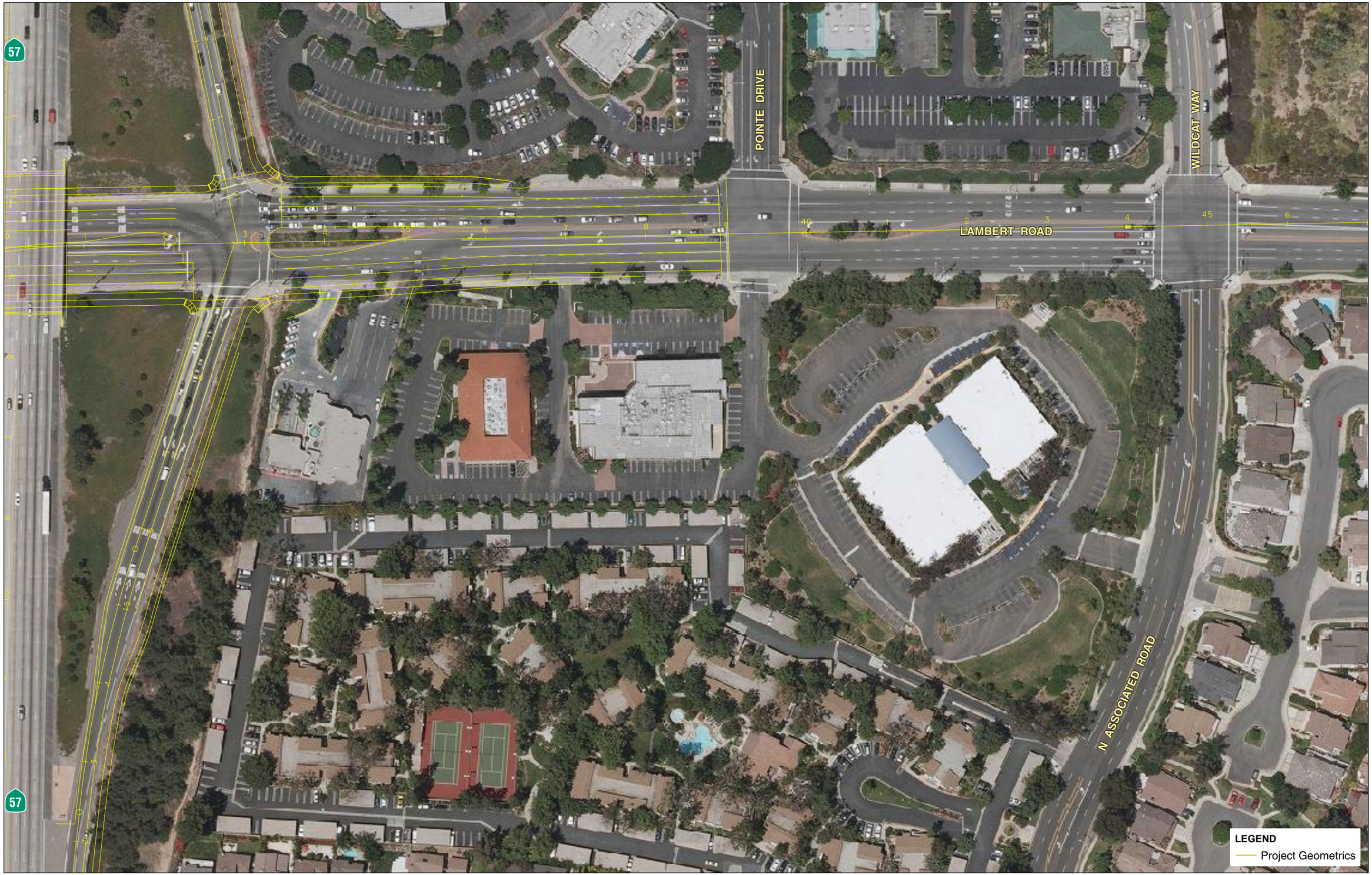

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 9 - Sheet D

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Figure 1-6e

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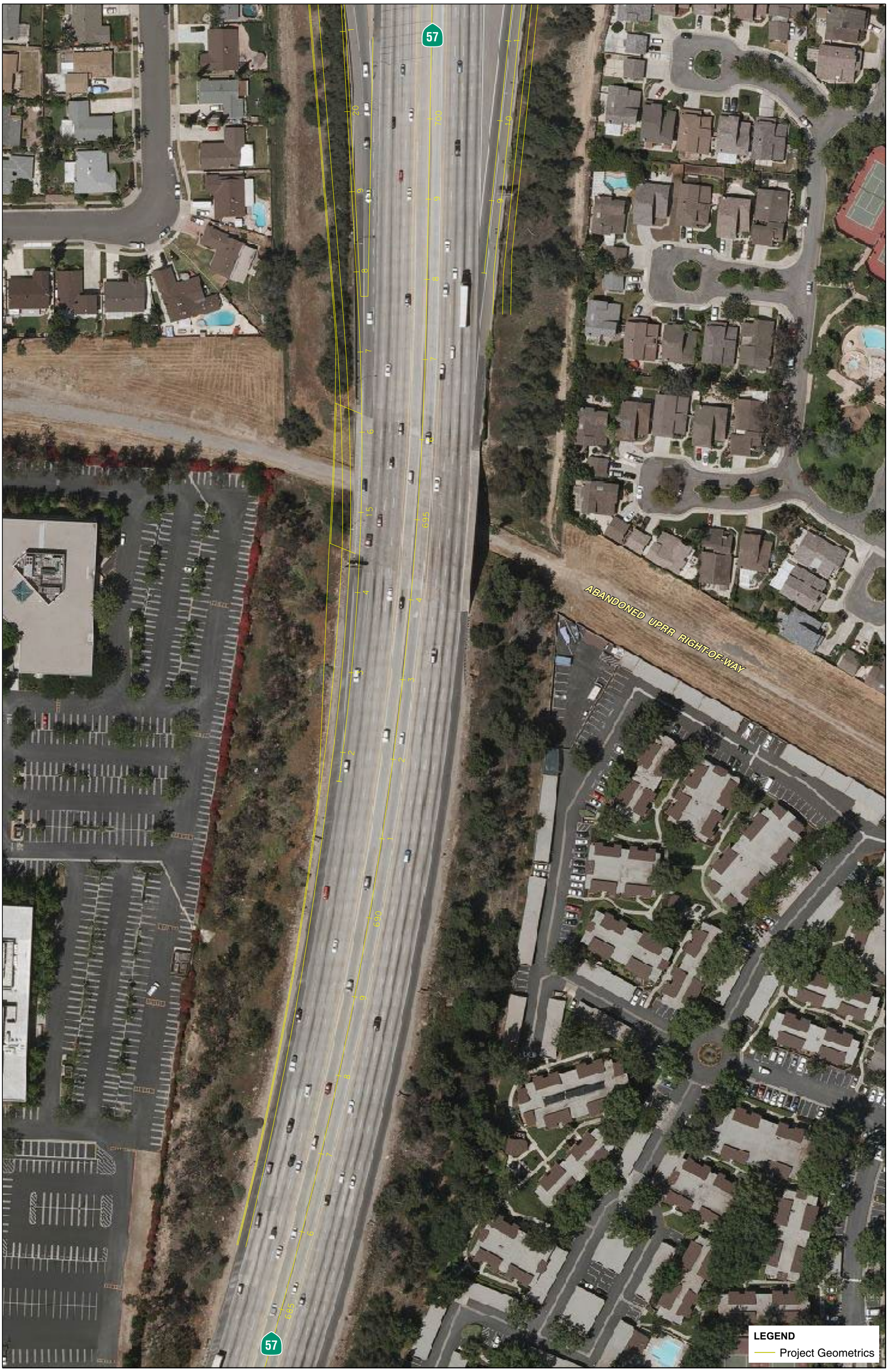

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Site Plan • Alternative 9 - Sheet E

Figure 1-6f

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1.4.2 TRANSPORTATION SYSTEM MANAGEMENT (TSM) AND TRANSPORTATION DEMAND MANAGEMENT (TDM) ALTERNATIVES

Although Transportation System Management measures alone could not satisfy the purpose and need of the proposed project, the following Transportation System Management measures have been incorporated into the Build Alternatives for the proposed project: maintain existing ramp metering system, coordinate intersection signals, provide an auxiliary lane on southbound SR-57, and provide eight-foot, Americans with Disabilities Act (ADA)-compliant sidewalks along Lambert Road.

1.4.3 NO BUILD ALTERNATIVE

The No Build Alternative assumes that no improvements are made to the SR-57/Lambert Road interchange. The No Build Alternative would maintain the existing conditions, which include those improvements being provided by the SR-57 Northbound Widening Project recently constructed. Under the No Build Alternative, the performance of the interchange would continue to deteriorate with the forecasted 20 percent increase in traffic by the year 2040. The adjacent SR-57 Northbound Widening Project provides an additional general purpose lane and auxiliary lane on SR-57 through the SR-57/Lambert Road interchange. The vertical clearance (14 feet 9 inches) under the Lambert Road Undercrossing would remain nonstandard. Existing ramp metering would remain in place at the SR-57 on-ramps. Eight-foot sidewalks would remain in place. Lambert Road is not designated as a bicycle route; therefore, a lack of a separated bicycle lane would remain.

1.5 COMPARISON OF ALTERNATIVES

Both Build Alternatives 7A and 9 are viable and support the project Purpose and Need. However, the ways in which each alternative achieves those objectives, and the benefits delivered by each alternative, are different.

Build Alternative 7A (Preferred Alternative) maintains the same diamond interchange configuration on the west side of the interchange for the southbound on and off ramps (similar to existing condition). Build Alternative 7A (Preferred Alternative) achieves acceptable levels of service for traffic operations through the construction of roadway widening, additional turn lanes, and a new northbound loop on-ramp to eliminate the conflicting high volume movements (high volume eastbound left turns opposing high volume westbound through movements) at the northbound ramp intersection. This configuration maximizes the congestion reduction that can be delivered by the project through the more balanced distribution of traffic across all eastbound lanes. Further, this alternative increases the spacing between the ramp intersections, which provides additional vehicle queue storage that optimizes efficient operation of the ramp intersections. The addition of the loop on-ramp necessitates a full acquisition of the Brea Auto Spa property and a partial acquisition of the Country Woods apartment complex in the southeast quadrant of the interchange. As noted in Table 3-4 of the Traffic Study (July 2012), Build Alternative 7A (Preferred Alternative) would reduce congestion related delay within the interchange by approximately 43 percent.

Build Alternative 9 maintains the same diamond interchange configuration and the proposed improvements do not require a substantial amount of right of way acquisition. Build Alternative 9 achieves acceptable levels of service for traffic operations through roadway widening and the addition of turning lanes. The operational limitation of maintaining the diamond interchange configuration is that the conflicting high volume movements (high volume left turns opposing high

volume through movements) in both the eastbound and westbound directions are not reduced and limits the amount of congestion reduction that can be delivered by the project. As noted in Table 3-4 of the Traffic Study (July 2012), Build Alternative 9 would reduce congestion related delay within the interchange by approximately 31 percent.

Build Alternative 7A (Preferred Alternative) is able to achieve 12 percent more reduction in congestion related delay primarily due to three factors: 1) the new northbound loop on-ramp eliminates the conflicting high volume movements (high volume eastbound left turns opposing high volume westbound through movements) at the northbound ramp intersection, 2) more balanced distribution of through and turning movements across all eastbound lanes, and 3) increased spacing between the ramp intersections, which provides additional vehicle queue storage.

After comparing and weighing the benefits and impacts of the feasible alternatives, the Project Development Team (PDT) has identified a preferred alternative. Final identification of a preferred alternative occurred after the public review and comment period.

After the public circulation period, all comments were considered, and the PDT recommended a preferred alternative and the Caltrans District Director made the final determination of the proposed project's effect on the environment. In accordance with CEQA, no unmitigable significant adverse impacts were identified and Caltrans has prepared a Mitigated Negative Declaration (MND). Similarly, the Caltrans District Director determined the action does not significantly impact the environment, Caltrans, as assigned by FHWA, has issued a Finding of No Significant Impact (FONSI) in accordance with NEPA.

1.6 IDENTIFICATION OF A PREFERRED ALTERNATIVE

On April 9, 2015, the PDT decided to recommend Alternative 7A as the Preferred Alternative. In making this selection, the PDT compared the alternatives analyzed in the IS/EA using the evaluation criteria as defined by the purpose and need for the project. These criteria were as follows:

- Reduce congestion;
- Improve the traffic flow;
- Increase signal queue capacity; and
- Accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards.

Utilizing these criteria, Alternative 7A was recommended as the Preferred Alternative because it best meets the purpose and need for the project. Alternative 7A was recommended over Alternative 9 with the following justification:

- Alternative 7A provides superior interchange traffic operations and congestion relief in both the near term and long term. The partial clover leaf interchange configuration provides the greatest capacity to handle traffic increases beyond the 2040 design horizon.
- The proposed interchange reconfiguration directly addresses the project need of reducing the number of conflicting traffic movements and minimizing potential safety hazards. The new northbound loop on-ramp eliminates conflicting high volume movements at the

northbound ramp intersection (high volume eastbound left turns opposing high volume westbound through movements), thereby directly enhancing traffic safety. This configuration also provides more efficient traffic flow through the interchange due to a more balanced distribution of through and turning movements across all eastbound lanes on Lambert Road.

- The proposed interchange reconfiguration directly addresses the project need of increasing the signal queue capacity by maximizing the distance between the northbound and southbound ramp intersections providing optimum traffic operations through the interchange.
- The proposed interchange configuration provides three significant benefits to the northbound mainline: 1) the addition of the northbound loop on-ramp distributes northbound freeway merge movements over two locations providing superior freeway ramp operations; 2) the #5 northbound general purpose lane, which currently terminates south of Lambert Road, is extended through the interchange; and 3) a full standard northbound mainline cross section is extended from south of Lambert Road through the interchange.

1.7 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

An analysis of the proposed project provided a comprehensive study of design solutions that were considered for addressing the need for improvements to the SR-57/Lambert Road interchange. The approved 2007 PSR provides a description of alternatives originally considered, but then dropped from further consideration as part of the Preliminary Alternative Identification and Screening.

The following transportation concepts were evaluated and eliminated from further consideration based either on impacts to resources, feasibility, ability to meet the purpose and need, and/or cost. At the time of the 2007 PSR, alternatives were evaluated based on performance, and not on potential environmental impacts.

1.7.1 ALTERNATIVE 2/6

This alternative combined two separate alternatives which included widening SR-57 off-ramps to four lanes, widening Lambert Road to provide triple eastbound left-turn lanes onto the northbound SR-57 on-ramp, and widening the SR-57 northbound on-ramp to accommodate the triple left-turn movement from eastbound Lambert Road. This alternative was dropped from further consideration because it did not relieve forecast congestion at the Lambert Road/State College Boulevard intersection and did not provide the reduction in the overall delay through the interchange as compared to other alternatives.

1.7.2 ALTERNATIVE 4

This alternative included the improvements proposed as part of Alternative 2/6 with the addition of a grade separated (over Lambert Road) direct connection ramp from the southbound SR-57 off-ramp at Lambert Road to Birch Street south of Lambert Road. The intent of this ramp was to relieve the congestion at the southbound ramp intersection and at the Lambert/State College Boulevard intersection resulting from motorists using Lambert Road and State College Boulevard to access the Brea Mall and other retail/commercial areas to the south. The direct ramp required

the construction of a new structure over Lambert Road. This alternative was dropped from further consideration because it did not relieve forecast congestion at the Lambert Road/State College Boulevard intersection and did not provide the reduction in the overall delay through the interchange as compared to other alternatives. The direct ramp component of this alternative was utilized to develop a hybrid Alternative 4A, discussed below.

1.7.3 ALTERNATIVE 4A

Alternative 4A included those improvements identified in Alternative 4, above, but also included a northbound SR-57 on-ramp from State College Boulevard utilizing the former Union Pacific Railroad (UPRR) corridor, which is current City ROW. The northbound SR-57 on-ramp would have required additional reconstruction of adjacent SR-57 off-ramps. Alternative 4A was analyzed during the preparation of the PSR and was conditionally approved. Alternative 4A was an unconventional interchange configuration with engineering concerns regarding: 1) the potential for wrong-way movements/driver confusion; 2) design hazards such as a tight curve leading to a long northbound SR-57 on-ramp; and 3) unconventional interchange configuration which include the isolation of the southbound SR-57 off-ramp to Birch Street. Upon initiation of the Project Approval/Environmental Document (PA/ED) phase, the PDT re-evaluated the unconventional nature of Alternative 4A. This alternative was dropped from further consideration for the same reason as Alternatives 2/6 and 4 and because of the multiple geometric and operational deficiencies.

1.7.4 ALTERNATIVE 5

This alternative included the improvements proposed as part of Alternative 2/6 with the addition of an at-grade frontage road connection between Lambert Road and Birch Street along the west side of SR-57. The frontage road allowed motorists to continue straight through the southbound SR-57 ramp intersection. Access to the southbound SR-57 on-ramp was provided from the frontage road. The intent of the frontage road was similar to that of the direct ramp proposed as part of Alternative 4, but it did not provide the same congestion relieving benefits at the southbound ramp intersection. This alternative was dropped from further consideration because it did not relieve forecast congestion at the Lambert Road/State College Boulevard intersection and did not provide the reduction in the overall delay through the interchange as compared to other alternatives. In addition, the frontage road did not provide the same congestion relief at the southbound SR-57 ramp/Lambert Road intersection as the direct ramp considered in Alternative 4. The alternative also included a very short weaving distance for vehicles accessing the southbound SR-57 on-ramp from the frontage road, which created a potential for driver confusion along the frontage road immediately south of the southbound SR-57 ramps/Lambert Road intersection.

1.7.5 ALTERNATIVE 7

This alternative included the reconfiguration of the existing interchange to a partial cloverleaf configuration with loop ramps for both the northbound and southbound SR-57 on-ramps. The intent of this alternative was to relieve congestion through the interchange by eliminating the need for left turn movements from Lambert Road to the SR-57 on-ramps and replacing them with free right turn movements. Although the congestion benefits to the interchange were substantial with this configuration, the right-of-way impacts to adjacent residences were severe. Therefore, this alternative was dropped from consideration due to the city's concerns regarding the severity of the impacts to the neighborhood of single family residences located within the northwest quadrant of the SR-57/Lambert Road interchange. In addition, the southbound ramp intersection was

shifted closer to the Lambert Road/State College Boulevard intersection, which reduced the available weaving and queuing distance between the two intersections. In response to the city's concerns regarding the impacts to this residential area associated with constructing the southbound loop on-ramp, a hybrid of this alternative was developed that replaced the partial cloverleaf configuration on the west side of the interchange with a tight diamond. This alternative is named Alternative 7A and is analyzed within this IS/EA as a Build Alternative.

1.7.6 ALTERNATIVES 8 AND 8A

Alternative 8 proposed the construction of a split diamond interchange with two lane-collector/distributor roads running northbound and southbound parallel to SR-57 between Lambert Road and a new State College Boulevard connector road along the UPRR corridor. The existing northbound SR-57 off-ramp and southbound SR-57 on-ramp at Lambert Road would be relocated to intersect the new State College Boulevard connector road. A second grade separated northbound SR-57 on-ramp at the interchange would provide direct access from the connector road to northbound SR-57. Alternative 8A was a modification of Alternative 8 in that the second northbound SR-57 on-ramp from the State College Boulevard connector road was eliminated. Vehicles along the northbound collector/distributor road accessed SR-57 using the existing on-ramp by continuing north through its intersection with Lambert Road.

Alternatives 8 and 8A were dropped from further consideration because they provided only a relatively low reduction in the overall delay through the interchange relative to other alternatives considered. In addition, the alternatives required installation of a new signalized intersection along State College Boulevard in close proximity to existing intersections at Corporate Drive and Avocado Street, which would limit lane storage for the new intersection at the abandoned UPRR ROW intersection and cause isolated lane blocking. Moderate traffic volumes were forecast to utilize grade separated NB freeway entrance ramp reducing cost effectiveness of this design feature. The reduction in the overall delay through the interchange for Alternative 8A was less than what was obtained for Alternative 8 due to the additional traffic passing through the northbound SR-57 ramps/Lambert Road intersection.

1.7.7 DIVERGING DIAMOND INTERCHANGE ALTERNATIVE

In February 2014, the PDT conducted a preliminary evaluation of the Diverging Diamond Interchange (DDI) and the viability of implementing this type of alternative to this project location. While this alternative appeared feasible in terms of improving interchange traffic operations, the following challenges would preclude its implementation for the proposed project:

- The footprint of the DDI requires roadway modifications well beyond the ramp intersection approaches to accommodate the through lane crossover. In the case of the Lambert Road interchange, the intersection of Lambert Road and State College Boulevard is located only 400-ft to the west of the SB ramp intersection. The intersection of Lambert Road and State College Boulevard has very high volumes and it would not be feasible to execute the DDI approach through lane crossover in such a short distance.

- The DDI is an unusual design and, as such, presents possible unknown challenges to the safe accommodation of pedestrians and bicyclists. Providing for pedestrian and bicycle traffic through the interchange is an important element of this project since it provides the only link between residential areas and the local high school. The Project Sponsor (City of Brea) has expressed concern about implementing this type of interchange given the importance of providing for pedestrian and bicycle traffic.

- With the project being well into the PA/ED phase, implementing the DDI alternative would delay the project in excess of a year. This type of delay would jeopardize the Project Sponsor's project funding given the associated project delivery deadlines.

1.8 PERMITS AND APPROVALS NEEDED

The following permits, reviews and approvals would be required for proposed project construction, as listed below:

Permit/Approval	Agency	Status
Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ, NPDES No. CAS0000003)	State Water Resources Control Board (SWRCB)	Permit issued to Caltrans in September 2012 and became effective July 2013. Requires that projects incorporate Permanent Best Management Practices (BMPs) (Treatment and Source Control) into the project design and construction.
Statewide NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAS000002)	SWRCB	The Construction General Permit requires that prior to construction, the proposed project must submit Project Registration Documents (PRDs) in the SWRCB SMARTs Database. PRDs include the Notice of Intent (NOI), Site Maps, the Storm Water Pollution Prevention Plan (SWPPP), and Risk Assessment. The SWPPP is a document that will address water pollution controls specific to the proposed project during construction, per the NPDES Construction General Permit.
Order R8-2009-0003, NPDES Permit Number CAG998001, for discharges to surface waters that pose an insignificant (de minimus) threat to water quality (Dewatering Permit)	Santa Ana Regional Water Quality Control Board (RWQCB)	A Notice of Intent (NOI) under this Order must be submitted 45 days prior to a new discharge to the Santa Ana RWQCB. Required in the event that groundwater is encountered; however, dewatering is not anticipated to be required at this time.
Informal Section 7 consultation regarding potential impact to California Gnatcatcher	United States Fish and Wildlife Service (USFWS)	A Biological Assessment (BA) was prepared, informal Section 7 consultation was completed in October 2015. USFWS issued a concurrence letter (Appendix H).
Encroachment Permit (including Grading Permit)	California Department of Transportation – District 12	Required for construction activities within State right-of-way.
Grading Permit	City of Brea	Required for construction activities.

CHAPTER 2 – AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

2.1 ENVIRONMENTAL ISSUES WITH NO IMPACTS

As part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

2.1.1 COASTAL ZONE

The proposed project site is located approximately 18 miles east of the Pacific Ocean and is not located within any state or county coastal jurisdiction, nor is it within state appealable jurisdiction. No impacts would occur and no avoidance, minimization, and/or mitigation measures are required.

2.1.2 WILD AND SCENIC RIVERS

There are no designated wild and scenic rivers located within or adjacent to the proposed project. No impacts would occur and no avoidance, minimization, and/or mitigation measures are required.

2.1.3 PARKS AND RECREATIONAL FACILITIES

There are no designated parks, trails, or other Section 4(f) resources located within or adjacent to the SR-57/Lambert Road Interchange Improvement Project boundary or its immediate proximity. There are seven designated recreation parks within a one-mile radius of the proposed project limits. As shown in the Urban Design Plan Map of the City General Plan, Lambert Road is considered a landscape corridor and State College Boulevard is considered a major linkage (downtown circuit). During construction, access to nearby parks and trails would not be affected because such resources are located outside of the proposed project area or access to such resources would be maintained during construction. No “use” would occur to a Section 4(f) resource as a result of the proposed project as defined by Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code [USC] 303). No impacts would occur and no avoidance, minimization and/or mitigation measures are required.

2.1.4 FARMLANDS/TIMBERLANDS

According to the California Department of Conservation, Division of Land Resources, Orange County Farmland Map 2010,[1] there are no designated farmlands located within or adjacent to the SR-57/Lambert Road interchange. Therefore, no impacts would occur to agriculture or forest resources; no avoidance, minimization, and/or mitigation measures are required.

[1] Department of Conservation, Division of Land Resources, Orange County Farmland Map 2010. Online: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/ora10.pdf.

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2.2 HUMAN ENVIRONMENT

2.2.1 LAND USE

Information in this section is based upon the Community Impact Assessment (CIA) prepared in October 2012 for the proposed project. Designated land use is summarized from the City of Brea General Plan (2003). The General Plan was also reviewed to understand the development trends, land use-related goals, and specific city policies that could affect or be affected by the proposed project. Development applications were reviewed at the City of Brea to identify foreseeable and recent development projects within the proposed project area.

2.2.1.1 Existing and Future Land Use

Currently, the SR-57 mainline is a 10-lane freeway (four mixed-flow lanes and one high-occupancy vehicle [HOV] lane in each direction). The SR-57 Northbound Widening Project is recently completed and widened northbound SR-57 in the vicinity of Lambert Road to one HOV lane, five mixed-flow lanes, one auxiliary lane, and a two-lane off-ramp to Lambert Road. Currently, the northbound and southbound off-ramps widen to three lanes, while the on-ramps are two lanes merging into one lane. Lambert Road is a six-lane arterial road, widening to allow for turn lanes at the intersections with the SR-57 ramps, State College Boulevard, and Pointe Drive.

The proposed project area is located along SR-57 and Lambert Road, generally between State College Boulevard and Associated Road. Existing land uses within the proposed project area west of SR-57 are predominantly single-family residential, industrial, mixed use, public facilities, and commercial. The area east of SR-57 consists of public, general and medical offices, mixed use, recreation and open space, single-family and multi-family residential, and commercial. Existing land uses in the proposed project area are shown on Figure 2.2.1-1, Existing Land Use, and are described below:

- **Northeast Quadrant.** The existing land uses consist of the general office and medical office (including Olen Pointe Office Complex), educational facilities (including Brea Olinda High School), retail/commercial, and vacant lands.

- **Northwest Quadrant.** The existing land uses consist of single-family residences, educational and religious facilities (including the Brea United Methodist Church), public lands (park-and-ride lot), and vacant land.

- **Southeast Quadrant.** Existing land uses consist of medical and general offices, retail/commercial (including Brea Auto Spa), single- and multi-family residential (including Country Woods Apartment Complex), and recreation and open space.

- **Southwest Quadrant.** Existing land uses consist of single-family residential, general office, retail/commercial, industrial, public facilities, and recreation and open space.

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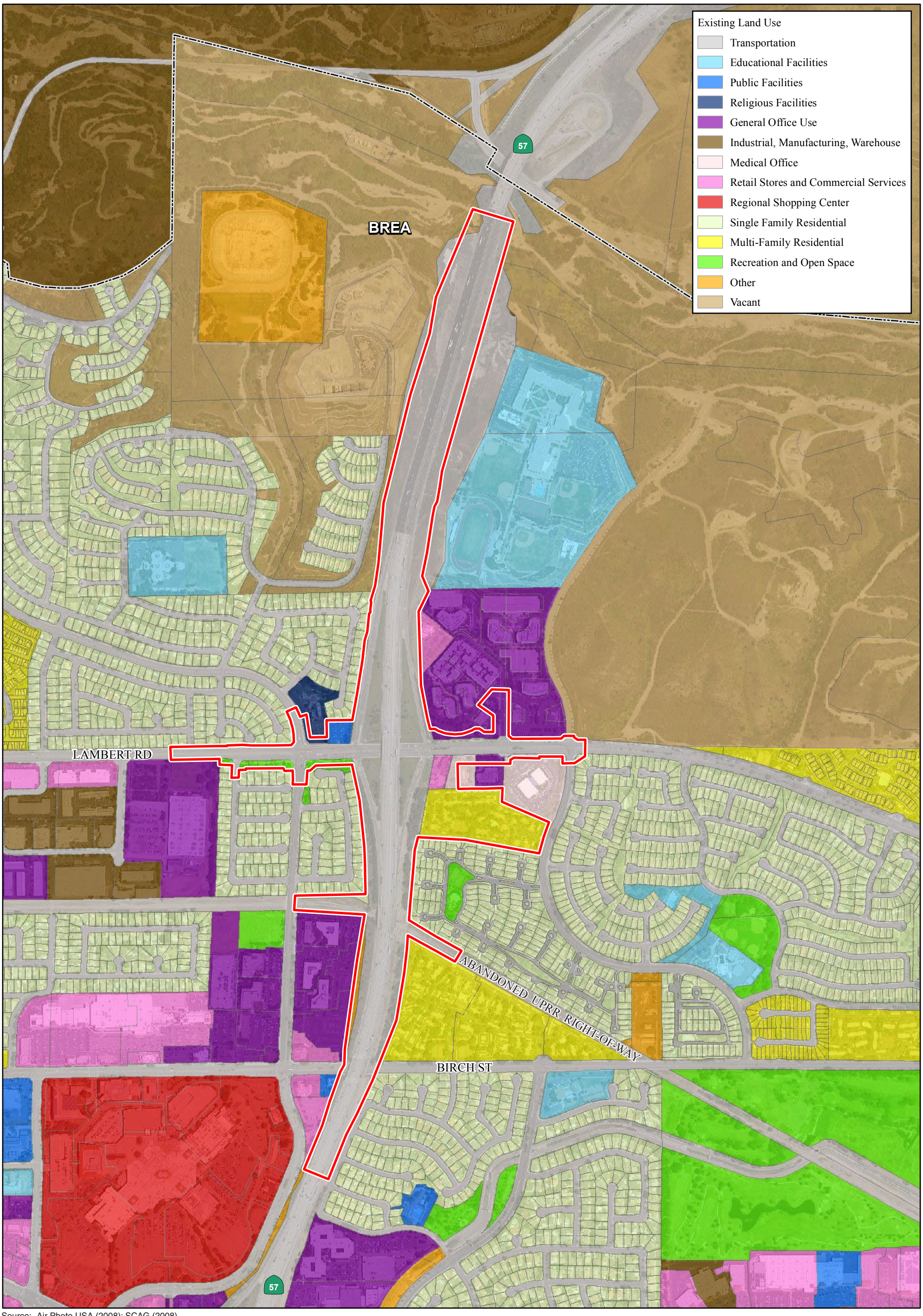

Source: Air Photo USA (2008); SCAG (2008).

LEGEND

Project Limits

City Boundary

0 750'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Existing Land Use

6/14/12 JN 10-107792-18226 MAS

Figure 2.2.1-1

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The City of Brea General Plan (General Plan) land use designations in the proposed project area are characterized by highly developed residential and commercial/office and industrial uses, as shown on Figure 2.2.1-2, General Plan Land Use Designations. According to the General Plan, as of 2002, approximately 26 percent of land uses are designated as residential, 12 percent are designated industrial, and 5 percent are designated commercial/office. Land uses immediately adjacent to the proposed project site are designated by the General Plan as public facilities, office/financial commercial, low- and high-density residential, regional commercial, and natural/open space.

Development Trends

According to the City of Brea General Plan, the city is built out with a mix of various types of residential communities and commercial/industrial areas. The areas west of the SR-57 are urbanized with predominantly low- and medium-density residential, commercial/retail, and industrial uses. The areas to the east of SR-57 are more semi-urban and rural, with large hillside developments. Approximately 62 percent of the city is developed by a mix of residential (26 percent), commercial (4 percent), industrial (12 percent), transportation (15 percent), and public (4 percent) land uses. The remaining 38 percent is designated as parks, open space, and vacant lands. Of these lands, approximately one percent is designated for agricultural use, and two percent for vacant land.

Because of the large open space and vacant land areas, the city receives pressure for growth and urban development on its fringes. Based on Southern California Association of Governments (SCAG) projections (2012), by 2035, the city is expected to increase its population from 39,282 to 52,674, which translates into a 25 percent increase in households. Refer to Section 2.2.2, Growth, for a more detailed description of the potential for growth in the proposed project area. Table 2.2.1-1, Development Projects in the City of Brea, includes a list of development projects within the jurisdiction of the City of Brea, as well as the current status of each. Refer also to Section 2.2.2, Growth, for a detailed discussion of growth trends in the proposed project area as well as Section 2.5, Cumulative Impacts, for a detailed discussion of cumulative impacts, which include the projects listed in Table 2.2.1-1.

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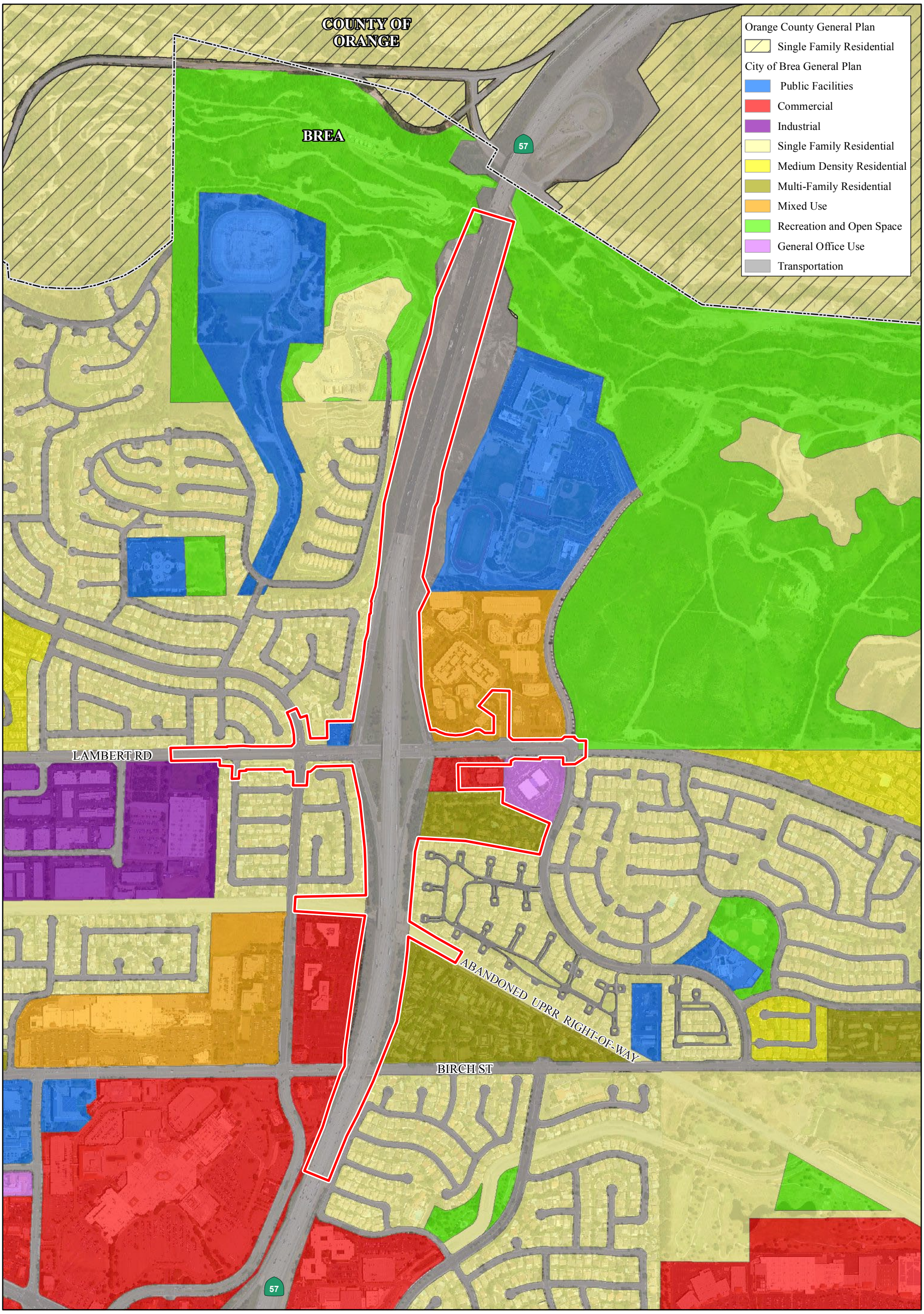

Source: Eagle Aerial (2011); City of Brea (12/15/2011); County of Orange (6/22/2005).

LEGEND

Project Limits

City Boundary

0 750'

6/14/12 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

General Plan Land Use Designations

Figure 2.2.1-2

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Table 2.2.1-1 Development Projects in the City of Brea

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	**Development**	**CIP**	**Development**	**CIP**	**Development**
PN 7197 - Imperial Highway Smart Street Project Segment "D"	**Brea/Elm Mixed-Use Development** 501, 503, 509 515 S. Brea Blvd; 30 units: 3 single family, 19 townhomes, 8 duplexes	**PN 7449 - Carbon Canyon Reservoir Slope Paving**	**Blackstone Development** *Residential development,* Approx. 800 acres, 701 single family, 94 apartments	**PN 7251 – SR-57 / Lambert Interchange**	**128 Olinda Drive** 4 Single-family homes; 3,194 s.f. to 3,562 s.f. per unit
PN 7210 - Safe Routes to School 2010 Upgraded existing pedestrian signal heads to "countdown" type throughout the city, installed speed feedback signs on State College and Associated, and upgraded a pedestrian detection system at Associated/Sleepy Hollow	**Birch Elementary School** 3145 E. Birch St; 16 regular classrooms, 3 kindergarten classrooms, an office and library/media center building, lunch shelter area and fields, play areas and parking lots, 4 temporary classrooms	**PN 7204 - Birch St. Median Landscape Phase 2**	**La Floresta** *Commercial and residential development* La Floresta Village Site Bordered by Imperial, Rose and Valencia; 119 acres; 1,110 residential units, 156,800 s.f. mixed-use commercial, 53.27 acres adult recreational center Birch Hills Site at current Birch Hills Golf Course, 91.3 acres, 75.60 acres open space, community facility, 247 high density residential dwellings	**PN 7276 - Lambert @ Puente Intersection Improvements**	**Central Park Village** *Mixed use development* 3 commercial buildings totaling 31,000 s.f.; 3-story medical office building is 45,000 square feet; 96 single-family attached townhomes with attached two-car garages and 444 rental multi-family apartments surrounding two parking structures and located above the one-story retail units along West Central Ave
PN 7213 - Traffic Signal at Birch/Voyager *Installed a traffic signal at the intersection*	**Stone Valley Townhomes** 124 Orange, 22 units	**PN 7248 - Traffic Signal System Master Computer Upgrade** *Development and implementation of new timing patterns on Birch*	**Summerwind by Trumark Homes** 1000 Site Dr, 5.49 net acres, 57 single family detached residential units	**PN 7277 - Central/Brea Intersection Widening**	**Madrona** *Residential development* 6700 Carbon Canyon Rd, 163 units
PN 7279 - Elm Street Resurfacing & Water Improvements	--	**PN 7450 - Berry Street Pump Station** *Installation of new water engines for pump station*	--	**PN 7278 - Imperial/Berry Intersection Widening**	--

Table 2.2.1-1 Development Projects in the City of Brea (Continued)

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	**Development**	**CIP**	**Development**	**CIP**	**Development**
PN 7282 - Residential Streets Rehab 2010/2011 *Resurfaced pavement in the Cinnamon Ridge neighborhood*	--	**PN 7862 - Birch St. Median Landscape Phase 1**	--	**PN 7283 - Residential Streets Rehab 2011/2012** *Resurfacing pavement and replacing water mains in the Country Hills Estate neighborhood*	--
PN 7289 - Puente Ave. Rehab				**PN 7295 - Elm Street Widening**	
PN 729 - Alley Rehab Project Phases 1 & 2 *Alley north of Birch between Randolph and Poplar, alley north of Birch and east of Flower, and alley south of Birch and east of Redwood*	--	--	--	**PN 7297 - Lambert Road Rehab Phase 1**	--
PN 7292 - Country Road Townhomes Curb Ramps	--	--	--	**PN 7452 - Glenbrook Tract Water Main Project**	--
PN 7294 - State College Blvd. Rehab	--	--	--	**PN 7617 - Sewer Main Relining**	--
PN 7296 - Midbury Tract Rehab	--	--	--	**PN 7618 - Sewer Upgrade Phase 4** *Replacing existing sewer main and adding new sewer main along Brea Creek Channel from Lambert to Eastwood*	--

Table 2.2.1-1 Development Projects in the City of Brea (Continued)

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	Development	CIP	Development	CIP	Development
PN 7301 - Laurel School Alley *Rehabilitated the alley adjacent to the east side of Laurel School from Imperial to Birch*	--	--	--	**PN 7619 - Master Plan Sewer Upgrade Phase 5** *Replacing existing sewer mains on Cherry from Peach to Alder and on Alder from Cherry to Laurel*	--
PN 7429 - Brea Plaza Water Main Replacements	--	--	--	**PN 7899 - Brea War Memorial** *Installing memorial at the Brea Civic and Cultural Center*	--
PN 7456 - Guitar Center Water Improvements	--	--	--	**PN 7903 - Super Block I Parking Structure**	--
PN 7463 - Birch Street Water Main Replacement	--	--	--	**PN 7905 - Eastside Community Facility** *Providing a community facility on the east side of town*	--
PN 7839 - City Hall Park Bandstand *Rehabilitated existing City Hall Park gazebo*	--	--	--	**PN 7906 - City Yard Paving** *Repairing existing pavement and constructing new pavement west of the existing gas pump*	--
PN 7873 - Tracks at Brea Phase 1 *Created a bike path along the Brea Canyon Flood Control Channel*	--	--	--	--	--

Table 2.2.1-1 Development Projects in the City of Brea (Continued)

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	Development	CIP	Development	CIP	Development
PN 7886 - City Entry Signs *Installed entry signs at State College/Elm and Lambert/Pioneer*	--	--	--	--	--
PN 7904 - Solar Energy & Efficiency Projects	--	--	--	--	--

Source: City of Brea Planning Department 2012.

2.2.1.2 Consistency with State, Regional, and Local Plans and Programs

Federal Transportation Improvement Program

Federal law requires that all federally funded projects and regionally significant projects (regardless of funding), must be listed in a Federal Transportation Improvement Program (FTIP). The FTIP identifies all planned transportation projects proposed over a six-year period within the jurisdiction of SCAG. Typical projects may include freeway improvements; public transit, rail, or bus facilities; high occupancy vehicle (HOV) lanes; signal synchronization; intersection improvements; and, improvements to freeway ramps or other similar improvement projects.

The FTIP is prepared to implement projects and programs listed in the Regional Transportation Plan (RTP), in compliance with state and federal requirements. County Transportation Commissions are responsible under state law for proposing county projects, utilizing policies, programs, and projects identified in the RTP for guidance, from among projects submitted by various cities and local agencies. SCAG reviews the list of projects and develops the FTIP based on consistency with the current RTP, connectivity between counties, and financial and conformity requirements.

The improvements proposed with the SR-57/Lambert Road interchange project are included in the SCAG financially constrained 2011 FTIP (FTIP ID ORA120320). The SCAG FTIP was determined to conform by FHWA and FTA on December 14, 2010. The design concept and scope of the proposed project is consistent with the proposed project description in the 2011 FTIP and is intended to meet the traffic needs in the area based on local land use plans. It should be noted that the 2013 FTIP has recently been adopted and the proposed project programmed within; however, it has not yet been determined to conform by FHWA and FTA.

Regional Transportation Plan

The SCAG RTP (adopted in 2008) is a comprehensive 20-year transportation plan that provides a vision for the future of the SCAG region's multimodal transportation system and specifies how that vision can be achieved for the six-county area in Southern California, which includes Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties. The RTP identifies major challenges, as well as potential opportunities associated with growth, transportation finances, the future of airports in the region, and impending transportation system deficiencies that could result from growth projections for the region.

SCAG is required to develop, maintain, and update the RTP on a three-year cycle. The RTP provides the basic policy and program framework for long-term investment in the regional transportation system in a coordinated, cooperative, and continuous manner and is intended to improve the balance between land use and the current and future transportation systems.

The proposed project is listed in the 2008 financially constrained RTP, which was found to conform to the State Implementation Plan (SIP) by the Federal Highway Administration (FHWA) and Federal Transit Authority (FTA) on June 5, 2008 (RTP ID 2M0724). The proposed project is also listed in the 2012 RTP (RTP ID 2M0724), which was found to conform to the SIP by FHWA and FTA on June 4, 2012. The design concept and scope of the proposed project is consistent with the proposed project description in the 2008 and 2012 RTPs and is intended to meet the traffic needs in the area based on local land use plans.

Regional Comprehensive Plan

The SCAG Regional Comprehensive Plan (RCP) (adopted May 2008) presents the consolidated planning and policy work produced by SCAG. The RCP specifically addresses growth and transportation issues facing Southern California. The RCP is a major advisory plan that addresses key issues within the region such as housing, traffic/transportation, water, and air quality. The RCP is intended to be a usable reference document for local planners, businesspeople, and other individuals whose work affects the future built environment in Southern California in preparing local plans and in the handling local issues of regional significance.

City of Brea General Plan - Circulation Element and Air Quality Element

The City of Brea General Plan (adopted February 2003) was considered to determine the land use and circulation goals and policies that are pertinent to the proposed project. The General Plan functions as a guide to planners, the general public, and decision-makers for the ultimate pattern of development for the City of Brea. The General Plan designates site development standards and the distribution, location, and the extent of land uses. The relevant goals and policies contained in the governing land use and circulation elements within the proposed project area, and project consistency with such goals and policies, are identified below:

Circulation Element

Goal CD-10: Maintain an effective regional transportation network.

> ***Policy CD-10.1:*** *Work continually with Caltrans to improve access to and from State Route 57.*
>
> ***Policy CD-10.4:*** *Work with Caltrans, the Orange County Transportation Authority, and surrounding Jurisdictions to provide adequate capacity on regional routes for through traffic and to minimize cut-through traffic on the local street system.*
>
> ***Policy CD-10.5:*** *Work with Orange County Transportation Authority to ensure that the County Master Plan of Arterial Highways is consistent with the city's Master Plan of Roadways.*

Goal CD-11: Provide a safe and efficient circulation system that meets the needs of the community.

> ***Policy CD-11.1:*** *Maintain a circulation system that is based upon and is in balance with the Land Use Element of the General Plan.*

Goal CD-12: Promote and support an efficient public transportation system.

> ***Policy CD-12.1:*** *Support transit providers such as the Orange County Transportation Authority in granting additional service routes within the city as needed.*

Air Quality Element

Goal CR-13: Improve air quality.

Policy CR-13.1: *Implement city-wide traffic flow improvements.*

Habitat conservation plans or similar regional conservation plans

There are no adopted habitat conservation plans (HCPs) or natural community conservation plans (NCCPs) that cover the proposed project.

2.2.1.3 Community Facilities – Parks and Trails

As discussed in Section 2.1, Environmental Issues with No Impacts, there are no designated parks located adjacent to the SR-57/Lambert Road interchange or its proximity. Seven designated recreation parks are located within a one mile radius. These parks include: Tamarack Park, Junior High Park Meadow, Tonner Canyon, Country Hills Park, Birch Hills Golf Course, Lagos de Moreno Park, and Green Briar Park. According to the Urban Design Plan Map of the City General Plan, Lambert Road is considered a landscape corridor and State College Boulevard is considered a major linkage (downtown circuit) within the proposed project limits.

2.2.1.4 Environmental Consequences

Construction (Short-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

Temporary construction easements (TCEs) would be required within the proposed project limits in several locations along Lambert Road to construct either Build Alternative 7A (Preferred Alternative) or Build Alternative 9. Therefore, the potential for temporary economic impacts would result.

Since the majority of the businesses in the proposed project area are commercial/financial and public in nature (bank, credit union, offices, church, medical office) or provide specialty commercial services, they are trip attractors and do not cater to pass-by traffic. Therefore, the business operations (bank, credit union, offices, church, medical office) would not be substantially impaired during construction of the proposed project. It is not anticipated that these businesses would experience hardship and loss of clientele during construction of the proposed project nor would there be changes to the land use pattern within the study area. In addition, a traffic management plan (TMP) would minimize construction traffic delay impacts by providing signage, detours, and a public awareness program. This is further discussed in Section 2.2.3, Community Impacts.

No Build Alternative

The No Build Alternative would not result in changes to land use patterns. No improvements to the existing SR-57/Lambert Road interchange are proposed under the No Build Alternative, beyond what is recently constructed with the SR-57 Northbound Widening Project, other than routine maintenance. Therefore, the No Build Alternative would not result in economic impacts.

Operation (Long-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

Compatibility with Existing Land Uses

Implementation of either Build Alternative 7A (Preferred Alternative) or Build Alternative 9 would not result in major changes to existing land use patterns in the vicinity of the SR-57/Lambert Road Interchange, since the interchange is an existing facility and is located in a highly developed area. The proposed project would be consistent with the surrounding residential, commercial, industrial, and other uses in the surrounding area. Additionally, Build Alternative 7A (Preferred Alternative) would result in a limited number of full and partial acquisitions. Build Alternative 9 would not result in any full acquisitions, and a limited number of partial acquisitions. Therefore, both Build Alternatives would not cause a high degree of disruption in the proposed project area. Refer to Section 2.2.3, Community Impacts, for further discussion.

Consistency with City of Brea General Plan

Table 2.2.1-2 evaluates proposed project consistency with the goals and policies of the City of Brea General Plan for both Build Alternatives. As shown, both Build Alternatives 7A and 9 would be consistent with the applicable City of Brea General Plan goals and policies intended to provide traffic flow improvements and adequate infrastructure on city streets.

Table 2.2.1-2
Consistency with State, Regional, and Local Plans and Programs

Policy	Build Alternative 7A (Preferred Alternative)	Build Alternative 9	No Build Alternative
City of Brea General Plan			
Goal CD-10: Maintain an effective regional transportation network.			
Policy CD-10.1: Work continually with Caltrans to improve access to and from State Route 57.	**Consistent.** Build Alternative 7A (Preferred Alternative) is a collaborative effort between the city and Caltrans to improve the City of Brea access to SR-57.	**Consistent.** Build Alternative 9 is a collaborative effort between the city and Caltrans to improve the City of Brea access to SR-57.	**Not Consistent.** Access to SR-57 would remain unchanged, and the LOS conditions would deteriorate over time.
Policy CD-10.4: Work with Caltrans, the Orange County Transportation Authority, and surrounding jurisdictions to provide adequate capacity on regional routes for through traffic and to minimize cut-through traffic on the local street system.	**Consistent.** The City of Brea, in cooperation with Caltrans, proposes improvements to the existing SR-57/Lambert Road interchange that would alleviate congestion and improve traffic flow along Lambert Road.	**Consistent.** The City of Brea, in cooperation with Caltrans, proposes improvements to the existing SR-57/Lambert Road interchange that would alleviate congestion and improve traffic flow along Lambert Road.	**Not Consistent.** The No Build Alternative is not consistent because it would not improve SR-57/Lambert Road on-ramps as planned in the City of Brea General Plan.
Policy CD-10.5: Work with Orange County Transportation Authority to ensure that the County Master Plan of Arterial Highways is consistent with the city's Master Plan of Roadways.	**Consistent.** Build Alternative 7A (Preferred Alternative) would not result in adverse effects to the OCTA MPAH because the upgraded interchange would improve the	**Consistent.** Build Alternative 9 would not result in adverse effects to the OCTA MPAH because the upgraded interchange would improve the operation and traffic flow on Lambert Road.	**Not Consistent.** The No Build Alternative would not improve operation of the existing interchange and thus would not be consistent with the city's General Plan

Policy	Build Alternative 7A (Preferred Alternative)	Build Alternative 9	No Build Alternative
	operation and traffic flow on Lambert Road.		requirements and OCTA MPAH.

Table 2.2.1-2 (Continued)
Consistency with State, Regional, and Local Plans and Programs

Policy	Build Alternative 7A (Preferred Alternative)	Build Alternative 9	No Build Alternative
Goal CD-11: Provide a safe and efficient circulation system that meets the needs of the community.			
Policy CD-11.1: Maintain a circulation system that is based upon and is in balance with the Land Use Element of the General Plan.	**Consistent.** Build Alternative 7A (Preferred Alternative) is consistent with the Land Use Element of the General Plan because it would result in only minor displacements of existing land uses and would not cause an imbalance between the circulation system and the Land Use Element of the General Plan.	**Consistent.** Build Alternative 9 is consistent with the Land Use Element of the General Plan because it would not displace existing land uses and would not result in an imbalance between the circulation system and the Land Use Element of the General Plan.	**Consistent.** The No Build Alternative is consistent with the Land Use Element of the City of Brea General Plan and would support commercial office land uses located along Lambert Road; however, it would not alleviate congestion and thus would not be as efficient as the Build Alternatives.
Goal CD-12: Promote and support an efficient public transportation system.			
Policy CD-12.1: Support transit providers such as the Orange County Transportation Authority in granting additional service routes within the city as needed.	**Consistent.** Build Alternative 7A (Preferred Alternative) would have no adverse effect on providing additional transit routes because it would accommodate existing transit provider service routes.	**Consistent.** Build Alternative 9 would have no adverse effect on providing additional transit routes because it would accommodate existing transit provider service routes.	**Consistent.** The No Build Alternative would not change existing transit routes and thus would support existing transit routes.
Goal CR-13: Improve air quality.			
Policy CR-13.1: Implement City-wide traffic flow improvements.	**Consistent.** Build Alternative 7A (Preferred Alternative) is consistent with the General Plan, Circulation Element p.2-49, traffic improvements, which recommend widening of the SR-57/Lambert Road northbound on-ramp.	**Consistent.** Build Alternative 9 is consistent with the General Plan, Circulation Element p.2-49, traffic improvements, which recommend widening of the SR-57/Lambert Road northbound on-ramp.	**Not Consistent.** The No Build Alternative is not consistent with the General Plan because it does not address proposed city improvements.

Sources: City of Brea General Plan, 2003; Community Impact Assessment, 2012.

Caltrans = California Department of Transportation
LOS = Level of Service
MPAH = Master Plan of Arterial Highways
OCTA = Orange County Transportation Authority
SR-57 = State Route 57

Consistency with Regional Plans

As noted above, the proposed project is listed in the 2008 RTP, 2012 RTP, and 2011 FTIP. The design concept and scope of the proposed project is consistent with the project description in the 2012 RTP and the 2011 FTIP and is intended to meet the traffic needs in the area, based on local land use plans. Therefore, both Build Alternatives 7A and 9 would be consistent with the regional and federal Transportation Plans. It should be noted that the 2013 FTIP has recently been adopted; however, it has not yet been determined to conform by FHWA and FTA.

No Build Alternative

The No Build Alternative would not provide any improvements to the SR-57/Lambert Road Interchange to enhance freeway operations, beyond those recently constructed in association with the SR-57 Northbound Widening Project. The No Build Alternative would not result in the conversion of existing land uses to transportation land uses because no improvements would occur. As shown in Table 2.2.1-2, Consistency with State, Regional, and Local Plans and Programs, the No Build Alternative would not meet all of the City of Brea General Plan goals and policies and would not be consistent with federal and regional planning.

2.2.1.5 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.2.2 GROWTH

Information in this section is based upon the Community Impact Assessment (CIA) prepared in October 2012 for the proposed project.

2.2.2.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require evaluation of the potential environmental effects 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 Code of Federal Regulation [CFR] 1508.8) refer to these consequences as indirect impacts. Indirect 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. The 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…"

2.2.2.2 Affected Environment

Southern California has been growing eastward and is projected to continue to grow toward fringe areas. The proposed project site is located within Orange County which has historically been one of the fastest growing counties within the state of California over the past four decades; however, because of the rapid population growth and low housing availability index, many people have moved from Orange County to adjacent Riverside and San Bernardino Counties due to a lower cost of housing. Based on Southern California Association of Governments (SCAG) projections (2012), by 2035, the City of Brea is expected to increase its population from 39,282 to 52,674, which translates into a 25 percent increase in households.

The proposed project site is located in northern Orange County, within a highly urbanized area in the City of Brea. According to the City of Brea General Plan, the city is built out with a mixture of various types of residential communities and commercial/industrial areas. The areas west of the State Route (SR) 57 are urbanized with predominantly low- and medium-density residential, commercial/retail, and industrial uses; the areas to the east of SR-57 are more semi-urban and rural, with large hillside rural developments. Approximately 62 percent of the city is developed with a mix of residential, commercial, industrial, transportation, and public land uses; the remaining 38 percent is designated as parks, open space, and vacant lands. Because of the large open space and vacant land areas, the city experiences pressure for growth and urban development along its fringes. Additional future population and employment growth within the city is anticipated to occur in the form of redevelopment.

2.2.2.3 Environmental Consequences

As identified in the CIA, the potential growth-related impacts of the proposed project were considered in the context of the first-cut screening analysis approach to assess the potential growth-inducing effects of the proposed project. The potential for the proposed project to influence growth is discussed below.

Both Build Alternatives (Alternatives 7A and 9)

Construction (Short-Term) Impacts

Minor delays along SR-57 may occur during the construction phase; however, temporary construction easements would be built to ensure that access to all properties in the proposed project area is maintained during such activities. As stated previously, the proposed project is intended to improve access to the city's commercial core and residential areas. Additionally, a Traffic Management Plan (TMP) would be prepared and would be utilized during the construction phase in order to alleviate temporary traffic congestion caused by construction. During final design, final measures would be identified to minimize traffic impacts through the provision of temporary parking supply, shared parking, shared vehicular access, and construction phasing. The TMP would minimize construction traffic delay impacts by providing signage, detours, and a public awareness program. In addition, access to all commercial uses in the proposed project area would be maintained during construction, therefore, the proposed project would not have temporary impacts on the economic growth of the surrounding community, nor would it affect the developmental growth of the community, as the area is built out.

Operation (Long-Term) Impacts

Construction of the proposed project (Build Alternatives 7A and 9) would reduce traffic congestion in the proposed project area, resulting in more efficient operation of the existing interchange and local circulation and improved access to the city's commercial core and surrounding residential areas. While the proposed project would result in reconstruction of an existing interchange, it would not provide new transportation facilities or create new access points to areas previously not accessible. Therefore, the proposed project would not result in changes in accessibility to the existing transportation system in the area.

The proposed project is consistent with the transportation goals and policies of the City of Brea General Plan. Future growth in the City of Brea is expected to occur with or without construction of the proposed project because the interchange project on its own cannot affect variables such as economic opportunities, employment, or housing availability, which directly affect local and regional growth. As previously described, areas served by SR-57 are highly developed, and any future decisions regarding land use modifications would occur at the discretion of the city. The proposed project meets the stated purpose and need (refer to Chapter 1, Proposed Project) and does not add capacity.

The proposed project would help to accommodate existing, approved, and planned growth in the area; however, because the proposed project would only improve the existing interchange and would not increase roadway or freeway capacity, it would not influence the amount, timing, or location of growth in the area. Pressure for growth may occur as the result of a combination of factors, including economic, market, and land use demands and conditions. New transportation facilities in areas where such facilities do not exist can influence the extent and location of growth in an area in combination with other pressures, such as economic and market conditions.

The proposed project would not provide new transportation facilities in an area where such facilities do not currently exist and, therefore, would not influence the amount, timing, or location of growth in the city. Because the proposed project would not influence growth in the area, it would not result in impacts to resources of concern.

Based on the analysis provided above, the proposed project would not result in growth-related impacts, and no further analysis is warranted.

No Build Alternative

The No Build Alternative would not provide improvements to the SR-57/Lambert Road interchange, beyond those recently constructed for the SR-57 Northbound Widening Project, to enhance freeway operations or reduce traffic congestion. The No Build Alternative would not be consistent with the project goal of reducing traffic congestion in the area, or result in better operation of the existing interchange or improve local circulation. Therefore, the No Build Alternative would not influence growth in the surrounding community.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

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2.2.3 COMMUNITY IMPACTS

2.2.3.1 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act of 1969 (NEPA), as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration in its implementation of NEPA (23 United States Code [USC] 109[h]) directs that final decisions on 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.

Affected Environment

Information in this section is based upon the Community Impact Assessment (CIA) prepared in October 2012 for the proposed project. The CIA incorporates data summarized from the United States Census Bureau, Census 2006–2010; 2010, the SCAG Growth Projections; and the California Department of Finance Demographic Research Unit.

The State Route (SR) 57/Lambert Road Interchange Improvement Project area lies within the City of Brea. As shown in Figure 2.2.3-1, Study Area Census Tracts, the study area includes five census tracts (Census Tracts 15.04, 15.06, 15.07, 218.14, and 218.15) from the 2010 Census that are located directly adjacent to the proposed project limits. Direct and indirect impacts of the proposed project could occur within these five census tracts. The community study area is larger than the area directly affected by the proposed project; however, this study area provides a more focused picture of the community affected by the proposed project than the city and county demographics alone can provide.

Community cohesion is the degree to which residents have a sense of belonging to their neighborhood, their commitment to the community, or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time. Indicators that a community has a high degree of cohesion are long-term residents, households of two or more people, ethnic homogeneity, and a high percentage of elderly residents. The demographics and population analysis was conducted based on census tracts from the 2010 Census and the 2006–2010 American Community Survey (ACS).

Existing data from the 2010 Census include the demographics of larger areas, such as counties and large cities; however, information regarding communities and census tracts is also available at the ACS level. The main differences between the 2010 Census and the ACS 2006-2010 surveys are in the sample sizes and the periods of time in which the samples were taken. Whereas the 2010 Census covers all households and residents and provides general

demographic characteristics, the ACS is sample-derived data, which provides detailed information on all levels, including census tracts.

Elements of community cohesion can be found in the demographic data used to profile communities from the United States Census. Specific indicators of community cohesion include:

- **Ethnicity**: Ethnic homogeneity is associated with a higher degree of community cohesion.
- **Household Size**: Households of two or more people tend to correlate with a higher degree of community cohesion.
- **Housing Tenure**: Households that have been part of a community for a longer period of time tend to correlate with a higher degree of community cohesion.
- **Transit-Dependent Population**: Residents who tend to walk or use public transportation for travel tend to correlate with a higher degree of community cohesion.

Ethnicity

The City of Brea grew 11 percent from 35,410 to 39,282 residents between 2000 and 2010. Table 2.2.3-1, Ethnic Composition 2010, shows the ethnic composition of Orange County, the city, and the study area, based upon the 2010 Census. The majority of the population within the city is largely White (67 percent), with a Hispanic population of 25 percent, followed by smaller Asian and Black populations. The White population in the city is greater than the county average, and the Hispanic population is lower than the county average. The ethnic composition of the city is roughly consistent with the county ethnic composition, with exception of the percentages of the White and Hispanic populations.

Study area census tracts support a White population relatively on par with the city reference population and slightly greater than the county white population, with the exception of Census Tract 218.15, which has a White population (58 percent) slightly lower than the city and county. The Hispanic population is dramatically lower than the county and the city Hispanic population in all study area census tracts except Census Tracts 15.04 and 15.07. The largest White population (71 percent) is concentrated in Census Tract 15.06, and is slightly higher than the city and is substantially higher than the ethnically diverse county.

Source: Census (2010); TBM (2010); Orange County (2011).

LEGEND

- Limits of Proposed Improvements
- Study Area
- City Boundaries
- Census Tracts 2010

0 5000'

6/4/12 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Study Area Census Tracts

Figure 2.2.3-1

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Table 2.2.3-1 Ethnic Composition 2010

Year	Area	Percentage						
		White	Black	American Indian/ Native Alaskan	Asian	Hawaiian/ Pacific Islander	Other	Hispanic
2010	County of Orange	61	2	0.6	18	0.3	15	34
2010	City of Brea	67	1	0.5	18	0.2	8	25
2010	Census Tract 15.04	61	2	0.8	14	0.5	17	40
2010	Census Tract 15.06	71	1	0.4	17	0	6	19
2010	Census Tract 15.07	64	2	0.5	20	0.2	9	26
2010	Census Tract 218.14	67	2	0.3	22	0.1	5	19
2010	Census Tract 218.15	58	1	0.4	34	0.1	3	13

Source: Community Impact Assessment, 2012

[1] Percentages do not add to 100 percent because the White, Black, American Indian and Alaskan Native, Hawaiian and Pacific Islander, and Other categories include persons identified with one race only; the Hispanic category overlaps with other categories.

[2] 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.

Housing

Southern California has been growing eastward and is projected to continue to grow toward fringe areas. Because of the rapid population growth and low housing availability index, many people have moved from Orange County to adjacent Riverside and San Bernardino Counties due to a lower cost of housing. The housing profiles for Orange County, the city, and the study area census tracts are shown in Table 2.2.3-2, Housing Profiles 2010.

Table 2.2.3-2 Housing Profiles 2010

	Census Tract 15.04	Census Tract 15.06	Census Tract 15.07	Census Tract 218.14	Census Tract 218.15	City of Brea	County of Orange
Total housing units	1,812	1,627	1,993	2,598	2,664	14,785	1,048,907
Housing units occupied	1,713	1,583	1,902	2,511	2,577	14,226 (97%)	992,781 (99.5%)
Owner-occupied housing units	42%	64%	38%	60%	91%	65%	59%
Renter-occupied housing units	58%	36%	62%	40%	9%	35%	41%
Median home price (2009)	N/A	N/A	N/A	N/A	N/A	$428,500	$435,500

Sources: Community Impact Assessment, 2012

Between 2000 and 2010, the total number of housing units in the county increased by eight percent, from 969,484 to 1,048,907. During the same period of time, the total number of housing units in the city increased approximately 11 percent, from 13,327 to 14,785. SCAG projects that the city will grow from 13,067 households in 2000 to 15,961 households in 2035, whereas the county is expected to increase from 935,287 to 1,118,490 households.

According to the 2010 Census, the majority of houses in the city, the county, and Census Tracts 15.06, 218.14, and 218.15 were owner-occupied. These census tracts are characterized by neighborhoods consisting of single-family residential properties. In contrast, the majority of the

population in Census Tracts 15.04 and 15.07 were renter-occupied due to the concentration of multi-family residences such as apartment complexes and condominiums.

According to the United States Census, between 1990 and 2000, the median home price in Orange County rose by approximately 6.8 percent, from $252,700 to $270,000, whereas between 2000 and 2008, the median home price increased by approximately 98 percent and reached $499,000. In 2008, when the economic downturn occurred, the housing prices suddenly dropped, leaving the housing market full of vacant residential properties below their market value price. Between 2000 and 2006, the median house prices in the city were higher than the median housing prices in the county. Between 2008 and 2011, the city experienced a sharp drop in median house prices, from $750,000 to $450,000. In 2011, the median value of residential properties in the city was $529,000, while the reported median house price was $500,000, whereas the county reported the median house price at a slightly lower price of $450,000.

Household Size

Total population and household size of the study area census tracts, the city, and the county in 2010 are provided in Table 2.2.3-3, Population and Household Size 2010. All of the study area census tracts, with exception of Census Tract 218.15, reported a lower number of persons per household than the city and county average. Census Tract 15.07 had the fewest persons per household (2.45) compared to the city average of 2.75 and the county average of 3.

Table 2.2.3-3 Population and Household Size 2010

Demographic Characteristics	Census Tract 15.04	Census Tract 15.06	Census Tract 15.07	Census Tract 218.14	Census Tract 218.15	City of Brea	County of Orange
Total Population	4,605	4,109	4,665	6,816	7,751	39,282	3,010,232
Persons per Household	2.69	2.59	2.45	2.71	3.01	2.75	3

Source: Community Impact Assessment, 2012

Housing Tenure

Table 2.2.3-4, Housing Tenure, provides data on how long homeowners have been residing in their units for the study area census tracts, the city, and the county. Approximately 59 percent of occupants in Orange County moved into their housing units between 2000 and 2010. Of these, approximately 25 percent moved into their units between 2000 and 2004, while approximately 34 percent moved into their units between 2005 and 2010.

Table 2.2.3-4 Housing Tenure

Area	Year Householder Moved Into Unit (%)					
	2005 or later	2000–2004	1990–1999	1980–1989	1970–1979	Moved in 1969 or earlier
County of Orange	34%	25%	22%	9%	6%	3.5%
City of Brea	31%	27%	20%	9%	8%	5%
Census Tract 15.04	42%	21%	23%	8%	2%	3%
Census Tract 15.06.	32%	15%	23%	17%	8%	5%
Census Tract 15.07	50%	21%	13%	4%	7%	5%
Census Tract 218.14	40%	19%	18%	14%	9%	2%
Census Tract 218.15.	21%	59%	12%	5%	3%	0.4%

Source: Community Impact Assessment, 2012

Similar to Orange County, approximately 58 percent of city residents moved into their housing units between 2000 and 2010. Approximately 27 percent of city residents moved into their units between 2000 and 2004, while the remaining 31 percent of city residents moved in later than 2005.

A majority (59 to 80 percent) of residents of the study area census tracts, with exception of Census Tract 15.06, moved into their current location between 2000 and 2010. Smaller percentages of residents moved into their residences in earlier years. The exception is Census Tract 15.06; approximately 47 percent of the residents of Census Tract 15.06 moved into their units between 2000 and 2010, with the majority moving in later than 2005. Approximately 53 percent of the residents in Census Tract 15.06 moved into their units before 2000. Based on the data provided in Tables 2.2.3-2, Housing Profiles 2012, and 2.2.3-3, Population and Household Size 2012, it can be concluded that the majority of residents in the study area census tracts, with exception of Census Tract 15.06, moved into the area relatively recently.

Foreclosure rates in the city are 1 in 409 (meaning that one house is foreclosed in every 409 houses), which are on par with the county at 1 in 411 (April 2012). These rates are lower than the State's rate of 1 in 351, indicating that the study area residents are generally in better economic shape than the average homeowner in the State.

Transit-Dependent Population

As described in the CIA, the Federal Transit Administration (FTA) defines a transit-dependent population as typically being low income, minority populations, and persons under the age of 18 and over 65. These populations have a tendency to walk or utilize public transportation for the purposes of travel.

In Southern California, the transit-dependent population in a community primarily consists of students, senior citizens, and low-income individuals. SCAG projects that the percentage of senior citizens in Southern California will continue to rise over the next two decades, with approximately one in six people expected to exceed the age of 64 in 2030.

The median age of the study area census tracts, the city, and the county is shown in Table 2.2.3-5, Age Distribution. The average median age in the study area census tracts is slightly higher (40 years) than the city and county averages (38.7 and 36.2 years, respectively).

The population over age 64 within the study area census tracts, with exception of Census Tract 15.06, is lower than the city average (15 percent) and county average (11.6 percent). Census Tracts 15.07 and 218.14 have the highest percentage of the population between 20 and 64 (66 percent) compared with other census tracts, the city, and the county. All study area census tracts have a similar percentage of the population under 19, between 23 and 28 percent, which is on par with the city and the county averages. Three of five study area census tracts populations (Census Tracts 15.06, 218.14, 218.15) have a higher median age, between the ages of 39 and 45, than the reference population of the city and the county. Populations within Census Tracts 15.04 and 15.07 have a lower median age, under the age of 35, than the county and the city reference population.

Table 2.2.3-5 Age Distribution

Area	Median Age	Percentage		
		Population < 19	Population 20-64	Population > 64
County of Orange	36.2	828,344 (27.6%)	1,832,211 (60.8%)	349,677 (11.6%)
City of Brea	38.7	10,091 (25.7%)	24,241 (59.3%)	4,950 (15%)
Census Tract 15.04	34.6	1,172 (25.5%)	2,971 (64.5%)	313 (10%)
Census Tract 15.06	45	971 (23.6%)	2,368 (57.7%)	770 (18.7%)
Census Tract 15.07	34	1,113 (23.9%)	3,101 (66.4%)	324 (9.7%)
Census Tract 218.14	39	1,733 (25.4%)	4,706 (66.1%)	377 (8.5%)
Census Tract 218.15	40	2,234 (28.8%)	4,701 (60.6%)	816 (10.6%)

Source: Community Impact Assessment, 2012

Other Demographics

Table 2.2.3-6, Local, County, Regional, and State Demographic Summaries, provides a summary of other demographic characteristics of Orange County, the City of Brea, and census tracts within the study area. The local, regional, and state employment percentages are shown in Table 2.2.3-7, 2006-2010 Employment Percentages for the Census Tracts, the City of Brea, and the County.

As identified in the CIA, the total number of persons 16 years of age and older available to work in Orange County from 2006 to 2010 was 2,315,782. Of the 2,315,782 persons available to work, 1,556,696 persons were in the civilian labor force in Orange County, of which 1,442,008 (62 percent) were employed and 114,688 (5 percent) were unemployed. These statistics are on par with the nationwide unemployment rates. The Census 2010 identifies 243,832,923 as the total number of persons 16 years of age and over available to work in the United States. Of the 243,832,923 persons available to work, 155,917,013 persons were in the civilian labor force in the United States, 57 percent were employed, and 7 percent were unemployed.

In 2010, the city maintained a civilian labor force of 21,219 persons, of which 19,761 (64 percent) were employed and 1,458 (4.7 percent) were unemployed. This indicates that the local economy has mimicked the regional economic downturn.

Income data provided in the CIA and shown in Table 2.2.3-6, Local, County, Regional, and State Demographic Summaries, was obtained from the 2006–2010 ACS. Census Tracts 218.14 and 218.15 have a higher median household income than the city and the county, whereas Census Tracts 15.04, 15.06, and 15.07 have median household incomes lower than the city and on par with the county. Census Tract 15.04 has the lowest median household income among all study area census tracts, the city, and the county. Thus, it can be concluded that portions of the study

area are inhabited by relatively high-income communities, and the remaining areas are inhabited by middle-income residents.

Table 2.2.3-6 Local, County, Regional, and State Demographic Summaries (ACS 2006–2010, Census 2010)

Characteristic	Census Tract 15.04	Census Tract 15.06	Census Tract 15.07	Census Tract 218.14	Census Tract 218.15	City of Brea	County of Orange
Total population	4,605	4,109	4,665	6,816	7,751	39,282	3,010,232
Median household income	$61,250	$75,844	$74,458	$81,828	$99,957	$79,647	$74,344
Persons below poverty (percent)	7.2	4	10	5.6	1.5	5.7	10
High school graduate or higher (over age 25) (percent)	85	94	95	95	92	93	83
College graduate or higher (over age 25) (percent)	30	42	48	52	49	41	36
Employed civilian labor force (percent)	64.3	53.8	68.8	65.9	63.8	64	62
Persons per household	2.69	2.59	2.45	2.71	3.01	2.75	3.00

Sources: Community Impact Assessment, 2012
ACS = American Community Survey

Most business establishments, sales, and employees in Orange County were distributed among retail, professional and scientific, and healthcare and social assistance, as shown in Table 2.2.3-7, 2006-2010 Employment Percentages for the Census Tracts, the City of Brea, and the County. The city had a similar employment market mix when compared to the county. Education, health, and social services are the primary market employment sectors, followed by manufacturing, and professional and technical services.

Table 2.2.3-7 2006-2010 Employment Percentages for the Census Tracts, the City of Brea, and the County

Economic Sector	Census Tract 15.04	Census Tract 15.06	Census Tract 15.07	Census Tract 218.14	Census Tract 218.15	City of Brea	Orange County
Construction	6.8%	6.5%	3.4%	6.4%	4.10%	6%	6.6%
Manufacturing	13.6%	16.8%	9.3%	14.5%	10%	13%	13.7%
Retail	5.6%	7.5%	9.4%	14.2%	11.7%	11%	10.8%
Finance and Insurance	11.6%	9.3%	11.8%	8.4%	12.6%	9%	9.3%
Professional and Technical Services	8.6%	10.7%	14.6%	12.7%	12.4%	11%	13.7%
Education, Health, and Social Services	17.8%	21.1%	24.7%	20.2%	23.8%	23%	17.8%
Lodging and Foodservice	14.20%	8.9%	6.40%	5.8%	4.3%	7%	9.5%
All Other Sectors	21.8%	19.2%	20.4%	17.8%	21.1%	20.6%	18.6%

Source: Community Impact Assessment, 2012
ACS = American Community Survey

Community Profile

The existing land uses in the proposed project area quadrants are generally consistent with the General Plan designations. Existing land uses within the proposed project area west of SR-57 are predominantly low-density residential, office, industrial, and regional commercial. The area

east of the SR-57 consists of a mix of public, office, single-family, and multifamily residential. The following provides a brief description of land uses within each of the four quadrants of the SR-57 interchange area. Figure 2.2.1-1, Existing Land Use, and Figure 2.2.1-2, General Plan Land Use Designations (see Section 2.2.1, Land Use) identify the Existing Land Use and the General Plan Land Use Designations in the proposed project area.

Northeast Quadrant. The existing land uses correspond to the General Plan Land Uses and consist of the Olen Pointe Office Complex, Brea Olinda High School, Tonner Canyon, and related open space lands.

Northwest Quadrant. The existing land uses correspond to the General Plan land uses and, west of Lambert Road, are composed of single-family residences, Brea United Methodist Church, and a park-and-ride facility.

Southeast Quadrant. Existing land uses consist of medical and general offices, retail/commercial (including Brea Auto Spa), single- and multi-family residential (including Country Woods Apartment Complex), and recreation and open space.

Southwest Quadrant. Existing land uses consist of single-family residential, general office, retail/commercial, industrial, public facilities, and recreation and open space.

Schools

The SR-57/Lambert Road interchange is located within the Brea-Olinda School District, within one mile of five schools: one high school, one junior high school, and three elementary schools. Brea Olinda High School is located northeast and adjacent to the proposed project study area, and Brea Junior High School is located along Lambert Road and 2,300 feet west of the SR-57/Lambert Road interchange. Country Hills Elementary School is located 1,850 feet southeast of SR-57/Lambert Road; Fanning Elementary School is located 1,400 feet northwest of SR-57/Lambert Road; and, Laurel Elementary School is located 4,750 feet southwest of SR-57/Lambert Road.

Parks and Trails

As discussed in Section 2.1.1.1, Land Use, there are no designated parks within the proposed project limits. Seven designated recreation parks are located within a one-mile radius from the SR-57/Lambert Road interchange. No trails are located within the proposed project limits. As shown in the Urban Design Plan Map of the City General Plan, Lambert Road is considered a landscape corridor. A major linkage (Downtown Circuit) runs along State College Boulevard and is located west of the interchange, while another major linkage connecting Tonner Ridge Trail through Birch Hills Golf Course with Ted Craig Regional Park is located east of the proposed project (Urban Design Plan Map, City General Plan).

Fiscal Conditions

Property taxes are levied on the assessed value of privately owned property. Property taxes for properties in the study area are collected by Orange County and apportioned to the incorporated cities in the County, including the City of Brea. The amount levied is approximately one percent of the assessed property value. For fiscal year 2009–2010, the reported property tax, including side accounts, collected in the city totaled $306,800,919.

Environmental Consequences

As outlined above, the proposed project study area is characterized by a population that has been residing in the area for a relatively short time (10 years or less), is between 58 and 71 percent White, with a median age between 34 and 45, and a median household income between $60,000 and $100,000. In addition, a large percentage of the residents tend to rent housing units rather than own, which is often a characteristic of a mobile population. Overall, based on the demographic characteristics of the census tracts and the mix of land uses in this area, the proposed project study area exhibits a moderate degree of community cohesion.

Construction (Short-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

During construction, Build Alternatives 7A and 9 would temporarily increase noise, dust, and vibration due to the use of construction equipment and construction crew commutes. Due to the temporary nature of impacts, it is not expected that construction would affect social interactions in the community and would not result in major hardship to local businesses; however, access to the local businesses, the park-and-ride facility, and neighborhoods may be temporarily altered as a result of the SR-57 ramp improvements. Local and regional commuters using the park-and-ride facility may need to use detours, and their average commute time may be temporarily extended during construction of the proposed project.

The SR-57 Northbound Widening Project, which extends from Orangethorpe Avenue north to Lambert Road, began in January 2011 and was completed in the summer of 2014. The construction of the proposed project is expected to begin in 2016 and be completed in 2017. Based on the anticipated schedules for these two project, residents in the SR-57/Lambert Road vicinity would have a two-year period (2014 through 2016) during which they would not experience inconvenience as a result of the construction of these two projects. Therefore, the impacts of these two projects would not be compounded and no construction conflicts between the two projects are anticipated.

Ramp closures for a period of longer than 10 consecutive days would not occur with Build Alternatives 7A and 9. Ramp closures would likely be conducted at night, and the ramps would re-open to traffic the next morning. Weekend closure would be the longest anticipated ramp closure. Because of this, impacts from the temporary ramp closure on the community within the proposed project study area would be minimal and would not adversely affect community cohesion under either Build Alternative.

Build Alternatives 7A and 9 would reduce parking and temporarily affect accessibility to businesses along Lambert Road during construction. Specifically, parcels with TCEs may experience some hardship during construction such as limited access, alternate access, noise, dust, and paint odors. During construction activities, access and on-site parking may be affected at businesses adjacent to the proposed project improvements. Since the proposed project includes interchange improvements, temporary business impacts may include restricted or constrained access. Additionally, several of the on-site parking spaces may be unavailable while the proposed project is underway. The temporary access and parking impacts on businesses are expected to occur for a few weeks, subject to construction phasing and staging.

Hardship impacts would be minimized through implementation of the Traffic Management Plan (TMP). During final project design, final measures would be identified to minimize traffic and

parking impacts through the provision of temporary parking supply, shared parking, shared vehicular access, and construction phasing. Temporary impacts to businesses would be limited and are not expected to adversely affect the operation of the businesses during construction due to implementation of the TMP.

A TMP would be prepared to alleviate these traffic-related impacts during construction and provide detours and alternative access and address impacts related to parking. In addition, Avoidance, Minimization, and Mitigation Measures provided in the Section 2.3.6, Air Quality, and Section 2.3.7, Noise, would further minimize impacts related to the generation of dust, noise, and air pollution during construction. Construction impacts would be temporary and would cease upon completion of the project. Avoidance and Minimization Measures would reduce temporary construction impacts. Impacts are not considered to be adverse.

During construction, access to nearby schools and parks would not be affected because the schools and parks are located outside of the proposed project area. The TMP includes procedures for notifying affected local agencies and would be implemented to address circulation impacts during construction.

Build Alternative 7A (Preferred Alternative)

Under Build Alternative 7A (Preferred Alternative), a full closure of Lambert Road between the northbound and southbound ramps would be required during multiple stages of the northbound loop on-ramp bridge construction. These full closures would be short term and conducted at night to minimize impacts to communities and traffic. As identified in Section 1.4.2, Build Alternatives, during the nighttime, traffic would be detoured to make use of State College Boulevard, Associated Road, Kraemer Boulevard, and Birch Street. Because of this, community impacts as a result of Build Alternative 7A (Preferred Alternative) are expected to be minimal and are not expected to interfere with the routine, daily activities of residents, such as work commutes, school commutes, and shopping. Construction impacts would be temporary and would cease upon completion. Avoidance and Minimization Measures would reduce temporary construction impacts. Impacts are not considered to be adverse.

Access

Build Alternative 7A (Preferred Alternative) would result in temporary access impacts to four properties located in the four quadrants of the interchange. These properties are:

- OCTA Park-and-Ride Lot, 1000 Lambert Road
- Brea Medical Offices, 1770 Lambert Road
- Business complex (Diverse Staffing Solutions), 1800 Lambert Road
- Country Woods apartment complex, 315 Associated Road

Under Build Alternative 7A (Preferred Alternative), full access to OCTA Park-and-Ride, the Brea Medical Offices, and the business complex would be maintained in the post-project condition. During construction activities, access would be temporarily affected during reconstruction of the driveways to match the proposed design; however, access to these properties would be provided during construction. The number of driveways to each site would remain the same, and site circulation for these properties would remain unchanged in the post-project condition.

No modification to the driveways is required at the Country Woods apartment complex at 315 Associated Road during construction; however, site circulation would be temporarily impacted under Build Alternative 7A (Preferred Alternative) during the construction of the SR-57 northbound loop on-ramp. Build Alternative 7A (Preferred Alternative) would require demolition of two apartment buildings, and as a result, the apartment complex's loop access road would be blocked at the rear of the property during demolition and construction activities. Full access to all unaffected apartment buildings (all but the two buildings being demolished) would be provided. After the relocation and reconstruction of the SR-57 northbound loop off-ramp, the apartment complex's loop access would be restored.

Parking

Build Alternative 7A (Preferred Alternative) would affect parking at the following five properties during construction:

- OCTA Park-and-Ride Lot, 1000 Lambert Road
- Brea Medical Offices, 1770 Lambert Road
- Business complex (Diverse Staffing Solutions), 1800 Lambert Road
- Country Woods apartment complex, 315 Associated Road
- Pointe Drive Business Park

Under Build Alternative 7A (Preferred Alternative), of the 11 stalls within the Park-and-Ride lot that face Lambert Road, seven of the stalls would be directly impacted during construction, while the remaining four stall have the potential to be impacted during construction. There are a total of 87 parking stalls at this location. During the completion of the CIA, site visits and a review of aerial photos of the Park-and-Ride lot determined that a maximum usage of the Park-and-Ride lot is 70 percent of capacity; however, this capacity may fluctuate throughout the year. In order to accommodate the fluctuation in use of the Park-and-Ride lot, minimization measure COMM-6 requires temporary restriping of parking stalls during constructions. This would maintain 100 percent of the original parking capacity. Therefore, no net temporary loss of parking stall would occur as a result of the proposed project construction.

Brea Medical Offices would only be restricted during the removal activities, grading, and landscaping for the widening of eastbound Lambert Road, east of the SR-57 northbound off-ramp. Due to the limited nature of construction impacts, it is expected that temporary impacts to parking would not affect the operation of the business and its clients. A total of 15 dental office parking stalls would be directly impacted during construction. The open parking between the adjacent sites would provide ample excess parking.

Overall site parking at the Business Complex (Diverse Staffing Solutions) would be reduced during construction of the westbound Lambert Road widening, east of the SR-57 northbound on-ramp. A total of 18 general office parking stalls would potentially be impacted during construction. These parking stalls are adjacent to a landscaped area that may require temporary access from the interior of the site. The open parking between the adjacent sites would provide ample excess parking during construction.

For the Brea Medical Offices and Business Complex (Diverse Staffing Solutions), construction efforts would be staggered with adjacent properties to minimize short-term parking impacts.

There are a total of 188 parking stalls between the shared medical facilities. Should construction activities impact both sites simultaneously, there would be an 18 percent reduction in the number of parking stalls available. The observed maximum usage at this parking lot is 50 percent of capacity.

Country Woods apartment complex would be modified during construction and would result in the loss of 55 parking stalls and two apartment buildings would be displaced (see discussion below under Section 2.2.3.2, Relocations and Real Property Acquisitions). The two buildings would be removed prior to the start of construction and the 55 parking spaces are those necessary for the two impacted buildings. Since the buildings would be removed prior to construction, no additional or temporary parking would be required.

There would be 20 stalls impacted at the Pointe Drive Business Park during construction. Pointe Drive Business Park does not currently provide on-street parking within the Business Complex. During final design, if parking is identified as limited, negotiations with the Pointe Drive Business Park owner would occur to provide temporary on-street parking on Pointe Drive. This would provide for short-term replacement parking during construction activities only.

In all, the impacts to parking for these sites would be temporary with no permanent loss of required parking spaces. Due to the limited nature of construction impacts, it is expected that temporary impacts to parking would not affect the operation of the businesses/medical facilities and their clients.

Fiscal Conditions

As shown in Table 2.2.3-8, construction employment has two components: direct and indirect. The direct effect is the number of construction jobs created to complete a project. The indirect effect is the additional employment and business activity that would be generated in the regional economy by the initial construction expenditure. Build Alternative 7A (Preferred Alternative) would generate an estimated 187 direct and 361 indirect construction jobs, for a total of 548 jobs generated. These construction jobs would generate temporary employment and revenues for both local and regional economies.

Table 2.2.3-8 Estimated Construction Employment Under the Build Alternatives

Estimated Capital Construction Costs[1]	Estimated Employment Generated		
	Direct Jobs[2]	Indirect Jobs[3]	Total Jobs
Build Alternative 7A (Preferred Alternative): $19.7 M	187	361	548
Build Alternative 9: $16.4 M	156	300	456

Source: Community Impact Assessment, 2012

1 Capital construction costs without Right of Way (ROW) from RBF, 2012.

2 American Road and Transportation Builders Association (ARTBA) estimates 9.5 new on-site construction jobs created for every $1 million of investment in highway construction and improvement projects in the United States.

3 ARTBA estimates 18.3 new indirect employment jobs created for every $1 million of investment in highway construction and improvement projects in the United States.

Build Alternative 9

No closure of Lambert Road would be required under Build Alternative 9. Construction traffic would be provided with optional detours to mitigate congestion at the interchange during construction. Under Build Alternative 9, traffic would be detoured in the same manner as under

Build Alternative 7A (Preferred Alternative). Construction impacts would be temporary and would cease upon completion. Avoidance and Minimization Measures would reduce temporary construction impacts. Impacts would not be adverse.

Access

Build Alternative 9 would result in temporary access impacts during construction to four properties located in the four quadrants of the interchange. These properties are:

- OCTA Park-and-Ride Lot, 1000 Lambert Road
- Brea Medical Offices, 1770 Lambert Road
- Business complex (Diverse Staffing Solutions), 1800 Lambert Road
- Brea Auto Spa, 1700 Lambert Road

Under Build Alternative 9, the driveways to these properties would be realigned to match the proposed project design. During construction, all sites would have the same number of driveways that exist currently. Access to these properties would be provided during construction.

Parking

Build Alternative 9 would affect parking at the following four properties during construction:

- OCTA Park-and-Ride Lot, 1000 Lambert Road
- Brea Medical Offices, 1770 Lambert Road
- Business complex (Diverse Staffing Solutions), 1800 Lambert Road
- Pointe Drive Business Park

Under Build Alternative 9, parking impacts to the Park-and-Ride Lot, the Brea Medical Offices, the Business Complex (Diverse Staffing Solutions), and the Pointe Drive Business Park would be the same as the impacts resulting from Build Alternative 7A (Preferred Alternative). Parking along the frontage of Lambert Road for each site would be affected by construction activities as Lambert Road is widened and realigned. The impacts to parking for these sites would be temporary. Minimization measure COMM-6 would require restriping of parking stalls at the Park-and-Ride lot, in order to maintain the original parking capacity.

Due to its tight footprint, Build Alternative 9 would avoid the acquisition of buildings from the Country Woods apartment complex and, thus, would not result in the removal of parking stalls from this complex.

Fiscal Conditions

As shown above in Table 2.2.3-8, Build Alternative 9 would generate an estimated 156 direct and 300 indirect construction jobs, resulting in a total of 456 jobs generated. These construction jobs would generate temporary employment and revenues for both local and regional economies.

No Build Alternative

No improvements to the existing SR-57/Lambert Road interchange are proposed under the No Build Alternative, other than routine maintenance. Therefore, the No Build Alternative would not result in temporary impacts to community character and cohesion, access and parking. The No Build Alternative would not generate construction jobs; therefore, no temporary employment and revenues would be associated with this alternative.

Operation (Long-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

Community character and cohesion can be affected by air quality, noise and visual impacts. With respect to air quality, Build Alternatives 7A and 9 would improve vehicular traffic and circulation and would not create a facility that is likely to meaningfully increase air pollutants; refer to Section 2.3.6, Air Quality, for further analysis.

With respect to noise, the Noise Study Report dated April 2013, identified one area under both Build Alternatives 7A and 9 that would increase permanent noise levels. Therefore, the Noise Study Report, and subsequent Noise Abatement Decision Report (NADR) dated February 2014, evaluated one noise barrier, NB No. 1, for the proposed project. NB No. 1 would be adjacent to the outdoor eating area associated with El Torito Grill. NB No. 1 would be feasible because it would be capable of reducing noise levels by 5 dB or more. This noise barrier was then evaluated for construction cost. It was determined that NB No. 1 would have construction costs that are below the reasonable allowance; therefore, NB No. 1 would be reasonable. Refer to Section 2.3.7, Noise, for the full discussion of the noise barrier.

With respect to visual impacts, the Visual Impact Assessment, dated January 2014, analyzed the impacts to visual resources as a result of the construction of a noise barrier, NB No.1, at the outdoor eating area associated with El Torito Grill. A new block noise barrier would obstruct views from the El Torito outdoor patio area of the surrounding developed area of Brea. Implementation of Avoidance, Minimization, and Mitigation Measures provided in the Section 2.2.6, Visual/Aesthetics, would minimize impacts related to the noise barrier, by requiring a transparent wall. Refer to Section 2.2.6, Visual/Aesthetics, for a full discussion of the noise barrier impact on visual/aesthetic resources.

Build Alternative 7A (Preferred Alternative)

Build Alternative 7A (Preferred Alternative) would improve the operation of the existing SR-57/Lambert Road interchange. The affected area is, therefore, already divided by SR-57 and Lambert Road, and Build Alternative 7A (Preferred Alternative) would not further divide existing communities in the vicinity of the interchange. As a result of implementation of Build Alternative 7A (Preferred Alternative), operation of the existing interchange would improve, thus reducing travel times for local and regional commuters; however, implementation of Build Alternative 7A (Preferred Alternative) would result in relocation of residents and employees from the affected parcels; refer to Section 2.2.3.2, Relocations and Real Property Acquisitions, for further details. Displacements of properties and relocations of residents could affect community character and cohesion if replacement properties are not available within the same or adjacent communities. According to the Relocation Impact Memorandum (approved June 2012), sufficient replacement properties exist within the city and adjacent cities for relocated residents and employees.

The demolition of multiple structures within the Country Woods apartment complex and the relocation and installation of ramp structures along the property boundary may result in the exposure of the existing residents within the Country Woods Apartment Homes to new lighting from vehicle headlights along SR-57 and associated ramp structures. Build Alternative 7A (Preferred Alternative) proposes to install perimeter fencing along the property line in this area. Avoidance, minimization, and/or mitigation measures the proposed project would be required to install opaque fencing material or appropriate vegetation for the purposes of screening the residents from the freeway uses would reduce light/glare associated with vehicle headlights. Minimal changes in the visual character of the project area would occur under Build Alternative 7A (Preferred Alternative), as compared to the existing conditions.

Avoidance, minimization, and/or mitigation measures are provided for individual impact related to air quality, refer to Section 2.3.6, noise, refer to Section 2.3.7, and visual resources, refer to Section 2.2.6. Because of this, and in conjunction with the fact that Build Alternative 7A (Preferred Alternative) is an improvement of an existing transportation facility, Build Alternative 7A (Preferred Alternative) would not result in adverse impacts related to community character and cohesion.

Access

After construction of Build Alternative 7A (Preferred Alternative), access to all affected properties would be restored and would be in relatively the same locations as prior to construction.

Parking

Upon completion of construction, there would be no net loss of parking stalls within the proposed study area. Therefore, Build Alternative 7A (Preferred Alternative) would restore all parking and there are no permanent impacts.

Parking impacts at the Country Woods apartment complex would be along the SR-57 frontage, which would be reconstructed on site. Upon completion of the proposed project, the number of parking stalls per dwelling unit for the property would remain the same. There would be no permanent impacts to parking.

Fiscal Conditions

The parcels included in calculations for property tax loss are parcels to be fully acquired by Build Alternative 7A (Preferred Alternative). Build Alternative 7A (Preferred Alternative) would result in the full acquisition of one business. As shown in Table 2.2.3-9, this would constitute a loss of approximately $37,000 in property taxes, or 0.10 percent loss of the revenue for the city as a whole. In addition, partial acquisitions would also result in a reduction in the assessed property values and would likely decrease the property taxes collected from these parcels, further increasing the property tax loss. Acquisition of two buildings of the apartment complex would not preclude Country Woods Home Apartments from operating because there are several other residential buildings in the complex that would remain; however, the assessed value of the property would likely decrease, resulting in an additional decrease in property taxes.

Table 2.2.3-9 Estimated Annual Property Tax Loss

Build Alternative	Property Tax Loss[1]	Percent of Total Annual Property Tax Revenue Loss	Total Annual City Property Tax Revenue[2]
Build Alternative 7A (Preferred Alternative)	$37,493	0.10%	$306,800,919
Build Alternative 9	$0	$0	$0

Source: Community Impact Assessment, 2012
1 Based on the secured tax bills collected from affected parcels.
2 Orange County Tax Collector, Summary of Secured Tax Charges and Collection from all TRAs, FY 2009/2010.
FY = Fiscal Year
TRA = Tax Reform Act

Acquisitions associated with Build Alternative 7A (Preferred Alternative) would require the relocation of a sales-tax-generating business. If businesses displaced by Build Alternative 7A (Preferred Alternative) relocate within the city, no net loss of sales tax revenue would occur; however, relocation outside of the city would result in a net loss of sales tax revenue. The potential loss in sales tax revenue with the proposed project was estimated using total taxable sales in the city. The estimated annual sales tax revenue loss to the city, Orange County, and the State of California resulting from business displacements in the city is shown in Table 2.2.3-10. If the car wash business to be potentially displaced was relocated outside the city, the potential sales tax losses for the city would be an estimated $7,320 per year, based on the displacement of one business. If the businesses did not relocate within Orange County, the Orange County sales tax loss would be approximately $3,660 per year. As discussed in Section 2.2.3.2, Relocations and Real Property Acquisitions, there are several locations available in adjacent cities to relocate the car wash business. Currently, there is no available replacement property in the city; however, such properties may become available before or at the time of the Build Alternative 7A (Preferred Alternative) construction.

Table 2.2.3-10 Estimated Annual Sales Tax Revenue Loss for the City of Brea under the Build Alternatives

Jurisdiction	Tax Rate	Taxable Sales	Total Sales Tax Revenue	Average Sales Tax/ Business	Build Alternative 7A (Preferred Alternative) Sales Tax Loss	Build Alternative 9 Sales Tax Loss
City of Brea	1%	$1,369,505,000	$13,695,050	$7,320	$7,320	0
Orange County	0.50%	—	$6,847,525	—	$3,660	0
State of California	7.25%	—	$99,289,113	—	$53,067	0

Source: Community Impact Assessment, 2012

Build Alternative 9

Build Alternative 9 would improve the operation of the existing SR-57/Lambert Road interchange. Because Build Alternative 9 is an improvement of an existing transportation facility, it would not divide existing communities adjacent to the interchange and is not expected to interfere with social interactions. In addition, Build Alternative 9 would not result in full acquisitions of properties and therefore would avoid displacement of the car wash and two apartment complex buildings from the study area. As a result of implementation of Build Alternative 9, operation of the existing interchange would improve, thus reducing travel times for local and regional commuters.

Build Alternative 9 would not result in adverse impacts related to community character and cohesion and would result in fewer impacts overall as compared to Build Alternative 7A (Preferred Alternative).

Access

After construction of Build Alternative 9, access to all affected properties would be restored and would be in relatively the same locations as prior to construction.

Parking

Upon completion of construction, there would be no net loss of parking stalls within the proposed study area. Therefore, Build Alternative 9 would restore all parking and there are no permanent impacts.

Fiscal Conditions

As shown in Table 2.2.3-9, Build Alternative 9 would not result in full acquisitions and, therefore, would not result in property tax losses to the local tax base. As shown in Table 2.2.3-10, because Build Alternative 9 would not result in the acquisition of businesses, it would not result in sales tax losses for the city, Orange County, or the State of California.

No Build Alternative

No improvements to the existing SR-57/Lambert Road interchange are proposed under the No Build Alternative, beyond improvements recently constructed in association with the SR-57 Northbound Widening Project and other routine maintenance. Therefore, the No Build Alternative would not result in permanent impacts to community character and cohesion.

Avoidance, Minimization, and/or Mitigation Measures

COMM-1 During final design, a community outreach program will be developed, inconsultation with the City of Brea and Caltrans, to inform the community about proposed project construction activities, as well as the changes to access. This community outreach project will also provide a point of contract for nearby residences and businesses that will be adjacent to the project site. The community outreach project will maintain a hotline to take messages and to provide updates on construction scheduling and any lane closures and detours.

COMM-2 During construction, the contractor will be required to coordinate all temporary ramp closures and detour plans with the City of Brea School District, as well as with applicable fire, emergency, medical, and law enforcement providers to minimize temporary delays in school trips and provider response times. This coordination will follow the guidance provided in the community outreach program and the traffic management plan.

COMM-3 During construction, the contractor shall be required to notify the City of Brea Police and Fire Departments, medical service providers, and the City of Brea School District and shall supply such entities with construction plans prior to the commencement of construction, as applicable. Such information shall include traffic management plans referring to the temporary ramp closures and detour plans and any other restrictions that may be necessary during the construction

phase in order to minimize temporary delays in school trips and provider response times.

COMM-4 During final design, the project shall develop and implement a construction (traffic) management program that maintains access to and from the proposed project area through signage, detours, flagmen, etc. during all construction activities. Provisions within the traffic management program shall include, but are not limited to, providing signage identifying construction schedule and detours, providing detours around the construction area, and implementing a public awareness program.

COMM-5 During construction, the contractor will temporarily restripe parking stalls within the Orange County Transportation Authority Park-and-Ride lot, to maintain full parking capacity. Upon construction completion, the contractor will permanently restripe the OCTA Park-and-Ride lot, with the original number of spaces to ensure no net loss in parking.

2.2.3.2 Relocations and Real Property Acquisition

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 the 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. Please see Appendix E for a summary of the RAP.

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 United States Code [USC] 2000d, et seq.). Please see Appendix B for a copy of Caltrans' Title VI Policy Statement.

Affected Environment

Information in this section is based upon the Relocation Impact Memorandum approved June 2012 and the Community Impact Assessment (CIA) dated October 2012, both of which were prepared for the proposed project.

Full acquisition of a property is defined as an area within which occupants of residential and non-residential units would be displaced by a project and would be expected to be relocated as part of a project. A partial acquisition is considered to occur when a portion of a property is acquired, but full use of the property and structures would remain. Partial acquisitions generally consist of portions of a back, side, or front yard; landscaped area; and/or, parking.

Existing land uses within the project area include single- and multi-family residential (the Country Woods Apartment Complex), office, industrial, public land, and regional commercial. The study area is characterized by a population that has been residing in the area for a relatively short time (10 years or less), is between 58 and 71 percent White, with a median age between 34 and 45, and a median household income between $60,000 and $100,000. In addition, a large percent of the residents tend to rent housing units rather than own, which is often a characteristic of a mobile population. For further details regarding land uses, refer to Section 2.2.1, Land Use. For further

details regarding community character and cohesion, refer to section 2.2.3.1, Community Character and Cohesion.

Environmental Consequences

Construction (Short-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

Temporary construction easements (TCEs) would be required within the project limits in several locations along Lambert Road to construct both Build Alternatives 7A and 9. Figure 2.2.3-2, Alternative 7A – Temporary Construction Easements and Partial and Full Parcel Acquisitions, and Figure 2.2.3-3, Alternative 9 – Temporary Construction Easements and Partial and Full Parcel Acquisitions, depict the areas associated with TCEs. The business operations (bank, credit union, offices, church, medical office) would not be substantially impaired during construction of either alternative, as access would be continuous through the construction phase. The Traffic Management Plan (TMP) would minimize construction traffic delay impacts by providing signage, detours, and a public awareness program. TCEs would not result in relocations for either residential or non-residential properties.

Operation (Long-Term) Impacts

Build Alternative 7A (Preferred Alternative)

Table 2.2.3-11, Full and Partial Acquisitions under Build Alternative 7A, lists the full and partial property acquisitions associated with Build Alternative 7A (Preferred Alternative). These areas are depicted in Figure 2.2.3-2, Alternative 7A – Temporary Construction Easements and Partial and Full Parcel Acquisitions.

Table 2.2.3-11 Full and Partial Acquisitions under Build Alternative 7A (Preferred Alternative)

APN	Area (sf)	Residential/Nonresidential (Affected Business Types)	Relocation
Full Acquisitions			
320-101-17	41,382	Industrial/Commercial: Brea Auto Spa	Yes
Partial Acquisitions			
319-041-13	2,614	Public: Park-and-Ride	No
319-031-47	3,920	Public	No
319-021-01	1,307	Public	No
320-101-19	1,307	Medical Offices	No
320-101-14	436	Office	No
320-101-10	13,939	Multifamily Residential: Apartment Complex	Yes
319-021-59	1,307	Public	No
319-021-60	1,307	Public	No
319-021-61	871	Public	No
319-021-62	871	Public	No
319-021-63	871	Public	No
319-022-27	1,742	Public	No
319-371-18	3,049	Commercial: Olen Properties	No

Source: Community Impact Assessment, 2012
APN = Assessor's Parcel Number, sf = square feet

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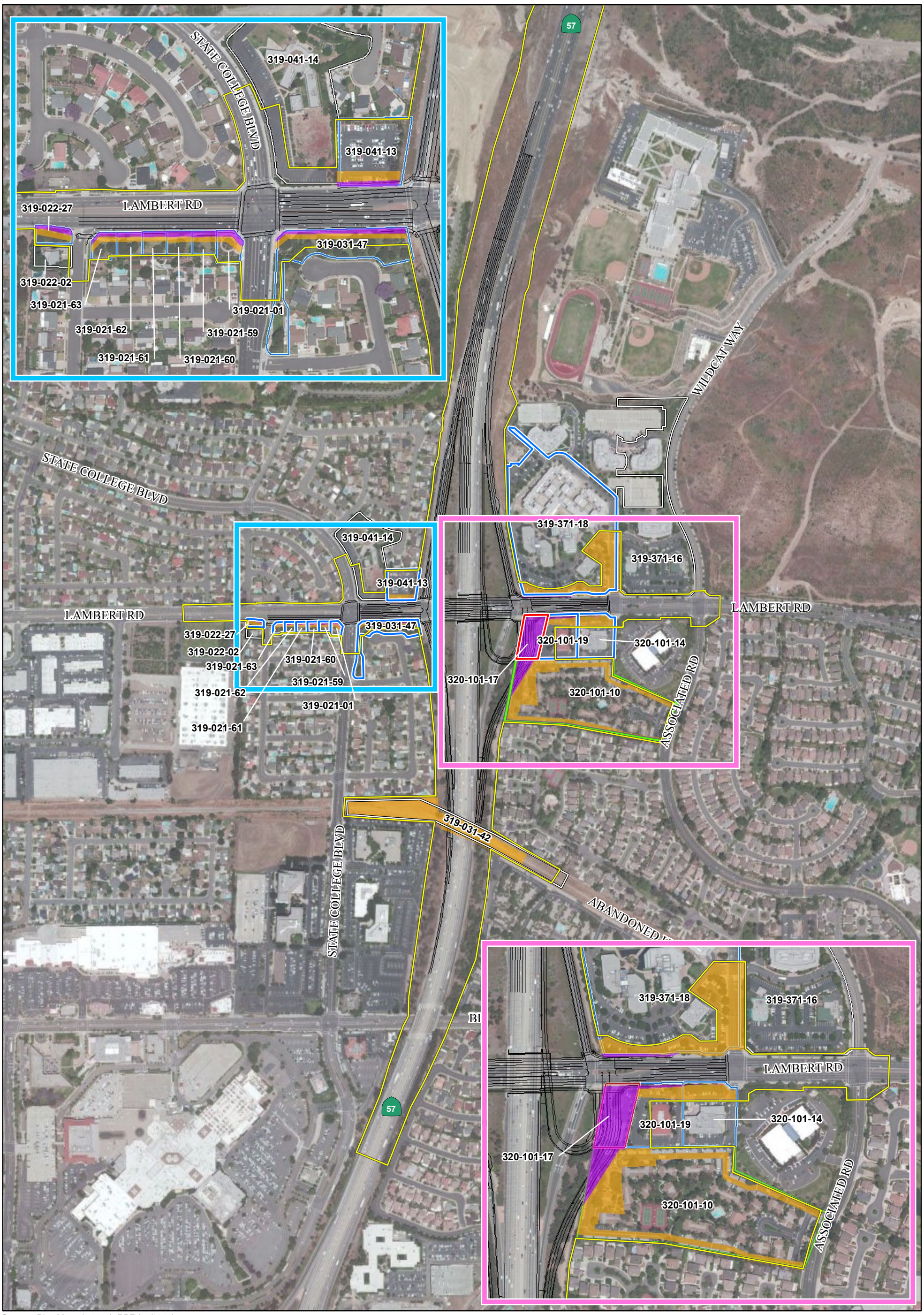

Source: Bing Maps (c.2010); RBF (01/2012).

Project Limits
Alternative 7A
Temporary Construction Easement
Exact Locations of Proposed Acquisitions within the Parcel
Full Acquisition
Parcels with Partial Acquisitions
Parcel Acquisition with Relocation
Parcel Boundary
000-000-00 Accessors Parcel Number

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 7A Temporary Construction Easements and Partial and Full Parcel Acquisitions

0 290 580'

6/4/12 JN 10-107792-18226 MAS

Figure 2.2.3-2

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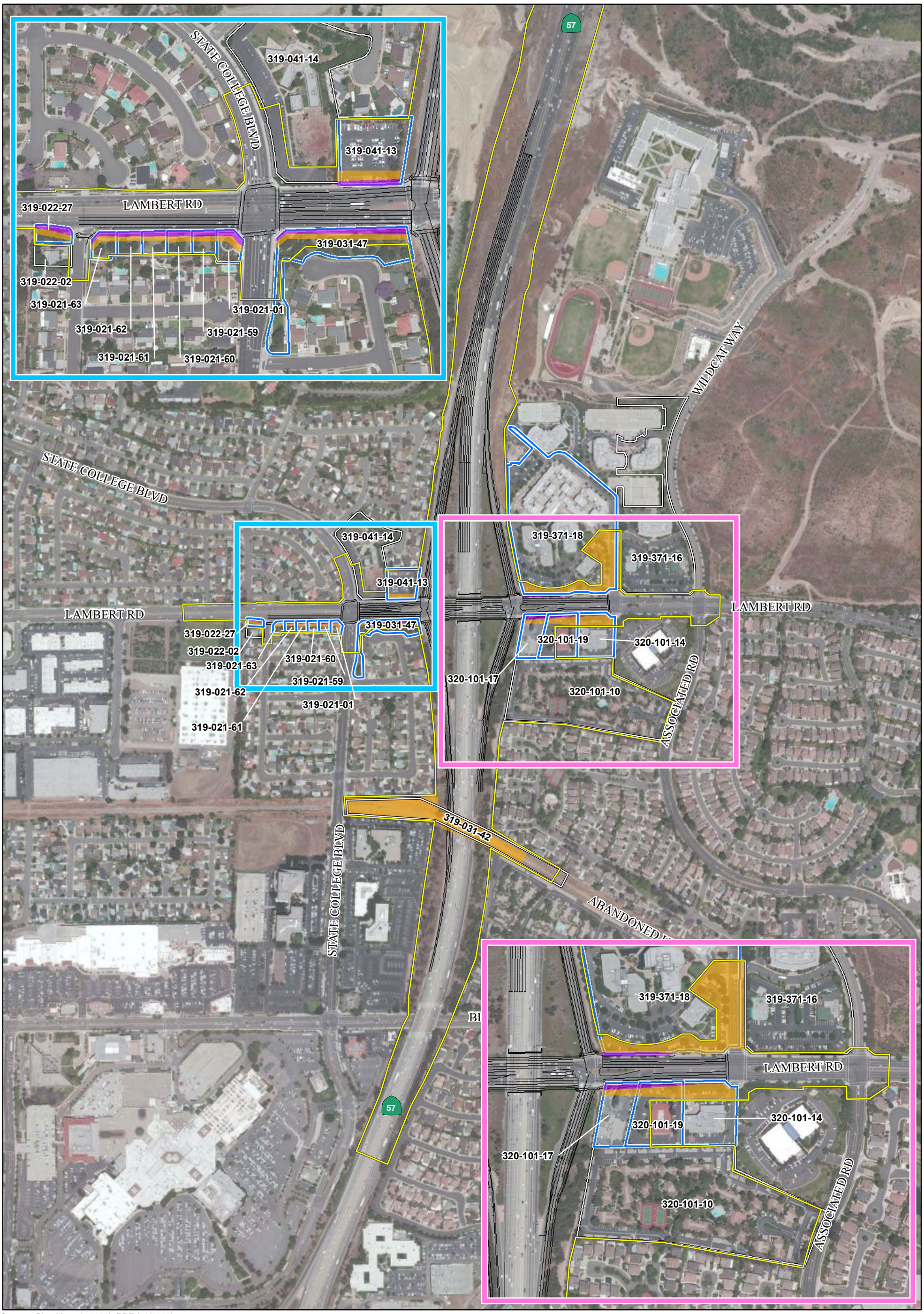

Source: Bing Maps (c.2009); RBF (01/2012).

Project Limits
Alternative 9
Temporary Construction Easement
Exact Locations of Proposed Acquisition within the Parcel
Partial Acquisition
Parcel Boundary
000-000-00 Accessors Parcel Number

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 9 Temporary Construction Easements and Partial Parcel Acquisitions

0 290 580'

11/3/14 JN 10-107792-18226 MAS

Figure 2.2.3-3

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Build Alternative 7A (Preferred Alternative) would result in the full acquisition of one business (Brea Auto Spa) and 13 partial acquisitions, including two buildings from the Country Woods Apartment Homes.

The car wash facility to be displaced was established in 1990 and is located in the southeast quadrant of the SR-57/Lambert Road interchange. Auto wash facilities primarily depend on pass-by traffic; however, with a long establishment period, they likely had secured local clientele. If the car wash relocates outside of the city, it may experience loss of local clientele. This loss may be offset if the business reestablishes itself in a site similar to its existing location (e.g., at a freeway interchange or a primary arterial intersection).

The Relocation Impact Memorandum (Approved June 2012) was prepared to identify properties to be displaced and to find replacement properties for the relocated business and employees. Equivalent business properties, approximately seven, were available for the relocated business (car wash) in the adjacent cities of Anaheim, Placentia, and Fullerton at the time of the property survey. At the time of the survey, there were no replacement properties available for the car wash facility in the City of Brea.

The number of employees displaced as a result of property acquisitions was estimated based on data from the California Employment Development Department Labor Market Info database, as well as the city's business license data. The Labor Market Info database includes the names of businesses in all cities in California and the estimated number of employees at each business. The labor data presented in the Labor Market Info database is updated semiannually and comes from a variety of sources, including phone books, annual reports, business directories, public records data from county courthouse filings, the Securities and Exchange Commission, the Secretary of State Corporations Division data, listings for new business registrations, and utility hookups.

Table 2.2.3-12, Estimated Employee Displacements, identifies the estimated number of employee displacements based on business relocations. Build Alternative 7A (Preferred Alternative) would result in the acquisition of one car wash business (Brea Auto Spa) and the displacement of approximately 20–49 employees from the study area, which represents between 0.1 and 0.25 percent of the total number of employees in the city.

Table 2.2.3-12 Estimated Employee Displacements

Build Alternatives	Estimated Displaced Employees	Percent Displaced Employees in the City of Brea
Build Alternative 7A (Preferred Alternative)	Brea Auto Spa 20–49	0.1–0.25%
Build Alternative 9	0	0

Source: Community Impact Assessment, 2012

[1] Employed civilian labor force from the 2006–2010 United States Census ACS.

ACS = American Community Survey

There is a possibility that the car wash business (Brea Auto Spa) could reestablish itself within the study area and keep its current employees; however, due to alternative locations, timing, or other reasons, employees may not be able to relocate with the business and would need to look for job opportunities elsewhere.

A partial acquisition of the Country Woods apartment complex located in the southeast quadrant of the SR-57/Lambert Road interchange would occur under Build Alternative 7A (Preferred Alternative), requiring the removal of two apartment buildings. As a result, approximately 17

residential units would be displaced. Based on the average household size (2.74) in the residential properties within the affected Census Tract 218.14, approximately 47 residents could be relocated.

The Relocation Impact Memorandum (approved June 2012) was prepared to identify properties to be displaced and to find replacement properties for the relocated residents and employees. Based on the relocation properties research results, an adequate number of replacement properties are available in the study area to all displaced residents. As of January 2012, several apartments for rent are available within the Country Woods apartment complex. Given the Census Tract 218.14 demographic characteristics such as high household income, high education levels, low transit dependency, relatively short residency, and availability of replacement properties, it is expected that residential relocation impacts occurring under Build Alternative 7A (Preferred Alternative) would not be adverse.

Avoidance, minimization, and/or mitigation measures would minimize impacts to relocated residents and displaced businesses.

Build Alternative 9

Build Alternative 9 would not result in full acquisitions. Partial acquisitions under Build Alternative 9 are shown on Figure 2.2.3-3, Alternative 9 – Temporary Construction Easements and Partial Parcel Acquisitions, and listed in Table 2.2.3-13, Partial Acquisitions under Build Alternative 9. Build Alternative 9 would result in partial acquisitions of 13 nonresidential parcels. None of these acquisitions under Build Alternative 9 would result in the displacement of businesses or residential relocations. Therefore, no residents or employees would be displaced under this alternative.

Table 2.2.3-13 Partial Acquisitions under Build Alternative 9

APN	Area (sf)	Residential/Nonresidential (Affected Business Types)	Relocation
Partial Acquisitions			
320-101-17	3,049	Industrial/Commercial: Brea Auto Spa	No
319-041-13	2,614	Public: Park-and-Ride	No
319-031-47	4,792	Public	No
319-021-01	1,307	Public	No
320-101-19	1,742	Medical Offices	No
320-101-14	436	Office	No
319-021-59	1,307	Public	No
319-021-60	1,307	Public	No
319-021-61	871	Public	No
319-021-62	871	Public	No
319-021-63	871	Public	No
319-022-27	1,742	Public	No
319-371-18	3,920	Commercial: Olen properties	No

Source: Source: Community Impact Assessment, 2012
APN = Assessor's Parcel Number, sf = square feet

No Build Alternative

No improvements to the existing SR-57/Lambert Road interchange are proposed under the No Build Alternative, beyond those recently constructed in association with the SR-57 Northbound Widening Project. Therefore, the No Build Alternative would not result in full or partial acquisitions of properties and no relocations would occur.

Avoidance, Minimization, and/or Mitigation Measures

REL-1 During final design, property owners located within the acquisition area shall be notified of their rights and benefits during the acquisition period. The City of Brea acquisition guidelines shall be followed to determine a fair market value of properties affected in accordance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act (Uniform Act) of 1970 (Public Law 91-646, 84 stat. 1984). The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) (Public Law 91-646, 84 Statutes 1894) mandates that certain relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced by its projects. The Uniform Act provides for uniform and equitable treatment by federal or federally assisted programs of persons displaced from their homes, businesses, or farms and establishes uniform and equitable land acquisition policies. The City will provide all affected property owners with a copy of the Uniform Act. The City will comply with the Uniform Act. The compensation awarded to the property owner shall adequately offset the loss of the property value. The Uniform Act will also require compensation for any relocation costs associated with Temporary Construction Easements (TCE).

REL-2 During final design, where acquisition and relocation occur, 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), will be followed. An independent appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.

REL-3 The Uniform Act requires that comparable, decent, safe, and sanitary replacement housing that is within a person's financial means be made available before that person will be displaced. In the event that such replacement housing is not available for persons displaced by the proposed project within the statutory limits for replacement housing payments, last resort housing will be provided in a number of prescribed ways.

2.2.3.3 Environmental Justice

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 William J. Clinton on February 11, 1994. This EO 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 2010, this was $18,310 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 demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

Affected Environment

Information in this section is based upon the Community Impact Assessment (CIA) prepared in October 2012 for the proposed project.

The environmental justice analysis was conducted using census tract information from the 2006–2010 ACS and 2010 United States Census; refer to Figure 2.2.3-1, Study Area Census Tracts. The following analysis provides a comparison of five measures used to evaluate environmental justice:

- Percentage of non-White residents in the study area census tracts;
- Percentage of Hispanic residents (the Census Bureau considers Hispanic or Latino ethnicity distinct from racial background) in the study area census tracts;
- Percentage of the population below the poverty level in the study area census tracts;
- Median household income in the study area census tracts; and
- Transit-dependent population in the study area census tracts.

The composition of minority and low-income populations within the study area census tracts is shown in Table 2.2.3-14, Environmental Justice Populations.

Table 2.2.3-14 Environmental Justice Populations

Area	Non-White Residents (not including Hispanic Residents)1	Hispanic Residents1	Percent Below Poverty Level2	Median Household Incomes2	Transit-Dependent (< 16 and over 65)2
County of Orange	39%	34%	10.1	$74,344	15%
City of Brea	33%	25%	5.7	$79,647	9%
Census Tract 15.04	39%	40%	7.2	$61,250	16%
Census Tract 15.06	29%	19%	4	$75,844	6%
Census Tract 15.07	36%	26%	10	$74,458	12%
Census Tract 218.14	33%	19%	5.6	$81,828	11%
Census Tract 218.15	42%	13%	1.5	$99,957	4%

Source: Community Impact Assessment, 2012
[1] Census 2010
[2] 2006–2010 ACS
ACS = American Community Survey

Minority Populations

Non-White Population

The percentage of non-White, non-Hispanic residents was calculated by subtracting the number of White residents (one race only, as identified by the 2010 Census) from the non-Hispanic population. The predominant populations in all study area census tracts, the city, and the county are White. The city has a smaller non-White population than the county. As identified in Table 2.2.3-14, Environmental Justice Populations, Census Tracts 15.04, 15.07, and 218.15 have a non-White population slightly larger than the city reference population of 33 percent. Census Tracts 15.06 and 218.14 have a non-White population similar to the city's non-White population. It is therefore concluded that some non-White residents are present within the study area; however, they do not represent a majority.

Hispanic Residents

With exception of Census Tract 15.04, all of the study area census tracts have a lower percentage of Hispanic residents than the city. As shown in Table 2.2.3-15, Census Tract 15.04 has 40 percent Hispanic residents, compared to the average of 34 percent within the city. The majority of the study area population is White and non-Hispanic, and the study area does not exhibit a large percentage of Hispanic residents.

Poverty

The percentage of persons living in poverty in all of the study area census tracts is lower than the county average of 10 percent. All census tracts, except Census Tracts 15.07 and 15.04, have lower percentages of people in poverty than the city reference population of 5.7 percent. Census Tract 15.07 has the highest level of people in poverty, 10 percent, of the five study area census tracts. Thus, it can be concluded that some low-income populations are present in the study area.

Median Household Income

Low income is defined as a population whose median household income is at or below the Department of Health and Human Services poverty guidelines. All study area census tracts, with exception of except Census Tract 15.04, are characterized by communities with a median household income between $74,450 and $100,000. Census Tracts 218.14 and 218.15 have slightly higher median household incomes than the city ($79,647) and county reference populations ($74,344), and Census Tracts 15.04, 15.06, and 15.07 are characterized by slightly lower median household incomes than the city. Census Tract 15.04 reported the lowest median household income at $61,250. It is therefore concluded that the study area east of SR-57 is occupied by households with higher median incomes ($80,000 to $100,000), whereas the areas west of SR-57 are characterized by households with slightly lower median incomes (between $60,000 and $76,000).

Based on the businesses and persons observed during site visits, the tracts appear to be consistent with the demographic profiles obtained from the U.S. Census, and no low-income populations that deviated from the Census information were readily evident.

Transit-Dependent Population

The FTA defines low-income and minority residents as part of the transit-dependent population. The transit-dependent population is typically described as persons under the age of 16 and over

65, the populations who tend to walk or use public transportation for travel. Based on this definition, approximately nine percent of the population within the city, and 15 percent of the population within the county, are transit-dependent.

Two study area census tracts (Census Tracts 15.06 and 218.15) have a transit-dependent population that is substantially lower than the city and the county. Census Tracts 15.04, 15.07, and 218.14 have a slightly higher percentage of transit-dependent population than the city. Therefore, it is concluded that transit-dependent residents are present within the study area; however, the percentage of these residents is not disproportionately larger than the county and city reference populations.

Summary

Minority and low-income populations are present within the study area; however, the percentage of low-income and minority populations within three of the five study area census tracts is substantially less than the percentage of low-income and minority populations for the City of Brea and Orange County. Census Tracts 15.06, 218.14, and 218.15 are characterized by higher median household income, higher percentage (between 58 and 71 percent) White, and non-transit-dependent populations. Census Tracts 15.04 and 15.07 are characterized by a slightly higher percentage of people in poverty, non-White, and transit-dependent populations than the city. Although two of the five census tracts do show higher percentages of low-income and minority populations than the city, they are not substantially higher. When compared to the county demographics, these census tracts are on par with the county minority and low-income populations.

Environmental Consequences

Temporary (Short-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

The proposed project addresses deficiencies of the existing transportation system and would enhance the mobility and improve connections for residents within the proposed project area including minority and low-income populations. Disruptions to local communities may occur as a result of construction of Build Alternatives 7A and 9 in the form of construction crew commutes, construction noise, vibration, and use of construction equipment. Avoidance, minimization, and mitigation measures would be implemented in accordance with the results of the Noise Study Report (April 2013) and Air Quality Analysis (January 2013) to reduce noise, dust, and air quality pollution during construction of either proposed project alternative; refer to Section 2.3.7, Noise, and Section 2.3.6, Air Quality.

As both Build Alternatives 7A and 9 would construct improvements to an existing interchange, construction impacts would be experienced by all adjacent residents and others that use the interchange and would not be limited to low-income and/or minority populations. Construction impacts would be temporary and would cease upon completion of the proposed project. Therefore, Build Alternatives 7A and 9 would not cause disproportionately high and adverse short-term effects on any minority or low-income populations per EO 12898 regarding environmental justice.

No Build Alternative

No improvements to the existing SR-57/Lambert Road interchange would occur under the No Build Alternative, beyond what is recently constructed in association with the SR-57 Northbound Widening Project. Therefore, the No Build Alternative would not result in impacts to low-income and/or minority populations.

Operational (Long-Term) Impacts

Build Alternative 7A (Preferred Alternative)

While low-income and minority populations are present within the proposed project area, the percentage of low-income and minority populations within three of the five census tracts is substantially less than the percentage of low-income and minority populations in the city and the county as a whole. Although two of the five census tracts do show slightly higher percentages of low-income and minority populations than the city and Orange County as a whole, they are not substantially higher, and the potential impacts of the proposed Build Alternative 7A (Preferred Alternative) on the human environment, including acquisition of property, would not be disproportionately limited to the part of the proposed project area located within the census tract showing a higher percentage of minority populations than the city and county.

Specifically, Build Alternative 7A (Preferred Alternative) would relocate residents and displace one business from Census Tract 218.14. The affected Census Tract 218.14, where the residential and nonresidential displacements would occur, is characterized by a population is between 58 and 71 percent White, has a median age between 34 and 45, and has a median household income between $60,000 and $100,000. Ample replacement properties exist for displaced residents and employees. Build Alternative 7A (Preferred Alternative) could benefit local communities by reducing travel time and providing improved access to the city. Therefore, proposed Build Alternative 7A (Preferred Alternative) would not cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice.

Build Alternative 9

Although low-income and minority populations are present within the proposed project area, the percentage of low-income and minority populations within three of the five census tracts is substantially less than the percentage of low-income and minority populations in the city and Orange County as a whole. Although two of the five census tracts do show slightly higher percentages of low-income and minority populations than the city and county as a whole, they are not substantially higher, and the potential impacts of Build Alternative 9 on the human environment, including acquisition of property, would not be disproportionately limited to the part of the proposed project area located within the census tract showing a higher percentage of minority populations than the city and county.

Build Alternative 9 would not result in full acquisitions and relocation of residents and businesses. According to the Air Quality Analysis and the Noise Study Report, Build Alternative 9 would not permanently increase noise levels or result in air quality concerns. Similar to Build Alternative 7A (Preferred Alternative), Build Alternative 9 could benefit local communities by reducing travel time and providing improved access to the city. Therefore, Build Alternative 9 would not cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice.

No Build Alternative

No improvements to the existing SR-57/Lambert Road interchange are proposed under the No Build Alternative other than routine maintenance. Therefore, the No Build Alternative would not result in impacts to low-income and/or minority populations.

Avoidance, Minimization, and/or Mitigation Measures

Based on the above discussion and analysis, the Build Alternatives 7A and 9 and the No Build Alternative will not cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice.

2.2.4 UTILITIES/EMERGENCY SERVICES

The effects of a project are evaluated to determine if they would result in an adverse impact on the environment. An adverse impact would occur if the proposed project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or result in the need for new or physically altered governmental facilities, the construction of which could cause adverse environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services including fire protection, police protection, or other public facilities and a review of existing utility providers and facilities within and immediately adjacent to the project disturbance limits.

2.2.4.1 Affected Environment

Information in this section is based upon the Community Impact Assessment (CIA) prepared in October 2012 for the proposed project.

Utilities

Water service in the City of Brea is provided by the Metropolitan Water District (MWD) and the California Domestic Water Company. Wastewater service is provided by the city, with the main trunk system distributing to Orange County Sanitation District facilities. The City of Brea contracts with Brea Disposal for solid waste services. In addition, Orange County Waste and Recycling owns and operates the Olinda Sanitary Landfill, located two miles east of the proposed project. The Southern California Gas Company provides natural gas to the proposed project area. Telephone service is provided mainly by AT&T and Verizon; however, there are many telephone service providers in the city. Cable service is provided by Time Warner Cable and AT&T. Electrical services to the proposed project area are provided by Southern California Edison (SCE).

The following utilities are located within the SR-57/Lambert Road interchange: Chevron (underground 3-inch gas line), ExxonMobil Oil Corporation (underground active 8-inch pipeline and abandoned 6-inch pipeline), MWD of Southern California underground 97-inch potable water pipeline and 36-inch potable water pipeline, Plains West Coast Terminals (underground 12-inch pipeline), AT&T (underground telecommunications conduits), ConocoPhillips (underground 8-inch pipeline and idle 3-inch pipeline), NextG (overhead and underground cable service), SCE (overhead and underground electric lines), Southern California Gas Company (underground 4-inch natural gas pipeline), and City of Brea Water District (underground water lines).

Fire and Police Protection

The Brea Fire Department (BFD) provides emergency response for the entire city. The BFD entered into a Shared Fire Command Agreement with the city of Fullerton, which is part of a two-year pilot program effective May 2011, that allows the two municipalities to share various Chief/Marshal positions. The BFD operates four fire stations; each station is assigned a Fire Management Zone and responds to fires, medical aids, rescues, public assists and releases or potential releases of hazardous materials. In 2007, the BFD responded to 3,464 alarms. Station 3, located at 400 North Kraemer, is 0.8 mi east of the SR-57/Lambert Road interchange. Station 3 is staffed with a four-person engine company. [2]

[2] City of Brea. 2012. Brea Fire Department Information. Online: http://www.ci.brea.ca.us.

The Brea Police Department provides services to the cities of Brea and Yorba Linda, with an office in each city. The Brea Police Department has over 40 patrol officers, two robbery/homicide detectives, three juvenile/sex crime detectives, five property crime/general investigation detectives, four financial crime detectives, one crime analyst, and several special enforcement detectives. The station within the City of Brea is located at 1 Civic Center Circle, one mile southwest of the proposed project. The station is staffed with 100 sworn officers, 1 reserve officer, and 55 full-time and part-time civilian employees; it responds to calls from the entire city.[3]

2.2.4.2 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

Construction (Short-Term) Impacts

As identified in Section 1.4.2, Build Alternatives, Lambert Road and the on- and off-ramps would require temporary closures throughout the construction period, for staging, equipment movement, grading, and other construction activities. These full closures on Lambert Road and the on- and off-ramps would be short term (less than 10 consecutive days) and conducted at night, re-opening the following morning to minimize impacts to peak-hour traffic. The longest anticipated ramp closure would be a weekend closure. Detours on Lambert Road and for the on- and off-ramps would be put in place during these closures. The SR-57 mainline would not require closures, and thus, mainline freeway traffic would not be detoured as part of the proposed project; however, during SR-57/Lambert Road ramp closures, traffic would be detoured. Detoured traffic would make use of State College Boulevard, Associated Road, Kraemer Boulevard, and Birch Street. No traffic would be diverted to the north along State College Boulevard because there is no link between Tonner Canyon Road and Lambert Road east of SR-57. Alternatively, traffic would be detoured along the SR-57 mainline to adjacent interchanges such as SR-57/Imperial Highway.

As a result of the short-term road closures, temporary delays in emergency response times may occur during construction of the proposed project due to temporary lane closures and/or traffic detours. Alternative routes are available for use by public service vehicles during short periods of lane closures. These impacts would be minimized with the implementation of a Traffic Management Plan (TMP), which would reduce the disruption of emergency services (refer to Section 2.2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities).

Table 2.2.4-1, Utility Impacts for Build Alternatives 7A and 9, summarizes the impacts of the proposed project to utility providers within the project footprint. The proposed project would impact various underground and overhead utilities, which would require protection in place, removal, replacement, or relocation. Replacement and relocation of utilities would be conducted in cooperation with utility owners. It is expected that all utilities that require relocation would be relocated within the proposed project limits. An updated utility search would be required during the Final Design phase of the proposed project to determine all utility conflicts that require positive location and/or relocation.

[3] City of Brea. 2012. Brea Police Department Information. Online: http://www.ci.brea.ca.us.

Table 2.2.4-1. Utility Impacts for Build Alternatives 7A and 9

Utility Provider	Type of Utility	Potential Impacts – Build Alternatives (Alternatives 7A and 9)
Chevron	Underground 3-inch gas line	There is an underground pipeline along Lambert Road. This line may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
ExxonMobil Oil Corporation	Underground active 8-inch pipeline and abandoned 6-inch pipeline	There are underground pipelines along Lambert Road. These lines may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
Metropolitan Water District of Southern California	Underground 97-inch pipeline and 36-inch pipeline	There are underground pipelines along Lambert Road. These lines may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
Plains West Coast Terminals	Underground 12-inch pipeline	There is an underground pipeline along Lambert Road. This line may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
AT&T	Underground conduits	There are underground conduits along Lambert Road. These conduits may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
ConocoPhillips	Underground 8-inch pipeline and idle 3-inch pipeline	There are underground pipelines along Lambert Road. These lines may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
NextG	Overhead and underground Cable service	According to NextG, their facilities do not exist within the proposed project limits, and therefore would not be impacted by the proposed project. Further utility investigations would occur in the PS&E stage to ensure the status of this utility in regard to the proposed project.
Southern California Edison	Overhead and underground electric lines	Relocation of the overhead electric lines along Lambert Road would be required due to the widening of this street. Relocation and/or interruption of their services would be considered during the final design phase and coordinated with the utility agencies.
Southern California Gas Company	Underground 4-inch pipeline	There is a 4-inch underground pipeline along Lambert Road. This line may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.
City of Brea Water District	Underground water lines	There is an underground pipeline along Lambert Road. This line may be relocated or protected in place until construction is complete. Interruption of these services would be considered during the final design phase and coordinated with the utility agencies.

Source: Community Impact Assessment, 2012

Operation (Long-Term) Impacts

Emergency response times for fire, police, and ambulance providers are anticipated to improve as a result of the proposed project. These improvements would result in the improved operations at the majority of the study intersection from an unacceptable level of services (LOS) to an acceptable LOS; refer to Section 2.2.5, Transportation and Traffic, for further details. Because of the improved LOS at the majority of the study area intersections, fire and police response times would improve over the existing and No Build Alternative conditions.

The proposed project would not increase the need for domestic water services, wastewater facilities, or solid waste disposal, since the proposed project would not result in an increase in land uses that require these services. Utility services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists.

No Build Alternative

Under the No Build Alternative, existing utilities services and emergency services would not be affected. The benefit of enhanced police and fire response times would not be achieved under the No Build Alternative since existing and forecast congestion within the project study area would remain.

2.2.4.3 Avoidance, Minimization, and/or Mitigation Measures

UES-1 Prior to commencement of construction, the City will coordinate with all affected utility providers to establish exact procedures and specifications for all facilities to be relocated during construction. Additionally, the Project Engineer will notify other service purveyors in the vicinity of the improvements to verify that the proposed activities would not disrupt services to the community.

UES-2 Prior to and during construction, the project will coordinate with the California Highway Patrol, City of Brea Police and Fire Department, local public and private ambulance and paramedic providers, and the public school districts in the vicinity of the proposed project to provide information on construction schedule, duration of any lane closures, alternate routes during lane closures, as well as throughout the construction period, and to provide contact information in case of changing construction activities and schedule. This coordination will follow the guidance provided in the community outreach program and the traffic management plan.

UES-3 At least 48 hours prior to commencement of excavation work, the City will contact Underground Service Alert (USA) to verify the nature and location of other existing underground utilities, and to avoid the unplanned disruption of pipes or service lines during construction activities.

UES-4 Prior to commencement of construction, the City will prepare a Traffic Management Plan (TMP) in coordination with the California Department of Transportation (Caltrans). The TMP will consist of prior notices, adequate sign-posting, detours, phased construction and temporary driveways. The TMP will specify implementation timing of each plan element (prior notices, sign-posting, detours, etc.) as determined appropriate by Caltrans. Adequate local and emergency access will be provided at all times to adjacent uses. Proper detours and warning signs will be established to ensure public safety. The TMP will be devised so that construction will not interfere with any emergency response or evacuation plans. Construction activities will proceed in a timely manner to reduce impacts.

2.2.5 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

2.2.5.1 Regulatory

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 Codes of Federal Regulations [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.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR Part 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

2.2.5.2 Affected Environment

Information in this section is based upon the Traffic Study prepared in July 2012.

The proposed project involves improvements to the SR-57/Lambert Road interchange in the City of Brea. The section of SR-57 in the proposed project vicinity consists of four general purpose lanes plus one high occupancy vehicle (HOV) lane in each direction. The study area is the area within which traffic impacts of the Build Alternatives versus No Build Alternative are identified. The study area for the impact analysis is illustrated in Figure 2.2.5-1, Study Area, and represents those locations that would be affected by the proposed project.

Level of Service

Level of service (LOS) is a qualitative indicator of the operating condition of an intersection or roadway segment as represented by traffic congestion, delay, and the volume to capacity (V/C) ratio. LOS ranges from LOS A (the best) to LOS F (the worst) and can be used to describe the operations of roadway segments, intersections, freeway mainlines, on- and off-ramps, and ramp junctions. LOS F exists when the total demand exceeds the capacity of the roadway area, thus, the greater the congestion, the poorer the roadway operations. The densities are measured in passenger cars per mile per lane (pc/mi/ln). Refer to Figure 2.2.5-2, Signalized Intersection LOS, and Figure 2.2.5-3, Freeway Mainline LOS, for a graphical representation of LOS. LOS criteria for freeway segments, ramp merge and diverge, and intersections are provided below.

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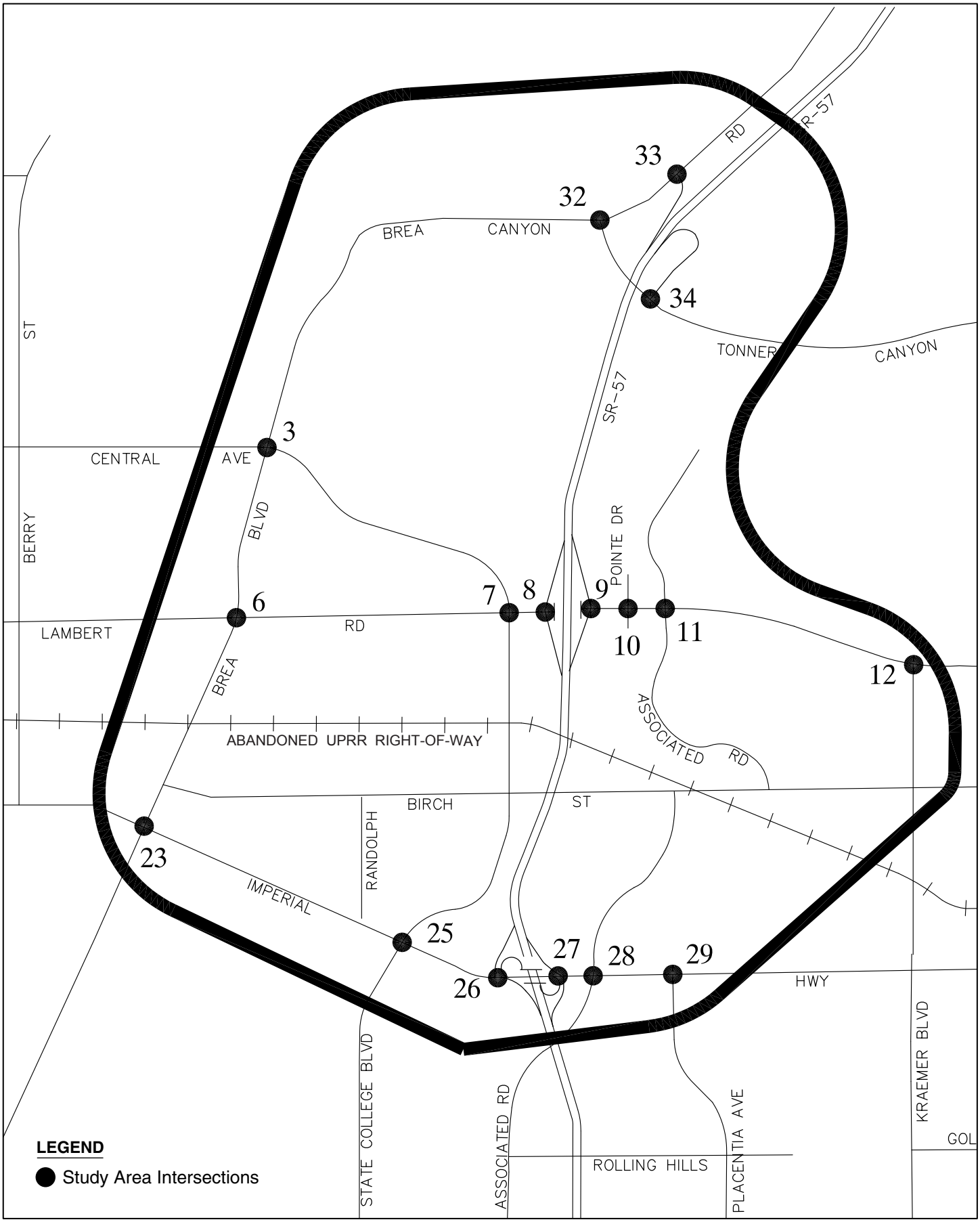

Source: Stantec, March 2012

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Study Area

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Figure 2.2.5-1

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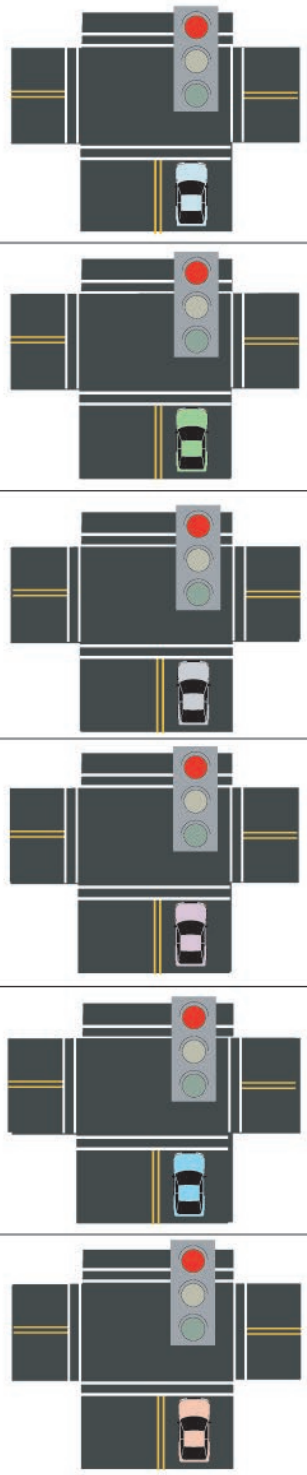
LEVELS OF SERVICE

for Intersections with Traffic Signals

Level of Service	Delay per Vehicle (seconds)
A	≤10
B	11-20
C	21-35
D	36-55
E	56-80
F	>80



Factors Affecting LOS of Signalized Intersections

Traffic Signal Conditions:
- Signal Coordination
- Cycle Length
- Protected left turn
- Timing
- Pre-timed or traffic activated signal
- Etc.

Geometric Conditions:
- Left- and right-turn lanes
- Number of lanes
- Etc.

Traffic Conditions:
- Percent of truck traffic
- Number of pedestrians
- Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections.

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Signalized Intersection LOS

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Figure 2.2.5-2

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LEVELS OF SERVICE

for Freeways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. **No delays**
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. **No delays**
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. **Minimal delays**
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. **Minimal delays**
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. **Significant delays**
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. **Considerable delays**

Source: 2000 HCM, Level of Service Criteria for Freeways.

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Freeway Mainline LOS

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Figure 2.2.5-3

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Freeway Mainline Segments

The LOS criteria for freeway segments are provided in Table 2.2.5-1, and are determined by the Highway Capacity Manual (HCM). For general purpose lanes, density (pc/mi/ln) is used to provide an estimate of LOS; for HOV lanes, V/C ratio is used to provide an estimate of LOS.

Table 2.2.5-1 Caltrans Freeway Mainline Performance Criteria

Level of Service	General Purpose Lanes (Density[a])	HOV Lanes	
		V/C[b]	Max. Volume
A	0.0-11.0	0.00-0.32	700
B	11.1-18.0	0.33-0.53	1,170
C	18.1-26.0	0.54-0.73	1,600[c]
D	26.1-35.0	0.74-0.90	1,980
E	35.1-45.0	0.91-1.00	2200
F	>45.0	≥ 1.00	n/a

Source: Traffic Study, 2012.
[a] Passenger cars per mile per lane (pc/mi/ln)
[b] V/C = vehicle to capacity ratio.
[c] 1,650 vehicles per hour (vph) is the maximum desired HOV volume for 1 lane and represents LOS C conditions (Source: Caltrans HOV Guidelines, 2003 Edition). Planning studies in District 12 have historically utilized 1,600 vph as the maximum desired HOV volume for one lane and 1,750 vph for two lanes. Segments exceeding these maximum desired volumes would be identified.

A summary of the existing freeway mainline conditions is provided in Table 2.2.5-2 for the freeway mainline segments. In the northbound direction, SR-57 exceeds the 1,600 vehicles per hour per lane for the HOV lanes during both the AM and PM peak hours. In the southbound direction, SR-57 operates at LOS E during the AM peak hours between Lambert Road to south of Tonner Canyon Road, while the HOV lanes exceed the 1,600 vehicles per hour per lane for the HOV lanes during the PM peak hours.

Table 2.2.5-2 Freeway Mainline LOS Summary – Existing (2011) Conditions

Location	Lanes			AM Peak Hour					PM Peak Hour				
				Mainline			HOV		Mainline			HOV	
	HOV	GP	Aux	Vol	Density	LOS	Vol	D/C[1]	Vol	Density	LOS	VOL	D/C[1]
NORTHBOUND													
Begin Project													
NB Mainline s/o Lambert Rd	1	4	0	5,700	23.9	C	**1,780**	.81	6,620	29.3	D	**1,760**	.80
NB Mainline s/o Tonner Canyon Rd	1	4	0	5,340	22.1	C	**1,680**	.76	6,750	30.1	D	**1,860**	.84
End Project													
NB Mainline n/o Tonner Canyon Rd	1	4	0	5,265	21.8	C	**1,780**	.81	7,160	33.1	D	**1,960**	.89

Table 2.2.5-2 Freeway Mainline LOS Summary – Existing (2011) Conditions (Continued)

Location	Lanes			AM Peak Hour					PM Peak Hour				
				Mainline			HOV		Mainline			HOV	
	HOV	GP	Aux	Vol	Density	LOS	Vol	D/C[1]	Vol	Density	LOS	VOL	D/C[1]
SOUTHBOUND													
Begin Project													
SB Mainline s/o Lambert Rd	1	4	0	7,040	32.2	D	1,340	.61	6,660	29.5	D	**1,830**	.83
SB Mainline s/o Tonner Canyon Rd	1	4	0	7,590	**36.6**	**E**	1,240	.56	6,470	28.3	D	**1,930**	.88
End Project													
SB Mainline n/o Tonner Canyon Rd	1	4	0	7,270	33.9	D	1,140	.52	6,530	28.7	D	**1,830**	.83

Source: Traffic Study, 2012.
HOV - High Occupancy Vehicle Lane; GP - General Purpose Lane; AUX - Auxiliary Lane; Vol - Volume; Density - passenger cars per mile per lane; LOS - Level of Service; NB – northbound; SB – southbound; s/o – south of; n/o – north of
Bold = Level of Service (LOS) E or F (mainline), or exceeds 1,600 vph/ln (HOV)
[1] Demand/capacity (D/C) ratios are calculated based on a maximum capacity for the HOV lane of 2,200 vph/ln; the maximum desired HOV lane volume is 1,600 vph/ln.
*Auxiliary lane that is not continuous between successive off/on ramps and does not add mainline capacity.

Ramps and Ramp-Freeway Junctions

The performance criteria used for evaluating freeway ramps are shown in Table 2.2.5-3, Ramp Performance Criteria, and are based upon the maximum vehicle volume that can be accommodated on the ramps at an interchange. The LOS criteria for the ramp-freeway junctions (i.e., the merge, diverge, and weaving movements) are provided in Table 2.2.5-4, Merge, Diverge, and Weaving Performance Criteria, which is based on vehicle density.

Table 2.2.5-3 Ramp Performance Criteria

Analysis based on peak hour volume/capacity (V/C) ratios using the following maximum capacities:

Freeway to Arterial Road Interchanges
Metered On-Ramps
• 900 vehicles per hour (vph) for a one-lane metered on-ramp with only one mixed-flow lane at the meter. • 1,080 (20 percent greater than 900) vph for a one-lane metered on-ramp with one mixed-flow lane at the meter plus one HOV preferential lane at the meter. • 1,500 vph for a one-lane metered on-ramp with two mixed-flow lanes at the meter. • 1,800 vph for a one-lane metered on-ramp (with mainline auxiliary lane) with two mixed-flow lanes at the meter plus one HOV preferential lane at the meter, or a two-lane metered onramp(with mainline auxiliary lane for 2nd lane) with two mixed-flow lanes at the meter.
Non-Metered On-Ramps and Off-Ramps
• 1,500 vph for a one-lane ramp. • 2,250 (50 percent greater than 1,500) vph for a two-lane on-ramp that tapers to one merge lane at or beyond the freeway mainline junction point (labeled as 1.5 lanes in the volume and capacity summary tables). • 2,250 (50 percent greater than 1,500) for a two-lane off-ramp with only one auxiliary lane (labeled as 1.5 lanes in the volume and capacity summary tables). • 3,000 vph for a two-lane on-ramp that has two receiving lanes. • 3,000 vph for a two-lane off-ramp with two auxiliary lanes.
Freeway to Freeway Interchanges
• 2,000 vph for a one-lane ramp. • 4,000 vph for a two-lane ramp.

Source: Traffic Study, 2012.

Table 2.2.5-4 Merge, Diverge, and Weaving Performance Criteria

Analysis based on the Highway Capacity Manual (HCM) methodology which calculates density in passenger cars/mile/lane (pc/mi/ln) for the section of freeway in the merge, diverge and weaving section.

Level of Services Ranges	Density (pc/mi/ln)
A	≤ 10
B	> 10 – 20
C	> 20 – 28
D	> 28 – 35
E	> 35
F	Demand exceeds capacity

Source: Traffic Study, 2012

A summary of the existing ramp configurations, capacities, and peak hour volumes together with the corresponding V/C ratios is provided in Table 2.2.5-5, Ramp Volume and Capacity Summary – Existing (2011) Conditions. As shown, all ramps are currently at LOS E or better (a V/C of less than 1.0).

In accordance with the HCM procedures, a weaving analysis is performed when the distance between an on-ramp entry and the next off-ramp is less than 2,500 feet. The weave distances to the north and south of the proposed project site exceed this length. The results of the merge/diverge analysis for existing conditions can be found in Table 2.2.5-6, Ramp Merge/Diverge Analysis Summary – Existing (2011) Conditions. The following ramps have merge/diverge areas at LOS E, based on existing conditions:

- Lambert northbound diverge (PM peak hours)
- Lambert southbound diverge (AM peak hours)

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Table 2.2.5-5 Ramp Volume and Capacity Summary – Existing (2011) Conditions

Location	Northbound							Location	Southbound						
	Lanes		Cap	AM Pk. Hr.	V/C Ratio	PM Pk. Hr.	V/C Ratio		Lanes		Cap	AM Pk. Hr.	V/C Ratio	PM Pk. Hr.	V/C Ratio
	R.	Aux							R.	Aux					
SR-57															
Imperial NB On	1	0	1,500	330	.22	370	.25	Imperial SB On	1	0	1,500	660	.44	1,150	.77
Imperial NB Loop On	1	0	1,500	490	.33	340	.23	Imperial SB Loop On	1	0	1,500	300	.20	540	.36
Imperial NB Off	1	0	1,500	1,410	.94	1,030	.69	Imperial SB Off	1.5	1	2,250	890	.40	960	.43
Begin Project															
Lambert NB On	1	0	1,500	730	.49	1,070	.71	Lambert SB On	1	0	1,500	930	.62	1,230	.82
Lambert NB Off	1	0	1,500	1,190	.79	1,040	.69	Lambert SB Off	1	0	1,500	1,380	.92	940	.63
End Project															
Tonner Canyon NB Off	1	1	1,500	25	.02	510	.34	Tonner Canyon SB On	1	1	1,500	420	.28	40	.03

Source: Traffic Study, 2012
Bold = exceeds volume/capacity (V/C) ratio of 1.0
R. = Ramp termini lanes – 1.5 denotes a two-lane off-ramp with one dedicated and one optional lane, or a two-lane on-ramp entering the freeway as one merge lane and an auxiliary lane
Aux = Auxiliary lanes
Cap = Capacity

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Table 2.2.5-6 Ramp Merge/Diverge Analysis Summary – Existing (2011) Conditions

Location	AM Peak Hour				PM Peak Hour			
	Volumes		Density	LOS	Volumes		Density	LOS
	Fwy.	Ramp			Fwy.	Ramp		
SR-57 at Imperial								
NB Merge	5,370	330	22.4	C	6,350	370	26.2	C
SB Diverge	7,040	890	22.0	C	6,660	960	20.5	C
SR-57 at Lambert Road								
NB Merge	4,610	730	23.1	C	5,680	1,070	29.7	D
NB Diverge	5,700	1,190	33.5	D	6,720	1,040	**37.1**	**E**
SB Merge	6,210	930	30.2	D	5,530	1,230	30.2	D
SB Diverge	7,590	1,380	**42.0**	**E**	6,470	940	34.8	D
SR-57 at Tonner Canyon Road								
NB Diverge	5,240	25	25.0	C	6,650	510	33.7	D
SB Merge	7,270	420	29.9	D	6,530	40	24.1	C

Source: Traffic Study, 2012
FWY. = Freeway; **Bold** = Level of service (LOS) E or F
LOS Criteria based on Density (pc/mi/ln):

A	≤ 10	D	> 28-35
B	>10-20	E	> 35
C	> 20-28	F	Demand exceeds capacity (mainline or ramp)

Arterial Intersections

For the operational analysis of the arterial roadway intersections that serve freeway on- and off-ramps, LOS is derived by using the HCM average vehicle delay. For the study area intersections not serving freeway ramps, the intersection capacity utilization (ICU) methodology is used. The performance criteria for the delay and ICU procedures are summarized in Table 2.2.5-7, Arterial Intersection Performance Criteria.

Table 2.2.5-7 Arterial Intersection Performance Criteria

Caltrans Intersections		
Level of service based on average vehicle delay (seconds/vehicle) as calculated by the Highway Capacity Manual (HCM) procedures for signalized intersections.		
City of Brea Intersections		
Level of service to be based on Intersection Capacity Utilization (ICU) values as calculated by the following input values:		
Lane Capacity	1,700 vehicles per hour (vph)	
Clearance Interval	0.05	
Right turn on red Utilization Factor	0.75	
LOS Ranges - Signalized Intersections		
LOS	**Average Delay[1]**	**ICU[2]**
A	0.0 – 10.0	0.00 – 0.60
B	10.1 – 20.0	0.61 – 0.7
C	20.1 – 35.0	0.71 – 0.80
D	35.1 – 55.0	0.81 – 0.90
E	55.1 – 80.0	0.91 – 1.00
F	> 80.0	> 1.00
Performance Standard: LOS D		

Source: Traffic Study, 2012
[1] Seconds of delay per vehicle (average)
[2] Intersection Capacity Utilization

A summary of the existing intersection LOS is provided in Table 2.2.5-8, Existing (2011) Conditions ICU and Delay Summary. Figure 2.2.5-4, Existing ADT and Peak Hour Volumes, illustrates the AM and PM peak hour volumes along with intersection lanes and average daily trip (ADT) volumes for the immediate area.

All intersections achieve the performance standard. For the Lambert Road interchange, the intersection results for existing conditions show LOS C or better in both the HCM and ICU calculations; however, queuing between the ramp intersections can exceed the available space, and blocking prevents the theoretical LOS values from being achieved. Therefore, actual operations tend to be worse than indicated by the theoretical values given.

Table 2.2.5-8 Existing (2011) Conditions ICU and Delay Summary

	AM Peak Hour		PM Peak Hour	
Location	**ICU**	**LOS**	**ICU**	**LOS**
City of Brea				
3. Brea Blvd & Central/State College Blvd	.68	B	.59	A
6. Brea Blvd & Lambert Road	.69	B	.65	B
7. State College Blvd & Lambert Road	.63	B	.68	B
8. SR-57 SB Ramps & Lambert Road	.69	B	.59	A
9. SR-57 NB Ramps & Lambert Road	.70	B	.61	B
10. Pointe Dr & Lambert Road	.61	B	.60	A
11. Associated & Lambert Road	.70	B	.52	A
12. Kraemer Blvd & Lambert Road	.38	A	.62	B
23. Brea Blvd & Imperial Highway	.71	C	.73	C
25. State College Blvd & Imperial Highway	.61	B	.77	C
26. SR-57 SB Ramps & Imperial Highway	.54	A	.61	B
27. SR-57 NB Ramps & Imperial Highway	.68	B	.64	B
28. Associated & Imperial Highway	.59	A	.62	B
29. Placentia & Imperial Highway	.46	A	.54	A
32. Brea Blvd & Tonner Canyon Road	.89	D	.89	D
33. Brea Blvd & SR-57 SB On Ramp	.90	D	.90	D
34. SR-57 NB Off Ramp & Tonner Canyon Road	.07	A	.21	A
Caltrans Locations	**Delay**	**LOS**	**Delay**	**LOS**
8. SR-57 SB Ramps & Lambert Road	27.6	C	22.5	C
9. SR-57 NB Ramps & Lambert Road	24.3	C	18.3	B
26. SR-57 SB Ramps & Imperial Highway	28.2	C	26.2	C
27. SR-57 NB Ramps & Imperial Highway	29.1	C	26.4	C
33. Brea Blvd & SR-57 SB On Ramp	10.1	B	14.0	B
34. SR-57 NB Off Ramp & Tonner Canyon Road	9.3	A	13.4	B

Source: Traffic Study, 2012

LOS Criteria based on Average Delay (sec/veh):

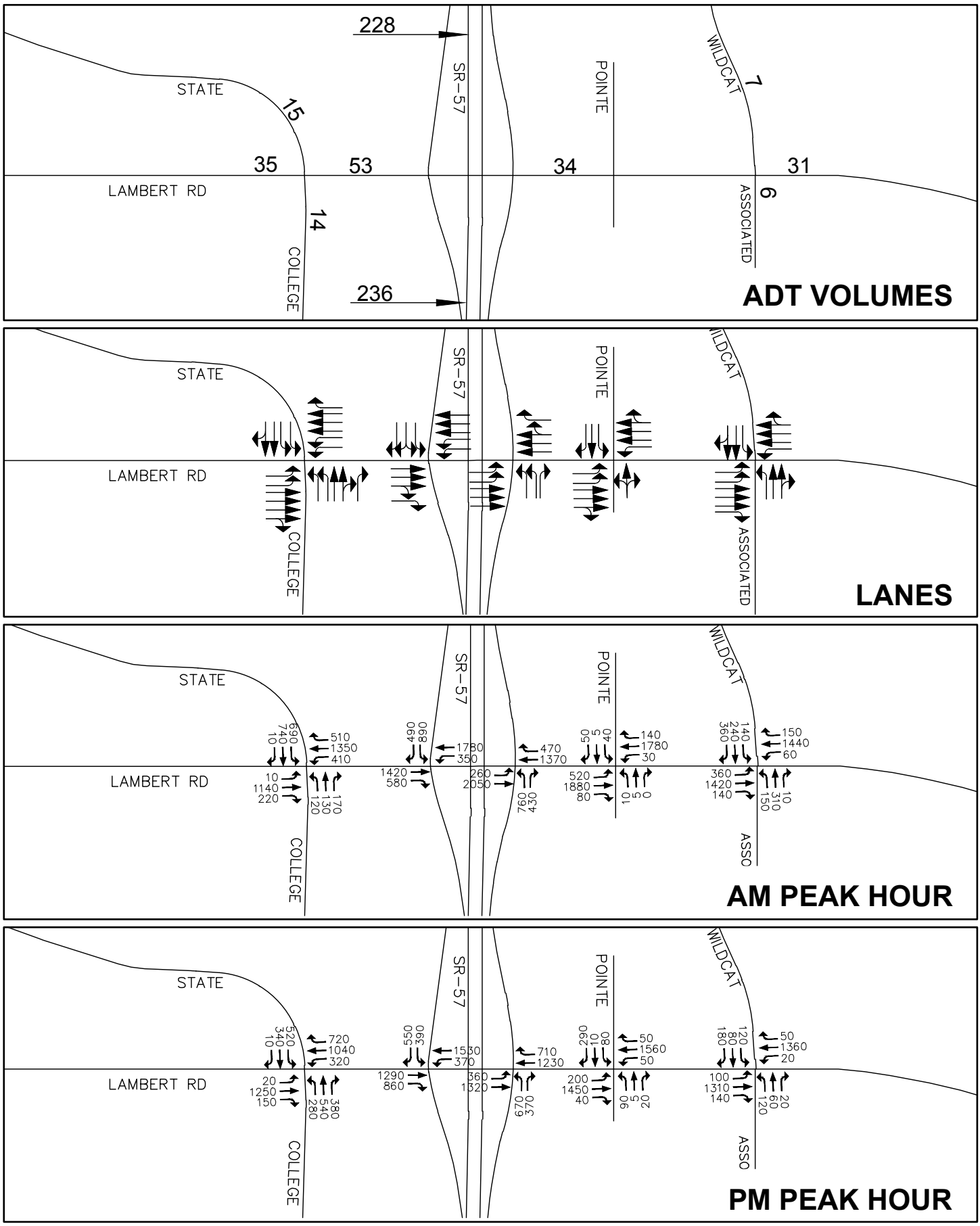
LOS	Average Delay	ICU V/C	LOS	Average Delay	ICU V/C
A	0.0 – 10.0	.00 –.60	D	35.1 – 55.0	.81 –.90
B	10.1 – 20.0	.61 –.70	E	55.1 – 80.0	.91 – 1.00
C	20.1 – 35.0	.71 –.80	F	>80.0	>1.00

Bold = exceeds performance standard of level of service (LOS) D

[1]All-way stop – delay represents the intersections average vehicle delay

[2]Yield – delay represents the yielding movement with highest approach delay

[3]Two-way stop – delay represents the movement with highest control delay



Source: Stantec, October 2012

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Existing ADT and Peak Hour Volumes

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Figure 2.2.5-4

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Existing and Year 2040 Comparison

A comparison between existing and the year 2040 average daily trip (ADT) volumes is given in Table 2.2.5-9, ADT Volumes – Existing (2011) and 2040 Conditions. As can be seen, the mainline volume increase between 2011 and 2040 is approximately 33 percent.

The 2040 traffic volumes forecasts for the interchange show an overall increase of approximately 27 percent as compared to existing traffic volumes. Table 2.2.5-10, Peak Hour Volumes Entering the Intersection – Existing and 2040, compares the traffic volumes entering the interchange during AM and PM peak hours for each leg of interchange. The AM shows an increase of approximately 28 percent over the existing counts and the PM peak hour shows an approximately 26 percent increase. The increase in the southbound volumes is mainly due to commute trips to/from Los Angeles County that use the SR-57/Lambert Road interchange.

Table 2.2.5-11, Intersection Peak Hour Volumes – Existing and 2040, summarizes the individual peak hour turning movements between existing (2011) conditions and Year 2040 conditions. The 2040 AM and PM peak hour volumes along with the ADT volumes for the study area freeway mainline segments are shown in Figures 2.2.5-5 through 2.2.5-7: Figure 2.2.5-5, 2040 ADT and Peak Hour Volumes – No Build Alternative, for No Build conditions; and Figure 2.2.5-6, 2040 ADT and Peak Hour Volumes – Build Alternative 7A (Preferred Alternative); and Figure 2.2.5-7, ADT and Peak Hour Volumes – Build Alternative 9, illustrate the Build Alternatives 7A and 9, respectively.

Table 2.2.5-9 ADT Volumes – Existing (2011) and 2040 Conditions

Location	2011	2040	Growth (%)
SR-57			
Mainline south of Lambert Rd	236,300	313,700	32.8%
Mainline south of Tonner Canyon Rd	228,300	303,400	32.9%
Mainline north of Tonner Canyon Rd	222,600	297,400	33.6%

Source: Traffic Study, 2012
Note: Volumes shown are 2-way total of HOV & GP lanes (NB & SB)

Table 2.2.5-10 Peak Hour Volumes Entering the Intersection – Existing and 2040

Year	AM Peak Hour					PM Peak Hour				
	SB	WB	NB	EB	Total	SB	WB	NB	EB	Total
2011	1,380	1,840	1,190	2,000	6,410	940	1,940	1,040	2,150	6,070
2040	2,100	2,130	1,350	2,660	8,240	1,310	2,480	1,210	2,630	7,630
Increase					28.5%					25.7%

Source: Traffic Study, 2012

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Table 2.2.5-11 Intersection Peak Hour Volumes – Existing and 2040

Location	North Leg					East Leg					South Leg					West Leg				
	SBL	SBT	SBR	SB	NB	WBL	WBT	WBR	WB	EB	NBL	NBT	NBR	NB	SB	EBL	EBT	EBR	EB	WB
AM Peak Hour																				
2011																				
State College	690	740	10	1,440	650	410	1,350	510	2,270	2,000	120	130	170	420	1,370	10	1,140	220	1,370	1,480
SR-57 SB Ramps	890	0	490	1,380	0	350	1,780	0	2,130	2,310	0	0	0	0	930	0	1,420	580	2,000	2,270
SR-57 NB Ramps	0	0	0	0	730	0	1,370	470	1,840	2,480	760	0	430	1,190	0	260	2,050	0	2,310	2,130
2040																				
State College	1,110	780	10	1,900	880	430	1,770	730	2,930	2,660	130	140	180	450	1,440	10	1,370	230	1,610	1,910
SR-57 SB Ramps	1,260	0	840	2,100	0	390	2,090	0	2,480	3,110	0	0	0	0	1,200	0	1,850	810	2,660	2,930
SR-57 NB Ramps	0	0	0	0	950	0	1,610	520	2,130	3,160	870	0	480	1,350	0	430	2,680	0	3,110	2,480
Increase																				
State College	61%	5%	0%			5%	31%	43%	29%	33%	8%		6%	7%	5%	0%	20%	5%	18%	29%
SR-57 SB Ramps	42%		71%	52%		11%	17%		16%	35%							30%	40%	33%	29%
SR-57 NB Ramps					30%		18%	11%	16%	27%	14%		12%			65%	31%		35%	16%
PM Peak Hour																				
2011																				
State College	520	340	10	870	1,280	320	1,040	720	2,090	2,150	280	540	380	1,200	810	20	1,250	150	1,420	1,330

Table 2.2.5-11 Intersection Peak Hour Volumes – Existing and 2040 (Continued)

Location	North Leg					East Leg					South Leg					West Leg				
	SBL	SBT	SBR	SB	NB	WBL	WBT	WBR	WB	EB	NBL	NBT	NBR	NB	SB	EBL	EBT	EBR	EB	WB
SR-57 SB Ramps	390	0	550	940	0	370	1,530	0	1,900	1,680	0	0	0	0	1,230	0	1,290	860	2,150	2,080
SR-57 NB Ramps	0	0	0	0	1,070	0	1,230	710	1,940	1,690	670	0	370	1,040	0	360	1,320	0	1,680	1,900
2040																				
State College	750	360	10	1,120	1,710	340	1,480	990	2,810	2,630	300	700	400	1,400	860	20	1,480	160	1,660	1,790
SR-57 SB Ramps	520	0	790	1,310	0	410	2,020	0	2,430	2,200	0	0	0	0	1,360	0	1,680	950	2,630	2,810
SR-57 NB Ramps	0	0	0	0	1,370	0	1,630	850	2,480	2,090	800	0	410	1,210	0	520	1,680	0	2,200	2,430
Increase																				
State College	44%	6%	0%			6%	42%	38%	35%	22%	7%		5%	17%	6%	0%	18%	7%	17%	35%
SR-57 SB Ramps	33%		44%	39%		11%	32%		28%	31%							30%	10%	22%	35%
SR-57 NB Ramps					28%		33%	20%	28%	24%	19%		11%			44%	27%		30%	28%

Source: Traffic Study, 2012

SB: Southbound
NB: Northbound
WB: Westbound
EB: Eastbound

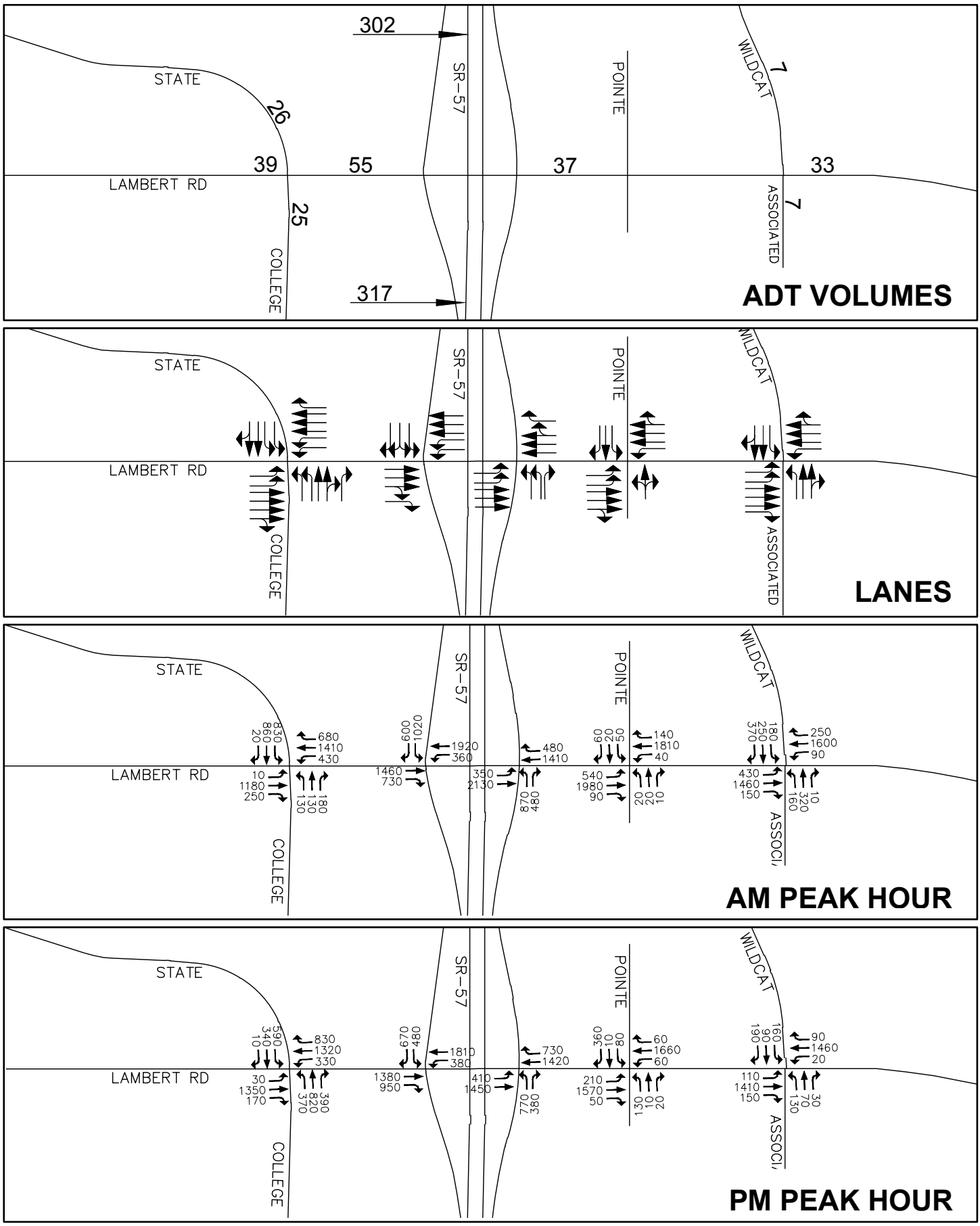
SBL: Southbound Left
SBT: Southbound Through
SBR: Southbound Right

WBL: Westbound Left
WBT: Westbound Through
WBR: Westbound Right

NBL: Northbound Left
NBT: Northbound Through
NBR: Northbound Right

EBL: Eastbound Left
EBT: Eastbound Through
EBR: Eastbound Right

* = Indicated volumes are for Build Alternative 9. The EBL movement becomes an EBR movement under Build Alternative 7.



Source: Stantec, October 2012

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

2040 ADT and Peak Hour Volumes No Build Alternative

not to scale

1/9/13 JN 10-107792-18226 MAS

Figure 2.2.5-5

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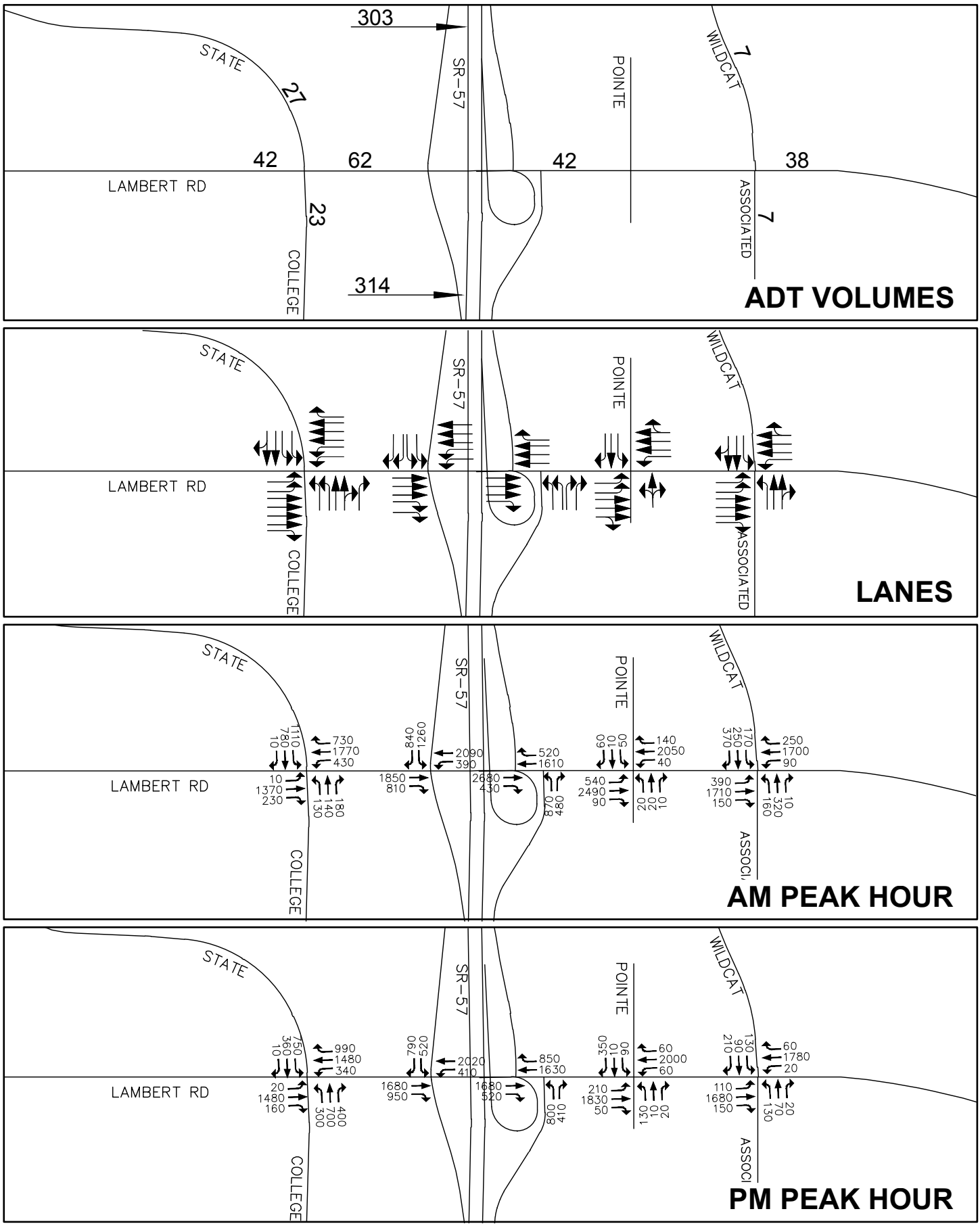

Source: Stantec, October 2012

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

2040 ADT and Peak Hour Volumes Build Alternative 7A

not to scale

1/9/13 JN 10-107792-18226 MAS

Figure 2.2.5-6

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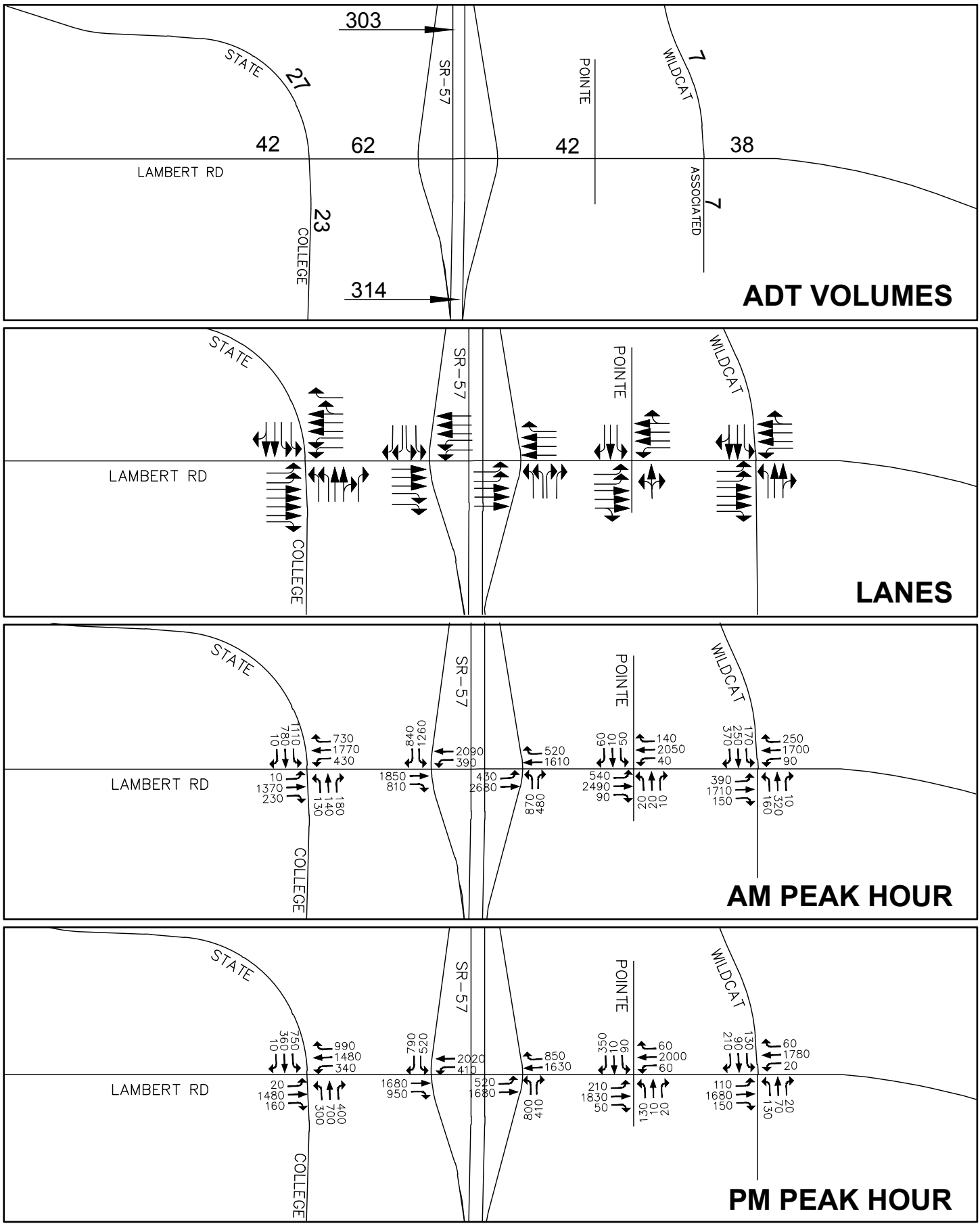

Source: Stantec, October 2012

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

2040 ADT and Peak Hour Volumes
Build Alternative 9

not to scale

1/9/13 JN 10-107792-18226 MAS

Figure 2.2.5-7

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Transportation, Transit, and Bicycle Facilities

An Orange County Transportation Authority (OCTA)-owned Brea park-and-ride facility is located in the northwest quadrant of the SR-57/Lambert Road interchange. This facility consists of approximately 90 parking stalls and serves local and regional commuters. The park-and-ride offers connection to the OCTA bus transit system. Four OCTA bus routes are located in proximity to the park-and-ride and within the study area; Routes 757, 213/213a, and 758 share the southbound bus stop at State College Boulevard and Lambert Road.

According to the City of Brea General Plan Circulation Element, Lambert Road currently does not provide for bike lanes; however, the General Plan proposes a Class II bike lane (on-road, striped, and signed) along Lambert Road, east of Associated Road. A Class II bike lane exists along State College Boulevard, west of the SR-57/Lambert Road interchange.

2.2.5.3 Environmental Consequences

Construction (Short-Term) Impacts

Build Alternative 7A (Preferred Alternative)

Local traffic would remain open during the majority of construction activities along Lambert Road and during construction of the interchange improvements. Construction-related detours and ramp closures would be required for Build Alternative 7A (Preferred Alternative) for staging, equipment movement, and grading.

Lambert Road would require a full closure between the northbound and southbound ramps during multiple stages of the northbound loop on-ramp bridge construction. These full closures would be short term and conducted at night, and all ramps would re-open the following morning. The longest anticipated ramp closure would be a weekend closure. Detoured traffic would make use of State College Boulevard, Associated Road, Kraemer Boulevard, and Birch Street. No traffic would be diverted to the north along State College Boulevard because there is no link between Tonner Canyon Road and Lambert Road east of SR-57. Alternatively, traffic would be detoured along the SR-57 mainline to adjacent interchanges. Westbound traffic, east of SR-57, would use the Lambert Road northbound on-ramp, exit and re-enter on Tonner Canyon Road, and then finally exit at the Lambert Road southbound off-ramp to continue westbound. Eastbound traffic west of SR-57 would be detoured to the Lambert Road southbound on-ramp, exit and re-enter at Imperial Highway, and exit at the Lambert Road northbound off-ramp.

SR-57 would not require closures, and thus, mainline freeway traffic would not be detoured as part of the proposed project; however, during SR-57 ramp closures, traffic would be detoured to Imperial Highway and would use State College Boulevard, Kraemer Boulevard, Associated Road, and Birch Street to reach destinations east and west of the interchange. Ramp closures would be short term (less than 10 consecutive days) and would occur at night to minimize impacts to peak-hour traffic.

Access to the OCTA Park-and-Ride facility would be maintained during construction; although delays may temporarily occur during the reconstruction of the driveways to match the proposed project design. The 11 parking spaces, including 3 spaces for disabled persons, fronting Lambert Road would be temporarily impacted during construction, resulting in a minimum of 76 spaces available during construction. Observed parking usage is approximately 70 percent of capacity; however, this capacity may fluctuate throughout the year. In order to accommodate the fluctuation

in use of the Park-and-Ride lot, minimization measure COMM-6 requires temporary restriping of parking stalls during constructions. This would maintain 100 percent of the original parking capacity. Therefore, no net temporary loss of parking stalls would occur as a result of the proposed project construction.

Sidewalks in the proposed project area may be temporarily impacted during construction. Any sidewalk closures would be temporary in nature and pedestrian detours would be provided during sidewalk closures. Ultimately, any changes to the sidewalks in the vicinity of the affected roads would be ADA compliant. This impact would not be adverse.

As there are no existing designated bike lanes on Lambert Road within the proposed project limits, Build Alternative 7A (Preferred Alternative) would not result in impacts to designated bike lanes; however, Build Alternative 7A (Preferred Alternative) provides standard shoulders to establish a Class III bikeway through the interchange in the future.

Build Alternative 9

Local traffic would remain open during the majority of construction activities along Lambert Road and during construction of the interchange improvements. Construction-related detours and ramp closures would be required for Build Alternative 9 for staging, equipment movement, and grading. However, Build Alternative 9 would not require the temporary closure of Lambert Road during construction, as is required under Build Alternative 7A (Preferred Alternative). Construction traffic would be provided with optional detours to mitigate congestion at the interchange during construction. Any ramp closures would be short term and conducted at night, and all ramps would re-open the following morning. The longest anticipated ramp closure would be a weekend closure. Detoured traffic would make use of State College Boulevard, Associated Road, Kraemer Boulevard, and Birch Road. No traffic would be diverted to the north along State College Boulevard because there is no link between Tonner Canyon Road and Lambert Road east of SR-57. Alternatively, traffic would be detoured along the SR-57 mainline to adjacent interchanges. Westbound traffic, east of SR-57, would use the Lambert northbound on-ramp, exit and re-enter and Tonner Canyon Road, and then finally exit at the Lambert Road southbound off-ramp to continue westbound. Eastbound traffic, west of SR-57, would be detoured to the Lambert Road southbound on-ramp, exit and re-enter at Imperial Highway, and exit at the Lambert Road northbound off-ramp.

SR-57 would not require closure; thus, the mainline freeway traffic would not be detoured as part of the proposed project; however, during SR-57/Lambert Road temporary ramp closures, traffic would be detoured to Imperial Highway and use State College Boulevard, Kraemer Boulevard, Associated Road, and Birch Street to reach destinations east and west of the interchange. Ramp closures would be short term (less than 10 consecutive days) at night to minimize impacts to peak-hour traffic.

Impacts to the OCTA Park-and-Ride lot under Build Alternative 9 would be similar to those discussed under Build Alternative 7A (Preferred Alternative), above. Access to the park-and-ride facility would be maintained during construction; although delays may temporarily occur during the reconstruction of the driveways to match the proposed project design. The 11 parking spaces, including 3 spaces for disabled persons, fronting Lambert Road would be temporarily impacted during construction, resulting in a minimum of 76 spaces available during construction. Observed parking usage is approximately 70 percent of capacity; however, this capacity may fluctuate throughout the year. In order to accommodate the fluctuation in use of the Park-and-Ride lot, minimization measure COMM-6 requires temporary restriping of parking stalls during

constructions. This would maintain 100 percent of the original parking capacity. Therefore, no net temporary loss of parking stall would occur as a result of the proposed project construction.

Sidewalks in the proposed project area may be temporarily impacted during construction. Any sidewalk closures would be temporary in nature and pedestrian detours would be provided during sidewalk closures. Ultimately, any changes to the sidewalks in the vicinity of the affected roads would be ADA compliant. This impact would not be adverse.

As there are no existing bike lanes designated on Lambert Road within the proposed project limits, Build Alternative 9 would not result in impacts to designated bike lanes; however, Build Alternative 9 provides standard shoulders to establish a Class III bikeway through the interchange in the future.

No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. No changes to the SR-57/Lambert Road interchange would occur beyond those recently constructed in association with the SR-57 Northbound Widening Project. Therefore, no impacts related to traffic and transportation would occur.

Operation (Long-Term) Impacts

Both Build Alternatives (Alternative 7A and 9)

Freeway Mainline Analysis

The 2040 freeway mainline analysis results for the No Build and Build Alternatives 7A and 9 are summarized in Table 2.2.5-12, Freeway Mainline LOS Summary – 2040 Conditions, No Build and Build Alternatives 7A and 9. The results are the same for both Build Alternatives, as well as the No Build Alternative. Compared to existing conditions, the 2040 analysis includes two additional SR-57 auxiliary lanes in the northbound direction south of the interchange (recently constructed as part of the SR-57 Northbound Widening Project) and an additional SR-57 auxiliary lane in the southbound direction north of the interchange. The forecast mainline volumes are demand volumes which exceed the capacity for both mainline and HOV segments. Queues would form because the demand volume cannot be served, resulting in congestion occurring outside of the peak hours.

The following segments have mainline general purpose lanes at LOS E or F:

- Northbound between Lambert Road and Tonner Canyon Road (PM)
- Northbound north of Tonner Canyon Road (PM)
- Southbound between Imperial Highway and Lambert Road (AM)
- Southbound between Lambert Road and Tonner Canyon Road (AM)
- Southbound north of Tonner Canyon Road (AM)

The following HOV segments have volumes that exceed 1,600 vph/ln:

- Northbound between Imperial Highway and Lambert Road (AM and PM)
- Northbound between Lambert Road and Tonner Canyon Road (AM and PM)
- Northbound north of Tonner Canyon Road (AM and PM)
- Southbound between Imperial Highway and Lambert Road (AM and PM)
- Southbound between Lambert Road and Tonner Canyon Road (PM)
- Southbound north of Tonner Canyon Road (PM)

Ramp and Ramp-Freeway Junction Analysis

Table 2.2.5-13, Ramp Volume and Capacity Summary – 2040 Conditions, No-Build and Build Alternatives 7A and 9, shows an acceptable LOS (V/C less than or equal to 1.0) at all ramps, with the exception of the Lambert Road southbound off-ramp with respect to the No Build Alternative. Under the No Build Alternative, the Lambert Road southbound off-ramp would operate at unacceptable LOS (V/C = 1.40) during the AM peak hour. Build Alternative 7A (Preferred Alternative) exhibits the best performance for the northbound on ramps. Table 2.2.5-14, Ramp Merge/Diverge Analysis Summary – 2040 Conditions, No Build and Build Alternatives 7A and 9, shows an improved LOS for the Build Alternatives.

Intersection Analysis

Table 2.2.5-15, 2040 Intersection Delay and LOS Summary, shows that under both Build Alternatives, the LOS at the ramp intersections would improve. The intersections at State College Drive and Lambert Road would remain LOS E under Build Alternative 9; however, the delay would decrease by 1.3 seconds per vehicle as compared to the Year 2040 No Build Alternative. Additionally, Table 2.2.5-16, 2040 ICU and LOS Summary for No Build and Build Alternatives, shows three locations where, although LOS is below the acceptable criteria, the capacity utilization measures decrease, resulting in slightly less delay. This is considered a beneficial effect of both Build Alternatives. Intersections with a beneficial effect (ICU and/or LOS would improve with the proposed project) include:

- Associated Road & Imperial Highway (PM Peak Hour)
- Brea Boulevard and Tonner Canyon Road (PM Peak Hour)
- Brea Blvd & SR-57 Southbound Ramp (PM Peak Hour)

Ramp Queuing and Metering Analysis

The queuing analysis evaluates the queuing for the Build Alternatives at the off-ramp intersections and at the on-ramp meters. Table 2.2.5-17, 2040 Peak Hour Performance - Build Alternative 7A (Preferred Alternative), and Table 2.2.5-18, 2040 Peak Hour Performance - Build Alternative 9, summarize queuing results for Build Alternatives 7A and 9. The results show that the available ramp storage would accommodate the future demand under Build Alternatives 7A and 9. Lambert Road would experience some queues that exceed the storage capacity under both Build Alternatives. For the off-ramps, the results show that there is no potential for vehicle queuing to extend back to the freeway mainline. Table 2.2.5-19, Ramp Metering, shows that the 2040 traffic volumes would not exceed the volume that can be serviced by a 900 vph/lane metered lane for both Build Alternatives.

Transportation, Transit and Bicycle Facilities

Both Build Alternatives 7A and 9 would result in a sliver acquisition from the park-and-ride facility. The parking spaces would be reconfigured with no loss of parking spaces and limited modifications to the frontage of the property would occur with no change in the access driveway location.. The impacts to the park-and-ride lot would not affect local and regional travelers beyond what is identified during construction. Access would remain and no parking would be lost as a result of either Build Alternative.

The crosswalk allowing access to the north and south sides of Lambert road at the northbound SR-57 ramp/Lambert road intersection would be removed. Pedestrians would still have facilities along the north and south sides of Lambert Road through this intersection; however, crossing to the other side of Lambert Road would be eliminated. Pedestrian access to the north and south sides of Lambert Road would remain at the Lambert Road/Pointe Drive and Lambert Road/State College Boulevard intersections. Therefore, impacts with regard to pedestrian circulation would not be adverse. Build Alternatives 7A and 9 would conform to ADA requirements, as appropriate.

As there are no existing bike lanes designated on Lambert Road within the proposed project limits, the Build Alternatives would not result in impacts to designated bike lanes; however, Build Alternatives 7A and 9 provide standard shoulders to establish a Class III bikeway through the interchange in the future.

No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. No improvements would be made to the SR-57/Lambert Road project area beyond those recently constructed as part of the SR-57 Northbound Widening Project.

The 2040 freeway mainline analysis results for the No Build and Build Alternatives are summarized in Table 2.2.5-12, Freeway Mainline LOS Summary – 2040 Conditions, No Build and Build Alternatives 7A and 9. The results are the same for the No Build Alternative and both Build Alternatives. The forecast volumes are demand volumes which exceed the capacity for both mainline and HOV segments. Queues would form because the demand volume cannot be served, resulting in congestion occurring outside of the peak hours.

Intersection LOS and ramp V/C ratios would continue to worsen under the No Build Alternative, as shown in Table 2.2.5-13, Ramp Volume and Capacity Summary – 2040 Conditions, No Build and Build Alternatives 7A and 9. Table 2.2.5-15, 2040 Intersection Delay and LOS Summary, provides a summary of intersection delay and LOS for three intersections: State College Boulevard/Lambert Road; SR-57 southbound ramps/Lambert Road; and SR-57 northbound ramps/Lambert Road. Under the No Build Alternative, State College Boulevard/Lambert Road would operate at LOS E for both AM and PM peak hours, while the SR-57 southbound ramps/Lambert Road intersection would operate at LOS F during AM peak hours. Table 2.2.5-16, 2040 ICU and LOS Summary for No Build and Build Alternatives, shows Associated Road/Imperial Highway operates at unacceptable LOS during PM peak hours, while Brea Boulevard/Tonner Canyon and SR-57 southbound ramp/Brea Boulevard would operate at unacceptable LOS during AM and PM peak hours. This is similar to Build Alternatives 7A and 9; however, the No Build Alternative has a higher ICU at these intersections as compared to both Build Alternatives. No beneficial effects would be achieved with respect to the study area intersections.

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Table 2.2.5-12 Freeway Mainline LOS Summary – 2040 Conditions, No Build and Build Alternatives 7A and 9

Location	Lanes			AM Peak Hour					PM Peak Hour				
				Mainline			HOV		Mainline			HOV	
	HOV	GP	Aux*	Vol	Density	LOS	Vol	D/C[1]	Vol	Density	LOS	Vol	D/C[1]
Northbound													
Begin Project													
NB Mainline s/o Lambert RD	1	4	2	7,600	20.9	C	**2,400**	**1.09**	8,140	22.6	C	**2,200**	**1.00**
NB Mainline s/o Tonner Canyon Rd	1	4	0	7,300	34.2	D	**2,300**	**1.05**	8,400	**44.9**	**E**	**2,300**	**1.05**
End Project													
NB Mainline n/o Tonner Canyon	1	4	0	7,230	33.6	D	**2,400**	**1.09**	7,780	**38.3**	**E**	**2,400**	**1.09**
Southbound													
Begin Project													
SB Mainline s/o Lambert Rd	1	4	0	8,450	**45.5**	**F**	**1,640**	.75	7,270	33.9	D	**2,080**	**.95**
SB Mainline s/o Tonner Canyon Rd	1	4	1	9,450	**61.2**	**F**	1,540	.70	7,320	24.8	C	**2,180**	**.99**
End Project													
SB Mainline n/o Tonner Canyon Rd	1	4	0	9,120	**55.1**	**F**	1,440	.65	7,360	34.7	D	**2,080**	**.95**

Source: Traffic Study, 2012
HOV: High Occupancy Vehicle Lane GP: General Purpose Lane AUX: Auxiliary Lane
Bold = Level of Service (LOS) E or F (mainline), or exceeds 1,600 vph/ln (HOV)
[1]Demand/capacity (D/C) ratios calculated based on a maximum capacity for the HOV lane of 2,200 vph/ln; the maximum desired HOV lane volume is 1,600 vph/ln.
*Auxiliary lane that is not continuous between successive off/on ramps and does not add mainline capacity.

Table 2.2.5-13 Ramp Volume and Capacity Summary – 2040 Conditions, No-Build and Build Alternatives 7A and 9

Location	Northbound								Southbound						
	Lanes		Cap	AM Pk Hr		PM Pk Hr			Lanes		Cap	AM Pk Hr		PM Pk Hr	
	R	Aux		Volume	V/C Ratio	Volume	V/C Ratio	Location	R	Aux		Volume	V/C Ratio	Volume	V/C Ratio
No-Build															
Imperial NB On	1	0	1,080	740	.69	710	.66	Imperial SB On	1	0	1,500	680	.45	1,170	.78
Imperial NB Loop On	1	0	900	780	.87	500	.55	Imperial SB Loop On	1	0	900	310	.34	560	.62
Imperial NB Off	1	1	2,250	1,500	.67	1,060	.47	Imperial SB Off	1.5	1	2,250	1,130	.50	1,440	.64
Lambert NB On	1	0	1,500	950	.63	1,379	.91	Lambert SB On	1	0	1,500	1,200	.80	1,360	.91
Lambert NB Off	2	2	3,000	1,350	.45	1,210	.40	Lambert SB Off	1	0	1,500	2,100	**1.40**	1,310	.87
Tonner Canyon NB Off	1	1	1,500	30	.02	520	.35	Tonner Canyon SB On	1	1	1,500	430	.29	60	.04
SR 57 – Build Alternative 7A (Preferred Alternative)															
Lambert NB On	1	0	1,500	520	.35	850	.57	Lambert SB On	1	0	1,800	1,200	.67	1,360	.75
Lambert NB Loop On	2	1	1,500	430	.29	520	.35	Lambert SB Off	1.5	1	2,250	2,100	.93	1,310	.58
Lambert NB Off	2	2	3,000	1,350	.45	1,210	.40								
SR-57 – Build Alternative 9															
Lambert NB On	1	0	1,800	950	.53	1,370	.76	Lambert SB On	1	0	1,800	1,200	.67	1,360	.75
Lambert NB Off	2	2*	3,000	1,350	.45	1,210	.40	Lambert SB Off	1.5	1	2,250	2,100	.93	1,310	.58

Source: Traffic Study, 2012; updated per memorandum from Stantec to RBF Consulting on December 17, 2013, *SR-57/Lambert Road Ramp Volume and Capacity Summary Tables*.
Bold = exceeds volume capacity ratio of 1.0
R = ramp termini lanes – 1.5 denotes a two-lane off-ramp with one dedicated and one optional lane, or a two-lane on-ramp entering the freeway as one merge lane and an auxiliary lane
Aux = Auxiliary lanes
Cap = Capacity
* = General Purpose lane that is dropped at the ramp

Table 2.2.5-14 Ramp Merge/Diverge Analysis Summary – 2040 Conditions, No Build and Build Alternatives 7A and 9

Location	AM Peak Hour				PM Peak Hour			
	Volumes		Density	LOS	Volumes		Density	LOS
	Fwy	Ramp			Fwy	Ramp		
SR-57 at Imperial								
NB Merge	6,860	740	21.5	C	7,430	710	22.5	C
SB Diverge	8,450	1,130	--	**F**	7,270	1,440	23.2	C
SR-57 at Lambert								
NB Merge (7a Loop)	6,350	430	26.0	C	7,030	520	29.1	D
NB Merge (7a Direct)	6,780	520	28.2	D	7,550	850	33.7	D
NB Merge (9)	6,350	950	30.2	D	7,030	1,370	**36.1**	**E**
NB Diverge	7,700	1,350	<1.0	A	8,240	1,210	<1.0	A
SB Merge	7,350	1,200	--	**F**	6,010	1,360	32.4	D
SB Diverge (No Build)	9,450	2,100	**53.8**	**F**	7,320	1,310	**40.4**	**E**
SB Diverge (7A and 9)	9,450	2,100	**44.4**	**F**	7,320	1,310	31.0	D
SR-57 at Tonner Canyon								
NB Diverge	7,200	30	33.4	D	8,300	520	**40.8**	**E**
SB Merge	9,120	430	--	**F**	7,360	60	27.2	C

Source: Traffic Study, 2012

LOS Criteria based on density (pc/mi/ln):

A <10 D >28-35

B >10-20 E > 35

C >20-28 F Demand exceeds capacity (mainline or ramp)

Bold = Level of service (LOS) E or F

Table 2.2.5-15 2040 Intersection Delay and LOS Summary

Location	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
No Build				
7. State College and Lambert Road	**61.2**	**E**	**57.3**	**E**
8. SR-57 SB Ramps and Lambert Road	**80.0**	**F**	46.4	D
9.SR-57 NB Ramps and Lambert Road	29.2	C	28.8	C
Build Alternative 7A (Preferred Alternative)				
7. State College and Lambert Road	45.1	D	52.2	D
8. SR-57 SB Ramps and Lambert Road	39.4	D	24.9	C
9. SR-57 NB Ramps and Lambert Road	19.2	B	18.6	B
Build Alternative 9				
7. State College and Lambert Road	47.3	D	**56.0**	**E**
8. SR-57 SB Ramps and Lambert Road	36.4	D	18.8	B
9. SR-57 NB Ramps and Lambert Road	35.1	D	35.1	D

Source: Traffic Study, 2012
LOS Criteria based on Average Delay (sec/veh):

LOS: Average Delay

A: 0.0-10.0 D: 35.1-55.0

B: 10.1-20.0 E: 55.1-80.0

C: 20.1-35.0 F: > 80.0

Bold = Exceeds performance standard of level of service (LOS) D
Greater than 300 - delay is greater than 200 sec/veh
[1] All-way stop – delay represents the intersections average vehicle delay
[2] Yield – delay represents the yielding movement with highest approach delay

Table 2.2.5-16 2040 ICU and LOS Summary for No Build and Build Alternatives

Intersection	No-Build				Build (Alternatives 7A and 9)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
3. Brea Blvd and Central/State College	.73	C	.74	C	.76	C	.73	C
6. Brea Blvd and Lambert Road	.85	D	.79	C	.83	D	.77	C
7. State College and Lambert Road	.69	B	.79	C	.77	C	.85	D
10. Pointe Dr and Lambert Road	.64	B	.69	B	.69	B	.75	C
11. Associated and Lambert Road	.78	C	.55	A	.78	C	.62	B
12. Kraemer Blvd and Lambert Road	.55	A	.85	D	.57	A	.87	D
23. Brea Blvd and Imperial Hwy	.83	D	.79	C	.84	D	.79	C
25. State College and Imperial Hwy	.75	C	.87	D	.76	C	.88	D
26. SR-57 SB Ramps and Imperial Hwy	.70	B	.71	C	.64	B	.70	B
27. SR-57 NB Ramps and Imperial Hwy	.83	D	.80	C	.82	D	.70	B
28. Associated and Imperial Hwy	.73	C	**.97**	**E**	.72	C	**.92**	**E**
29. Placentia and Imperial Hwy	.73	C	.76	C	.70	B	.73	C
32. Brea Blvd and Tonner Canyon	**.93**	**E**	**1.02**	**F**	**.93**	**E**	**1.01**	**F**
33. Brea Blvd and SR-57 SB Ramp	**.92**	**E**	**1.02**	**F**	**.93**	**E**	**.95**	**E**
34. SR-57 NB Off and Tonner Canyon	.07	A	.35	A	.07	A	.37	A

Source: Traffic Study, 2012
Bold = Exceeds performance standard level of service (LOS) D

Table 2.2.5-17 2040 Peak Hour Performance – Build Alternative 7A (Preferred Alternative)

95th Percentile Queue Lengths													
	Northbound			Southbound			Eastbound			Westbound			
Intersection	L	T	R	L	T	R	L	T	R	L1	L2	T	R
8. SR-57 Southbound Ramps and Lambert Road													
Storage Available	--	--	--	1,550'	--	1,550'	--	390'	250'	160"	330'	470'	--
AM	--	--	--	431'	-	279'	--	285'	74'	160'	**332'**	**654'**	--
PM	--	--	--	411'	--	427'	--	272'	91'	160	253'	**632'**	--
9. SR-57 Northbound Ramps and Lambert Road													
Storage Available	1,300'	--	1,300'	--	--	--	--	460'	370'	--	--	480'	180'
AM	1,045'	--	617'	--	--	--	--	**466'**	28'	--	--	445'	**198'**
PM	694'	--	125'	--	--	--	--	357'	49'	--	--	364'	**279'**

Source: Traffic Study, 2012
Note: Queue length represents maximum length of queue in the lane with the longest queue.
Bold = queues that exceed the storage length
L1 = inside left-turn lane
L2 = outside left-turn lane

Table 2.2.5-18 2040 Peak Hour Performance – Build Alternative 9

95th Percentile Queue Lengths														
	Northbound			Southbound			Eastbound				Westbound			
Intersection	L	T	R	L	T	R	L1	L2	T	R	L1	L2	T	R
8. SR-57 Southbound Ramps and Lambert Road														
Storage Available	--	--	--	1,550'	--	1,550'	--		390'	250'	160'	330'	470'	--
AM	--	--	--	448'	-	343'	--		**435'**	79'	160'	188'	438'	--
PM	--	--	--	222'	--	454'	--		182'	102'	160'	225'	**562'**	--
9. SR-57 Northbound Ramps and Lambert Road														
Storage Available	1,050'	--	1,050'	--	--	--	145'	275'	450'		--	--	540'	540'
AM	429'	--	242'	--	--	--	145'	229'	249'		--	--	**591'**	219'
PM	527'	--	165'	--	--	--	145'	**430'**	329'		--	--	497'	405'

Source: Traffic Study, 2012
Note: Queue length represents maximum length of queue in the lane with the longest queue.
Bold = queue that exceeds storage length
L1 = inside left-turn lane
L2 = outside left-turn late

Table 2.2.5-19 Ramp Metering

Location	Northbound						Location	Southbound					
	Peak Hour	Volume	Lanes	Max Q/Lane		Meter Rate*		Peak Hour	Volume	Lanes	Max Q/Lane		Meter Rate*
				Vehicles	Feet						Vehicles	Feet	
Build Alternative 7A (Preferred Alternative)													
Lambert Road (Direct-On)	PM	850	2	2	52’	450	Lambert Road (Direct-On)	PM	1,360	3	2	57’	480
Lambert Road (Loop-On)	PM	520	2	3	76’	270	--	--	--	--	--	--	--
Build Alternative 9													
Lambert Road (Direct-On)	PM	1,370	3	3	79’	480	Lambert Road (Direct-On)	PM	1,360	3	2	57’	480

Source: Traffic Study, 2012
*Meter Rate in vehicles per lane per hour
Bold = Exceeds 900 vph/lane metering rate

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2.2.5.4 Avoidance, Minimization and/or Mitigation Measures

T-1 Prior to the start of construction, the project shall establish a community outreach program to inform the community about the proposed project construction activities, as well as changes to access. This community outreach program will also provide a point of contact for nearby residences and businesses that will be adjacent to the proposed project site. The community outreach program will maintain a hotline to take messages and to provide updates on construction scheduling and any lane closures and detours.

T-2 During construction, temporary signage will be installed notifying the public of closures or detours and the expected duration of the closure. This applies not only to the roadways, but also pedestrian and bicycle facilities. The timing of the temporary signage will be in accordance with the traffic management plan.

T-3 Prior to the start of construction, coordination with the California Highway Patrol, City of Brea Police and Fire Department, the City of Brea Fire Department, local public and private ambulance and paramedic providers, and the public school districts in the vicinity of the site, will be initiated to provide information on the construction schedule, duration of any lane closures details regarding the schedule of the movement of equipment to and from the project site, alternate routes at the time of the equipment movement, and to provide contact information in case of changing construction activities. This coordination will follow the guidance provided in the community outreach program and the traffic management plan.

T-4 Prior to construction, the City will prepare a Traffic Management Plan (TMP) in coordination with the California Department of Transportation (Caltrans). This TMP will consist of prior notices, adequate sign-posting, and temporary driveways. The TMP will specify implementation timing of each plan element (prior noticing, sign-posting) as determined appropriate by Caltrans. Adequate local and emergency access will be provided at all times to adjacent uses. Proper detours and warning signs will be established to ensure public safety. The TMP will be devised so that construction will not interfere with any emergency response or evacuation plans. Construction activities will proceed in a timely manner to reduce impacts.

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2.2.6 VISUAL/AESTHETICS

2.2.6.1 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* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on 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.

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 [PRC] Section 21001[b]).

2.2.6.2 Affected Environment

Information in this section is based upon the Visual Impact Assessment (VIA) prepared in January 2014 for the proposed project. The assessment method used in the VIA generally follows the guidelines outlined in the Federal Highway Administration (FHWA) publication, Visual Impact Assessment for Highway Projects, dated March 1981. A site visit was conducted on March 10, 2012.

The regional landscape establishes the general visual environment of the proposed project; however, the specific visual environment upon which this assessment focuses is determined by defining landscape units and the proposed project viewshed.

The regional landscape of northeast Orange County is characterized by expansive broad open canyons/washes and rolling hills. The proposed project area has been subject to suburban development over the last 40 years. The State Route 57 (SR-57) freeway corridor is urban in nature, and views from this corridor are generally of suburban and urban development. Development to the west of SR-57, within the proposed project area, includes residential and institutional (i.e., church) uses, as well as a park and ride facility, with commercial and industrial uses further west. Development to the east of SR-57, within the proposed project area, includes residential, commercial/office, and institutional (i.e., school) uses. The proposed project site is characterized by gently rolling hills sloping north towards the Puente Hills and Chino Hills. The most prominent natural visual feature within the proposed project area is the San Bernardino Mountains to the north.

According to Caltrans, a state route must be included on the list of highways eligible for scenic highway designation in Streets and Highways Code Section 263. It can be nominated for official designation by the local governing body. The proposed project site does not include any officially designated State scenic highways. SR-57 between Imperial Highway and SR-60 is eligible as a California State Scenic Highway. Properties adjoining SR-57 lie within unincorporated Los Angeles and Orange counties. Designating the freeway as an Official Scenic Highway would require a cooperative effort among many agencies to maintain the scenic qualities.

Visual Assessment Units

A visual assessment unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. A visual assessment unit often corresponds to a place or district that is commonly known among local viewers. Due to the location of the proposed project and the homogenous character of the project area, the project site is encompassed within one visual assessment unit; refer to Figure 2.2.6-1, Visual Assessment Unit. Although there are multiple land uses within the visual assessment unit, all are within similar proximity to the project site and have similar views to the SR-57/Lambert Road interchange. Thus, one visual assessment unit was determined to be sufficient for the purposes of this analysis.

This visual assessment unit is situated within the northeastern area of Orange County, generally located within a flat stretch of land at the base of the Puente and Chino Hills geographic features. These hills visually contrast with the urban forms of the City of Brea.

The visual assessment unit is relatively flat, with elevations ranging from approximately 344 feet above mean sea level (msl) to 630 feet above msl. The landscape unit is defined by mostly urban land surrounded by Puente Hills (approximately 1,100 feet above msl) located to the north of the proposed project area, the San Gabriel Mountains (Throop Peak is approximately 9,138 feet above msl) located to the north of the proposed project area, Chino Hills (peak at Gilman Peak Lookout Tower, 1,685 feet above msl) located to the northeast, and the Santa Ana Mountains located to the southeast.

Development within the visual assessment unit consists of residential, commercial/business, and institutional (i.e., school and church) uses, as well as a park and ride facility. Other visible features within the landscape unit include ornamental vegetation associated with highway and roadway right-of-way (ROW). Multiple streams are located within the area and are associated with the rolling hills and water reservoir (Humble Reservoir).

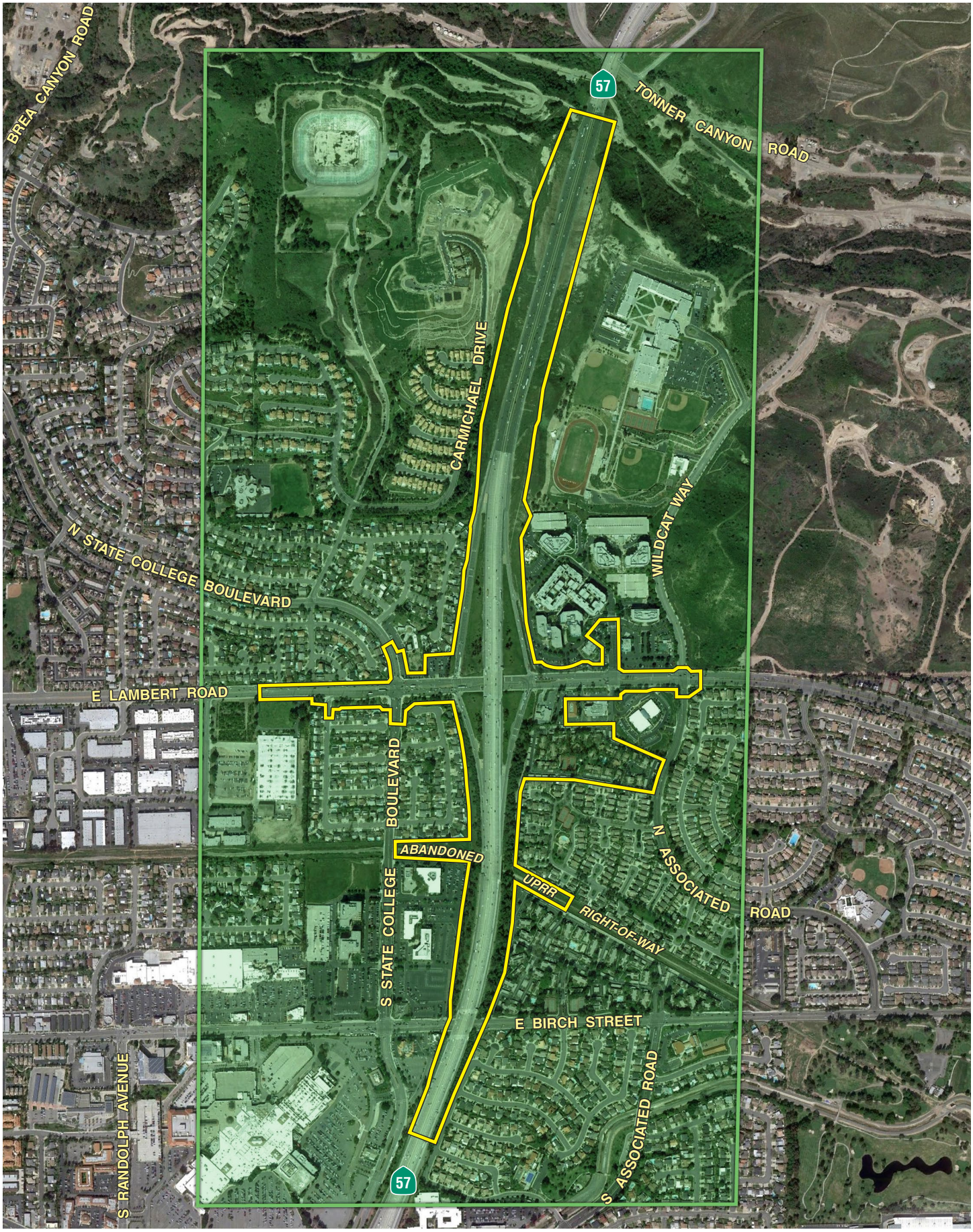
Project Area Viewshed

A viewshed is a subset of a visual assessment unit and is comprised of all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views located from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by proposed project features.

Scattered views are afforded from surrounding urban land uses within a one-mile radius of the proposed project site. Views of the proposed project site are afforded by adjoining commercial/business and institutional (church) uses, as well as motorists, pedestrians, and bicyclists using the proposed project area (including Lambert Road and the SR-57 travel lanes).

Views within the visual assessment unit consist of the SR-57 northbound and southbound travel lanes, surrounding commercial/business uses, institutional (church) uses, and surrounding hillsides. Mature ornamental vegetation associated with highway and roadway ROW is visible. Views to water features are screened by structures and vegetation; refer to Figure 2.2.6-2a, Viewshed Map – Alternative 7A, and Figure 2.2.6-2b, Viewshed Map – Alternative 9.

It should be noted that residential uses are present within the area; however, due to the existing topography, wall features, and mature vegetation, these residents are not afforded direct views of the existing on-site transportation uses.



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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Visual Assessment Unit

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Figure 2.2.6-1

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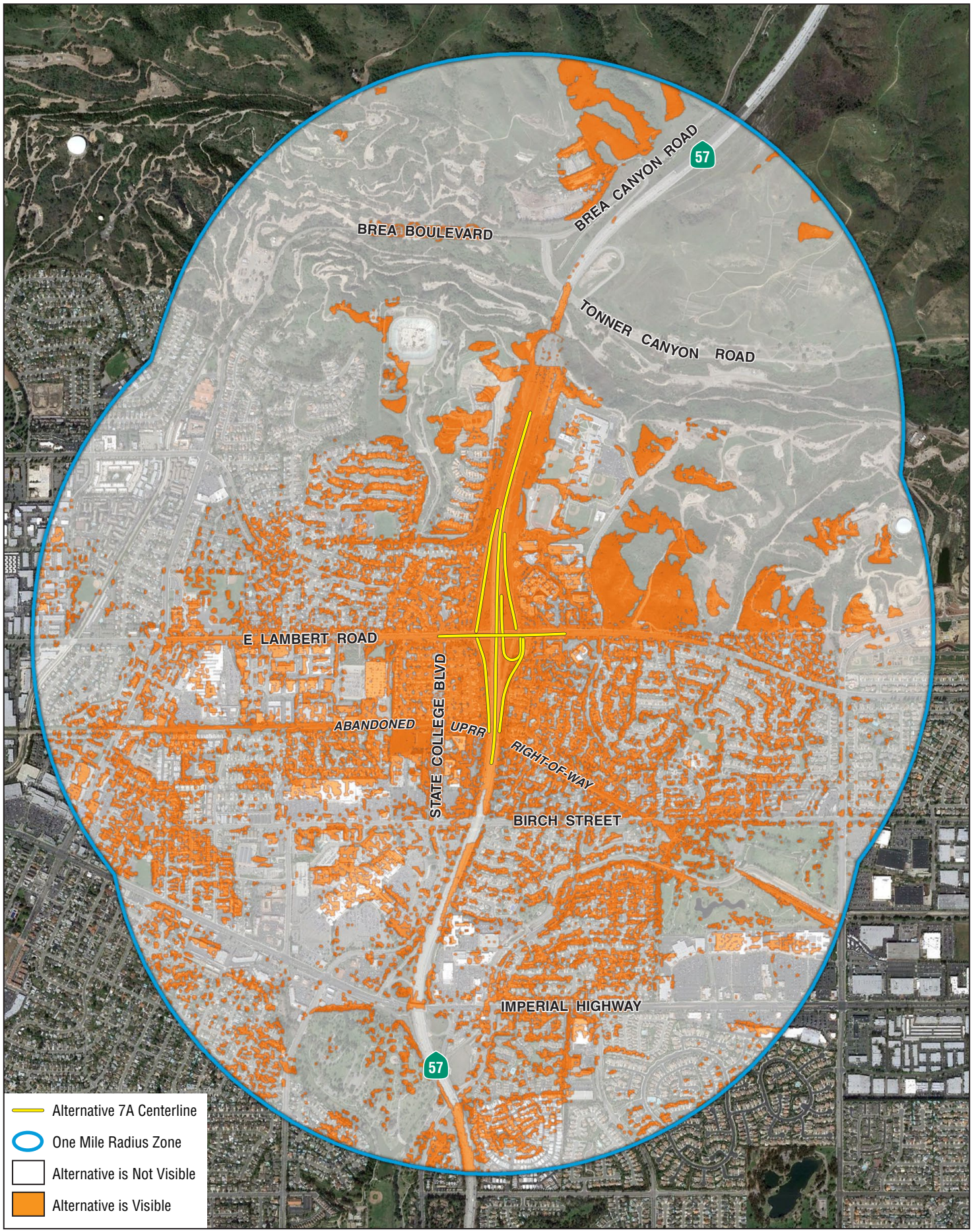

Source: Google Maps Pro Aerial

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Viewshed Map • Alternative 7A

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Figure 2.2.6-2a

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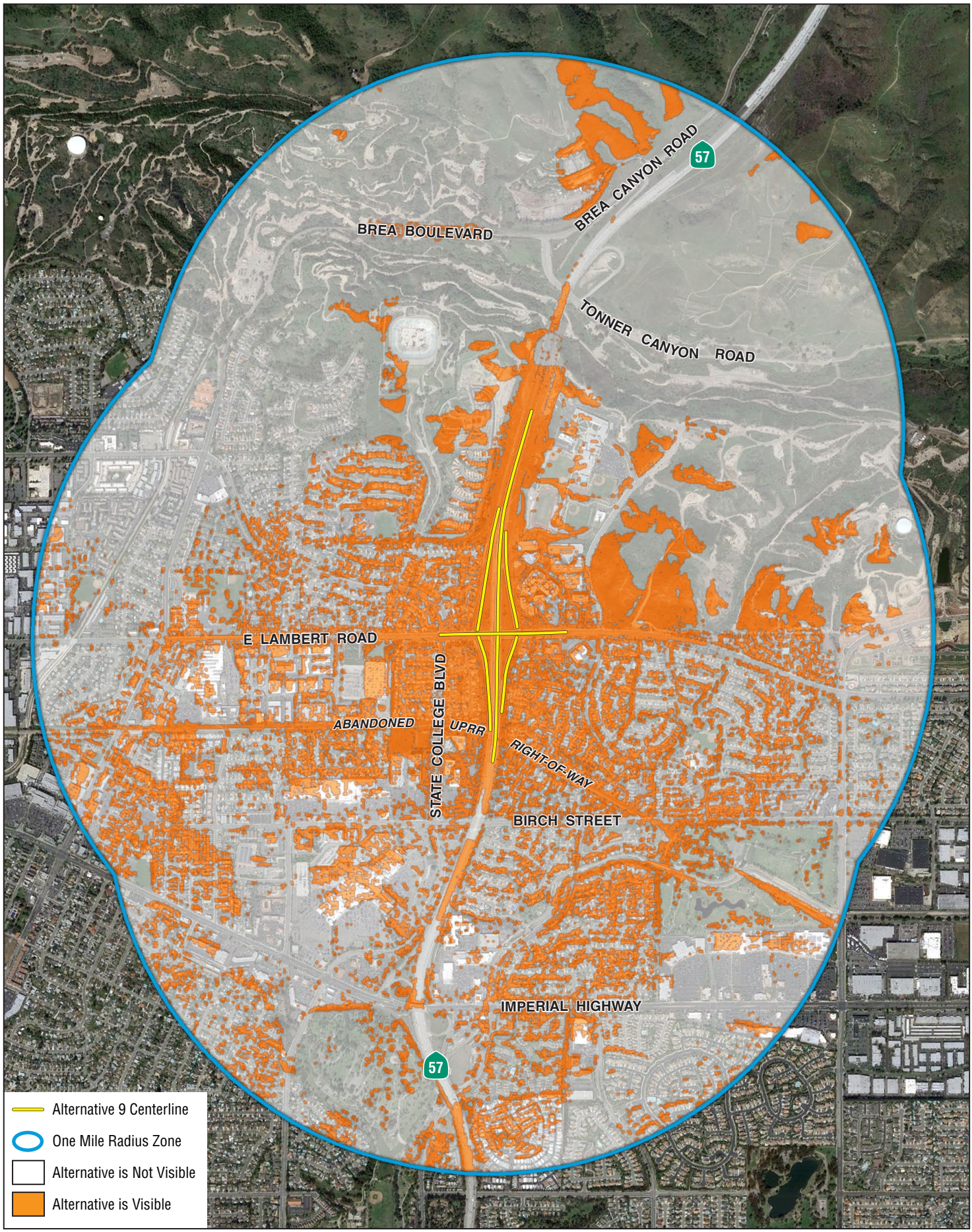

Source: Google Maps Pro Aerial

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Viewshed Map • Alternative 9

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Figure 2.2.6-2b

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Viewer Exposure and Sensitivity

Freeway Travelers

Many drivers commute from Orange County to Los Angeles every day. Existing daily traffic volumes along SR-57, within the area, include peak hour volumes ranging from 5,265 to 7,590 vehicles in the mixed flow lanes and 1,140 to 1,960 vehicles in the high occupancy vehicle (HOV) lane, as discussed in Section 2.2.5, Transportation and Traffic/Pedestrian and Bicycle Facilities.

Daily commuters may have an increased awareness of views from the road due to the amount of time spent on the freeway (near the proposed project area) each day. Drivers traveling in congested traffic conditions may perceive detailed views of the proposed project features for longer durations of time. Drivers traveling at normal freeway speeds usually focus attention on long-range non-peripheral views and would have moderate duration views to project features. Overall viewer exposure for freeway travelers along the proposed project site is considered to be moderate-high.

The degree of awareness of change for freeway travelers varies depending on the frequency of travel. Passengers have a heightened awareness of a wide range of views, while drivers are moderately aware. Therefore, overall viewer sensitivity for SR-57 travelers within the proposed project area is considered to be moderate.

Community Residents

Numerous residents live near the proposed project area; however, these residents do not have direct views of the freeway, as these views are screened by landscaping, walls, and/or slopes. The Country Woods Apartment Homes currently do not have direct views to the freeway; however, because Build Alternative 7A (Preferred Alternative) trends through existing carport structures and buildings within the northwestern portion of the Apartment Homes, these residents would have direct, long-duration views to proposed project changes and may have a high concern for the proposed project and its effect on views from their homes and neighborhood. Overall viewer exposure for residential uses along the proposed project site is considered to be moderate.

Residential viewers are generally considered to be engaged in their surrounding visual environment. While some residential viewers in the vicinity of the project site would not be aware of visual change due to intervening walls, trees, and buildings, residents of the Country Woods Apartment Homes would be highly aware of change due to their location adjacent to the project site. Based on the General Plan, community residents are concerned with the quality of views from their communities, as well as their views to City trees. As a result, residents may have a high concern for the proposed project and its effect on views from their homes and neighborhoods. Overall viewer sensitivity is considered to be moderate-high.

Commercial Area Employees and Customers

Typically, freeway service commercial uses are located in the proposed project area. These uses are generally concentrated to the east for the SR-57/Lambert Road interchange. Intervening structures and trees limit views to the proposed project for some buildings, while others located along Lambert Road and adjoining the on- and off-ramps have direct views to the proposed project. The duration of views from these uses are considered moderate. Overall viewer exposure for commercial employees and clientele would be moderate-low.

Commercial area employees and customers are typically people located indoors that are preoccupied and are not engaged in the surrounding outdoor visual environment. Awareness of the proposed project area is considered low and thus, overall sensitivity is considered low; however, refer to restaurant viewers affected by new soundwall below.

El Torito Grill Restaurant Employees and Customers

El Torito Grill Restaurant is located to the northeast of the SR-57/Lambert Road interchange, within a commercial/office/residential area. El Torito Grill sits atop a hill and includes a patio for clientele that overlooks the developed area of Brea. These viewers would have a direct, short to moderated duration view of the proposed project (a potential new soundwall up to 16 feet in height). The overall viewer exposure for commercial employees and clientele would be moderate.

Business Park Employees and Customers

Office buildings located in the proposed project area have middleground views of the proposed project. Employees working in these buildings would have moderate duration views of the proposed project due to the height of the buildings. Overall viewer exposure for office workers is considered low.

Business park employees and customers are typically people located indoors that are preoccupied and are not engaged in the surrounding outdoor visual environment. Awareness of the proposed project area is considered low and thus, overall sensitivity is considered low.

Local Street Users

Hundreds of drivers, bicyclists, and pedestrians using local streets each day have short duration views of the proposed project site. Overall viewer exposure for local street users is considered to be moderate.

Local street users are generally considered to be engaged in their surrounding visual environment. Awareness of the proposed project area is high. However, the City does not explicitly consider local street users to be sensitive viewers. Therefore, overall viewer sensitivity is considered moderate.

Institutional and Recreational Uses

The proposed project area is near Brea Canyon High School (in the northeast quadrant of the SR-57/Lambert Road interchange) and Brea Unified Methodist Church (in the northwest quadrant of the SR-57/Lambert Road interchange). Bicyclists and pedestrians would have middleground views of the proposed project site for longer periods of time. Institutional users may be concerned about the appearance of the proposed project. Due to the topography and intervening trees and structures, these users would have short duration views of the proposed project area. Bicyclists and pedestrians would have a moderate duration views of the interchange on their riding and walking experience. Overall viewer exposure for institutional and recreational uses within the proposed project area is considered moderate-low.

Institutional viewers are typically people located indoors that are preoccupied and are not overly engaged in the surrounding outdoor visual environment. Recreational viewers are considered to be engaged in their surrounding visual environment, including those utilizing Lambert Road. The overall viewer sensitivity for institutional and recreational uses in the proposed project area is considered to be moderate.

Existing Visual Resources

Existing Visual Character

Visual Character includes attributes such as form, line, color, texture, and is used to describe, not evaluate; that is these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change, as discussed below in Section 2.2.6.3, Environmental Consequences. For this proposed project, the attributes considered are:

- form – visual mass or shape;
- line – edges or linear definition;
- color – reflective brightness (light, dark) and hue (red, green);
- texture – surface coarseness;
- dominance – position, size, or contrast;
- scale – apparent size as it relates to the surroundings;
- diversity – a variety of visual patterns; and
- continuity – uninterrupted flow of form, line, color, or textural pattern.

Urban development exists within the proposed project area. On-site uses consist of freeway (SR-57) and roadway (Lambert Road) uses, as well as a car wash facility (Brea Auto Spa) and residential uses (Country Woods Apartment Homes). Surrounding uses include single-family residential, commercial/business, and institutional uses (Brea Unified Methodist Church and Brea Canyon High School).

Existing visual resources visible within the proposed project viewshed include the San Gabriel Mountains. The San Gabriel Mountains are located to the north of the proposed project site (Throop Peak is approximately 9,138 feet above msl). The water features (drainages and creeks) in the proposed project vicinity and surrounding mountains are not readily visible from public views in the proposed project area and thus do not contribute to the existing visual character. Vegetation within the area consists of ornamental landscaping associated with highway and roadway ROW as well as various urban land uses. Man-made features within the proposed project area consist of urban development. Existing freeway structures located on-site consist of multiple soundwalls and retaining walls of varying heights, two bridge structures (the Lambert Road Undercrossing and the Brea Overhead associated with the former railroad, which is currently City ROW), as well as walls recently constructed as part of the SR-57 Northbound Widening Project; refer to Table 2.2.6-1, Existing Wall Features, and Figure 2.2.6-3, Existing Wall Features.

Table 2.2.6-1 Existing Wall Features

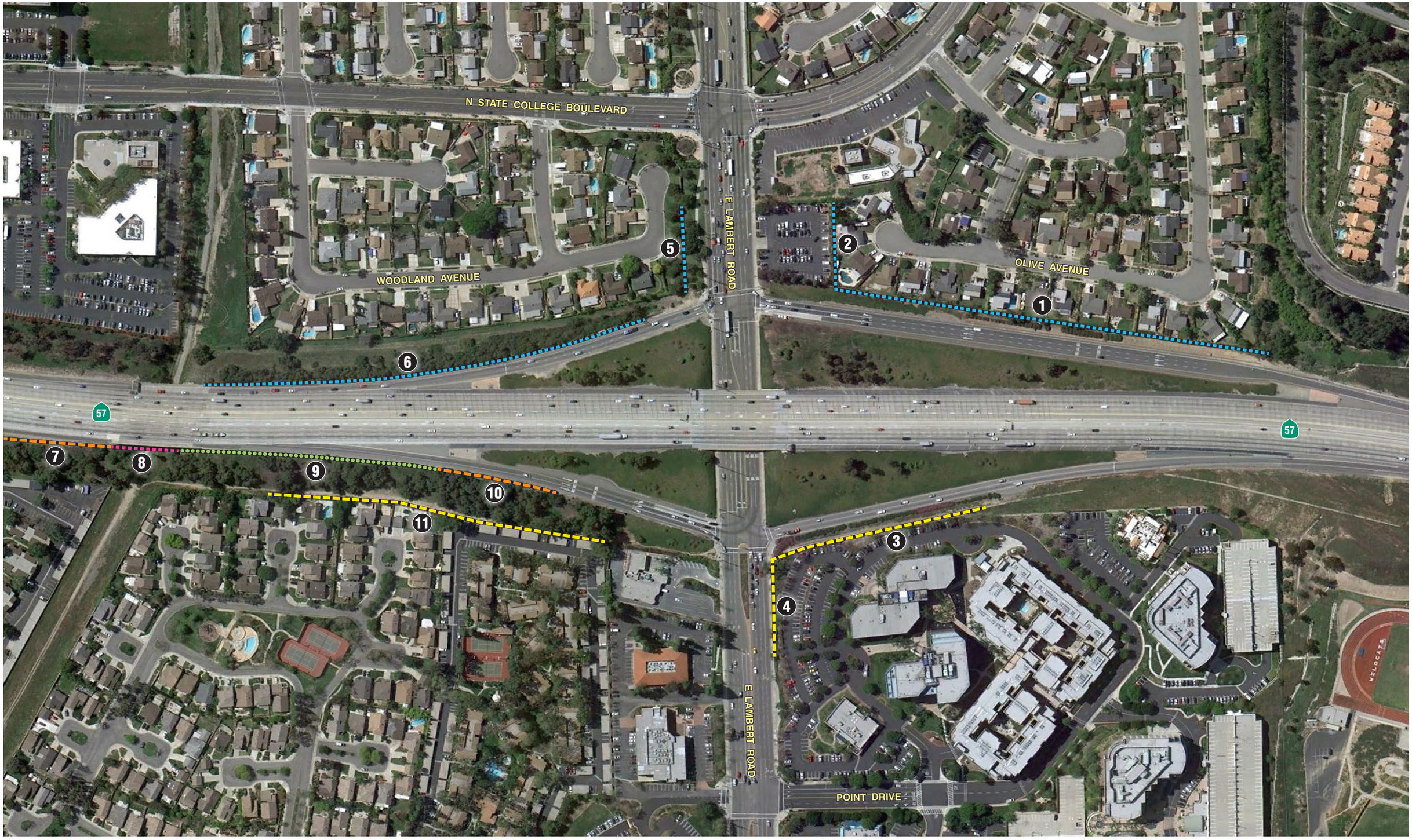
Wall Location[1]	Wall Type	Length (feet)	Maximum Height (feet)
1	Soundwall	1,050	10
2	Soundwall	215	6
3	Retaining Wall	470	3
4	Retaining Wall	560	6
5	Soundwall	390	10
6	Soundwall	1,090	6
7	Retaining Wall[2]	1,035	17.5
8	Soundwall[2, 4]	175	8.3
9	Combination Wall[3]	675	28.3
10	Retaining Wall[2]	250	14
11	Retaining Wall	1,120	8

Source: Visual Impact Assessment, 2014

Notes:

1. Refer to Figure 2.2.6-3, Existing Wall Features, for a mapping of the wall locations.
2. Constructed as part of the SR-57 Northbound Widening Project. These walls are considered existent by the proposed project.
3. Constructed/relocated as part of the SR-57 Northbound Widening Project and potential relocation by the proposed project.
4. This wall was included in the analysis of visual resources and aesthetics, as these existing wall features contribute to the character of the landscape. It should be noted that SR-57 Northbound Widening Project soundwall No. 8 was designed at a late date and thus was not included in the noise analysis in this IS/EA; however, the proposed project would not result in changes to soundwall No. 8.

The visible form of the SR-57 corridor in the visual assessment unit is fairly consistent, with a continuous width (except for the widening at the Lambert Road interchange), following a generally straight line with edges defined by shoulders, barriers, and soundwalls. The colors throughout the visual assessment unit are predominantly shades of grey associate with SR-57; however, the surrounding structures consist of whites, tans, browns, and blues. A variety of greens are also visually dominant in association with mature trees, shrubs, and vegetation, and the San Gabriel Mountains to the north. SR-57 texture appears to be granular throughout the visual assessment unit, while the textures of surrounding structures are grainy, rigid, and smooth. The scale of the features visible along the SR-57 corridor within the visual assessment unit vary due to the larger buildings located at higher elevations to the east of SR-57 and the smaller buildings are lower elevations to the west. The visual assessment unit is visibility diverse due to the contrast between the hardscape of SR-57, the development near the SR-57/Lambert Road interchange, and the substantial amount of mature trees and landscaping, as well as the dominating San Gabriel Mountains to the north. This visual assessment unit is generally continuous, with repeating form, line, color, and textural pattern.



Existing Retaining Wall
Existing Soundwall
SR-57 Northbound Widening Project Retaining Wall
SR-57 Northbound Widening Project Soundwall
SR-57 Northbound Widening Project Combination Retaining Wall / Soundwall

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Existing Wall Features

Exhibit 2.2.6-3

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Existing Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the proposed project corridor. Public attitudes validate the assessed level of quality and predict how changes to the proposed project corridor can affect these attitudes. For this proposed project, vividness, intactness, and unity are defined as follow:

- Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The average existing visual quality within the proposed project site, the visual assessment unit, is considered to be moderate. Views from drivers accessing SR-57 generally have views of ornamental landscaping and urban development that is fairly unified. Existing freeway wall structures appear fairly intact due to textured concrete and mature vine treatments throughout the length of the proposed project. Residential uses adjoining SR-57 are mostly screened from the mainline due to varying topography, mature vegetation, and existing wall features. Unity is increased in the visual assessment unit by the existing mature trees and vegetation, and the distant views to the San Gabriel Mountains to the north.

Key Views

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of Key Views that would most clearly display the visual effects of the proposed project. Key Views represent the primary viewer groups that would be affected by the proposed project, and are generally situated within the viewshed of major project features (e.g., proposed wall features, ramp re-configuration, and areas of roadway widening). Key View locations were selected after completion of site reconnaissance on March 10, 2012 as part of the VIA. Refer to Figure 2.2.6-4, Key View Locations Map, for a visual representation of the selected Key View locations and their orientation.

The SR-57 Northbound Widening Project is recently constructed, separate from the proposed project, and widened northbound SR-57 in the vicinity south of Lambert Road to one HOV lane, five mixed-flow lanes, and one auxiliary lane and a two-lane off-ramp to Lambert Road.

Key View 1

Key View 1 is located in the central portion of the visual assessment unit, near the SR-57 southbound Lambert Road off-ramp. Key View 1 represents a typical view from southbound SR-57 travelers. This view is looking south toward the SR-57/Lambert Road Interchange; refer to Figure 2.2.6-5, Key View 1 – Existing Condition.

The existing visual form appears consistent throughout the view. SR-57 is linear and continuous with edges defined by barriers and shoulders. The colors throughout Key View 1 include shades of grey associated with the concrete and asphalt materials used for SR-57, multiple greens associated with trees and vegetation, and values associated with the visible skyline. The texture

of SR-57 is granular throughout the view. The contrast between the freeway hardscape and trees and vegetation provide for some diversity. Vividness is moderate due to the flat nature of the foreground and middleground views. Mature landscaping throughout this view increases the intactness and unity, as seen from motorists traveling along southbound SR-57. Key View 1 is fairly unified as a result of the continuous linear pattern of SR-57 and the mature trees and vegetation to the east and west.

Key View 2

Key View 2 is located in the central portion of the visual assessment unit, near the SR-57 northbound Lambert Road off-ramp. Key View 2 represents a typical view from northbound SR-57 travelers. This view looks to the north toward the SR-57/Lambert Road interchange; refer to Figure 2.2.6-6, Key View 2 – Existing Condition.

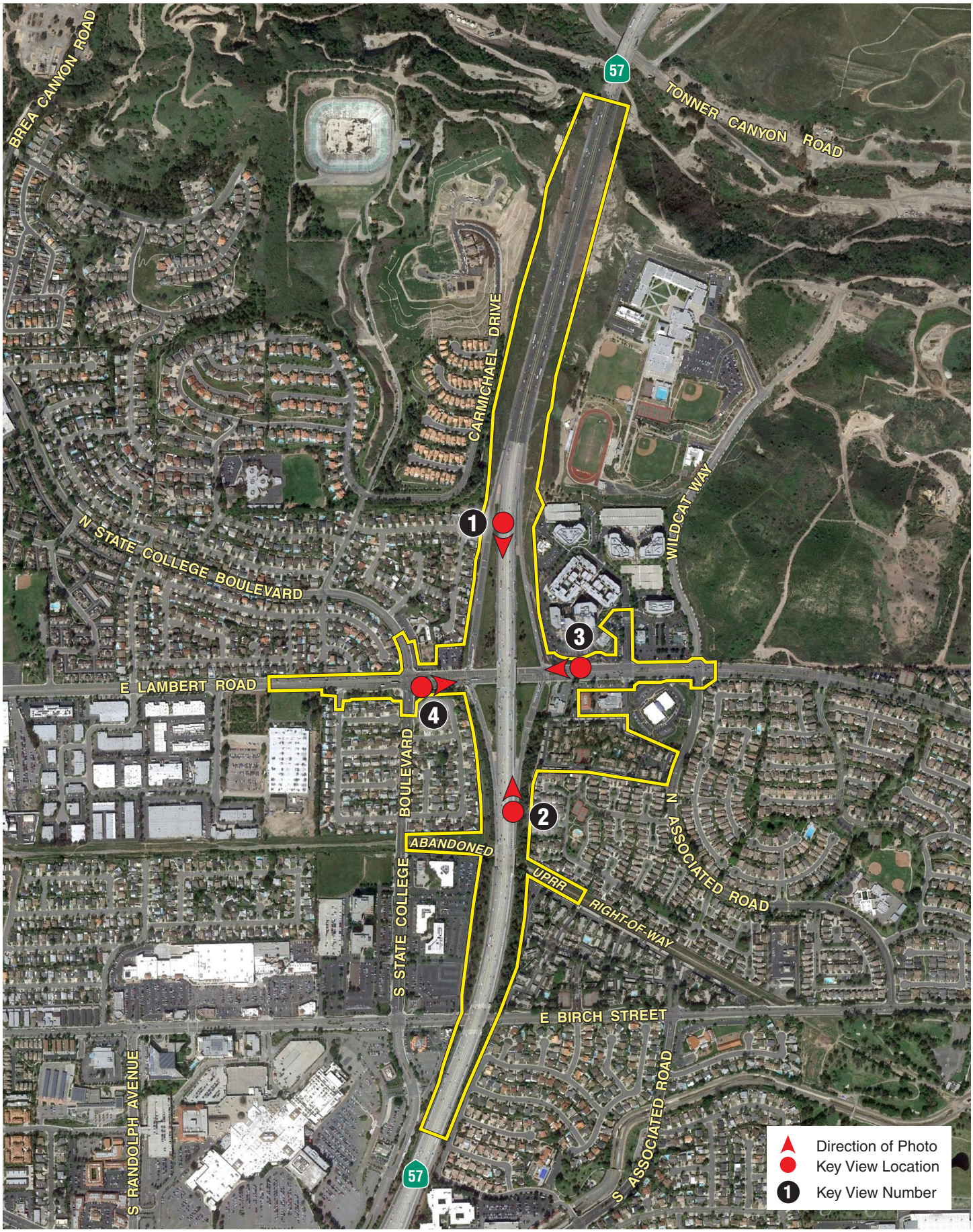
The visual form in Key View 2 appears to be uniform throughout the view. SR-57 appears to be generally linear and continuous, with the exception of the curved Lambert Road off-ramp. The colors throughout Key View 2 consist of shades of grey associated with the freeway, as well as greens associated with surrounding trees, blues of the visible skyline, and browns associated with the San Gabriel Mountains. The texture of the SR-57 northbound travel lanes appears to be granular. The abundant vegetation and trees along with the San Gabriel Mountains, freeway, barriers, and walls increase the diversity in Key View 2.

Foreground and middleground views include northbound SR-57 travel lanes, a center divide concrete barrier, and freeway signage. Mature trees and vegetation are visible in foreground and middleground views. Background views include distant vegetated hillsides and development. Overall vividness is moderately high at this Key View. Mature landscaping reduces the appearance of encroachment in this view, maintaining a moderately high intactness. Distant views to hillsides also distract travelers from visual intrusions. Mature trees and vegetation result in moderately high unity throughout this Key View.

Key View 3

Key View 3 is located in the eastern portion of the visual assessment unit, along the westbound travel lanes of Lambert Road, to the east of the SR-57/Lambert Road interchange. Key View 3 represents a typical view from westbound Lambert Road travelers. This Key View looks west along Lambert Road toward the SR-57/Lambert Road Interchange; refer to Figure 2.2.6-7, Key View 3 – Existing Condition.

The visual form in Key View 3 appears to be varied throughout the view, due to the linear pattern of Lambert Road and the perpendicular freeway overcrossing bridge structure. The Lambert Road edges are defined by sidewalks and a retaining wall. Several colors exist throughout Key View 3, including greys associated with the roadway, browns associated with the median and retaining wall, and greens, purples, and browns associated with trees and vegetation. Diversity in Key View 3 is increased due to the presence of the roadway, existing mature trees, vegetation, and commercial development. Foreground views include Lambert Road, associated landscaped raised median, sidewalks, and street trees. These landscape features minimize the encroaching features of the roadway and increase the overall intactness of this Key View. An existing retaining wall further increases the visible hardscape; however, existing shrubs planted along the retaining wall reduce the overall hardscape appearance.



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APPROXIMATE

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View Locations Map

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Exhibit 2.2.6-4

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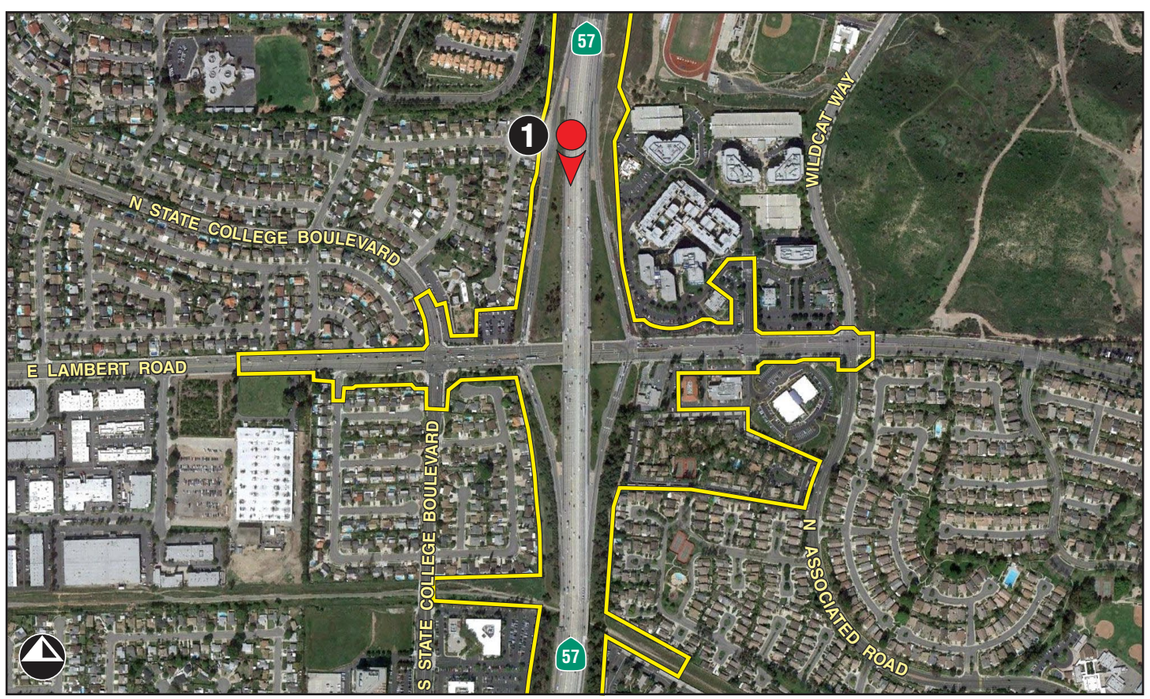

Direction of Photo
Key View Location
1 Key View Number

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Key View 1 Existing Condition

Figure 2.2.6-5

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Direction of Photo
Key View Location
2 Key View Number

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 2 Existing Condition

Figure 2.2.6-6

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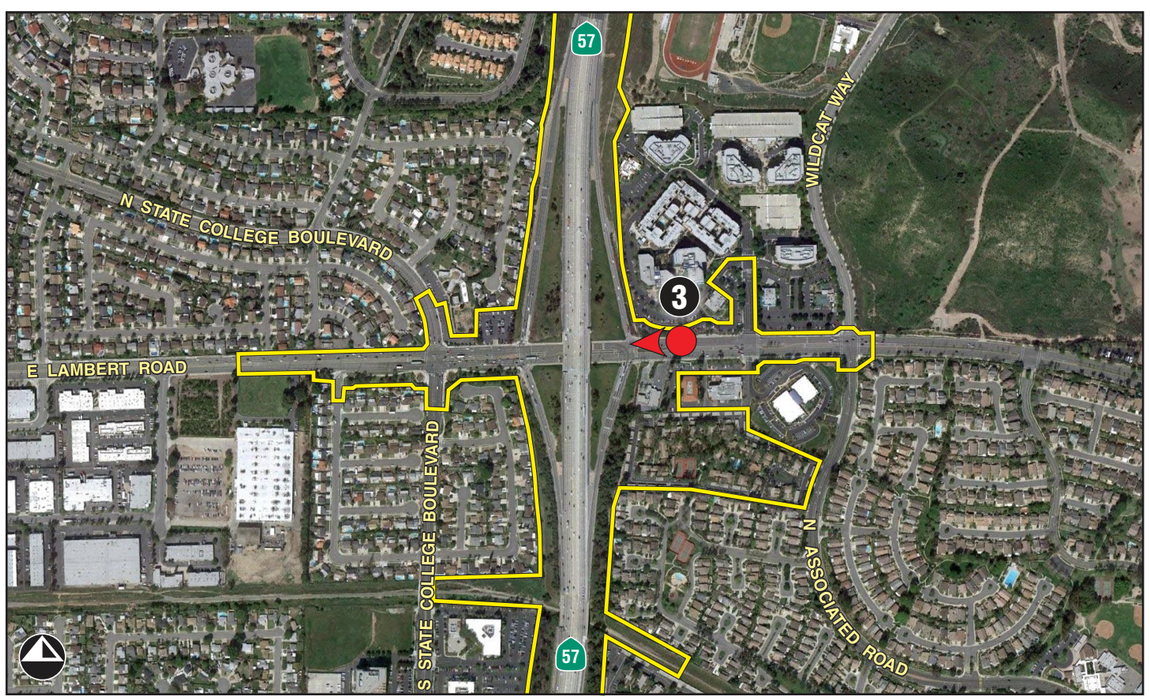

Direction of Photo
Key View Location
3 Key View Number

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 3 Existing Condition

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Figure 2.2.6-7

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Key View 4

Key View 4 is located in the western portion of the visual assessment unit, along the eastbound travel lanes of Lambert Road, to the west of the SR-57/Lambert Road interchange. Key View 4 represents a typical view from westbound Lambert Road travelers. This view is looking east along Lambert Road toward the interchange; refer to Figure 2.2.6-8, Key View 4 – Existing Condition.

The existing visual form varies as a result of the linear pattern of Lambert Road and the perpendicular freeway overcrossing bridge structure in middleground views. Edges along Lambert Road in this view are defined by sidewalks. Colors within the view include greys associated with the roadway, browns associated with the median and wall, blues associated with the skyline and developed uses, and greens, purples, and browns associated with trees and vegetation. Diversity is increased due to the presence of the roadway, existing mature trees, vegetation, and commercial development. Vividness in this Key View is considered moderate due to the mature trees, vegetation, and meandering sidewalk present within the foreground of this Key View. Middleground views encompass the existing SR-57/Lambert Road interchange and background views are not readily available. Overall intactness is considered moderately low, as the presence of overhead power poles increase encroachment. Unity at this Key View is considered to be moderate, as the mature trees and landscaping visible throughout this view allow for a more uniform color and texture.

2.2.6.3 Environmental Consequences

The following analysis considers the construction of the proposed project (for both Build Alternatives 7A and 9), as outlined in Chapter 1, Proposed Project, of this IS/EA. Figure 2.2.6-3, Existing Wall Features, and Table 2.2.6-1, Existing Wall Features, depict the existing retaining walls, soundwalls, combination retaining wall/soundwalls, and bridge structures. Existing walls 4, 9, and 10 as well as the two retaining walls associated with the Lambert Road Undercrossing would be relocated as part of Build Alternative 7A (Preferred Alternative). All walls being relocated as part of Build Alternative 7A (Preferred Alternative) would also be relocated as part of Build Alternative 9, with the exception of wall 9, which would remain in place.

As discussed in Section 2.3.7, Noise, and in the Noise Study Report and the Noise Abatement Decision Report (NADR), the proposed project would also result in the construction of a new soundwall feature along the outdoor patio for the El Torito Grill Restaurant. The noise barrier (NB No. 1) was evaluated for Build Alternatives 7A and 9. NB No. 1 was found to be feasible, as it would be capable of reducing noise levels by five A-weighted decibels (dBA) or more for both Build Alternatives 7A and 9 at a length of 207 feet and heights of 8, 10, 12, 14, and 16 feet. As identified in the NADR and shown in Table 2.3.7-7, the total reasonable allowance for NB No. 1 is $165,000, as there are three receptors benefiting from the barrier for all feasible heights. As discussed in Section 2.3.7, Noise, in accordance with Caltrans' *Traffic Noise Analysis Protocol*, each sound barrier must provide at least 7 dBA of noise reduction at one or more benefited receivers to be considered reasonable. Therefore, if the estimated noise barrier construction cost exceeds the total reasonable allowance or is not predicted to provide at least 7 dBA of noise reduction at one or more benefited receptors, the noise barrier is determined to be not reasonable. However, if the estimated noise barrier construction cost is within the total reasonable allowance and is predicted to provide at least 7 dBA of noise reduction at one or more benefited receptors, the noise barrier is determined to be reasonable. As shown in Table 2.3.7-7, NB No. 1 with a height of eight feet, under both Build Alternatives 7A and 9, was determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more. NB No. 1 at heights of 10,

12, 14, and 16 feet were determined to reduce noise levels by 7 dBA or more and the estimated noise barrier construction cost would not exceed the total reasonable allowance. Therefore, the NB No. 1 is determined to be reasonable. Thus the analysis of both a concrete block wall and a transparent wall were considered as part of the VIA.

Key Views

Key View 1

SR-57 Northbound Widening Project Features

Completion of the SR-57 Northbound Widening Project did not result in visible changes to the existing condition north of the Lambert Road Undercrossing, as seen from this Key View. Portions of a new soundwall (located atop a new retaining wall) would be visible in the middleground (to the south of the Lambert Road Undercrossing), along the widened northbound SR-57 off-ramp. These impacts have already been addressed as part of the SR-57 Northbound Widening Project Initial Study/Environmental Assessment (IS/EA) and resulting Mitigated Negative Declaration (MND) and Finding of No Significant Impact (FONSI) dated 2007. Therefore, these features as considered only in the context of which they combine with the proposed project's features under both Build Alternatives (Alternatives 7A and 9).

Proposed Project Features – Both Build Alternatives (Alternatives 7A and 9)

Visible features of the proposed project from this Key View would be similar for both Build Alternatives 7A and 9. The southbound SR-57 median shoulder would be widened to 10 feet through the left-hand curve north of Lambert Road to provide standard horizontal sight distance, and an additional auxiliary lane along southbound SR-57 would be provided. Other features of the proposed project would include the relocation of the SR-57 Northbound Widening Project combination soundwall/retaining wall and the top-most portion of a relocated retaining wall (located along the northbound SR-57 off-ramp).

Changes to Visual Quality/Character – Both Build Alternatives (Alternatives 7A and 9)

Visual changes to quality and character at Key View 1 under both Build Alternatives 7A and 9 would be considered low due to the similar appearance of hardscape features and minimal removal of landscaping; refer to Figure 2.2.6-9, Key View 1 – Proposed Condition, Alternatives 7A and 9.

Minimal landscaping has been removed and views to mature vegetation remains, maintaining the visible vividness and unity. Middleground views to relocated soundwalls along the ramps would be visible. Topographic conditions and distant views to the developed areas of Brea and Fullerton remain in this view. Overall, the resource change in this Key View would be low after construction of the proposed project.

Direction of Photo
Key View Location
4 Key View Number

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 4 Existing Condition

Figure 2.2.6-8

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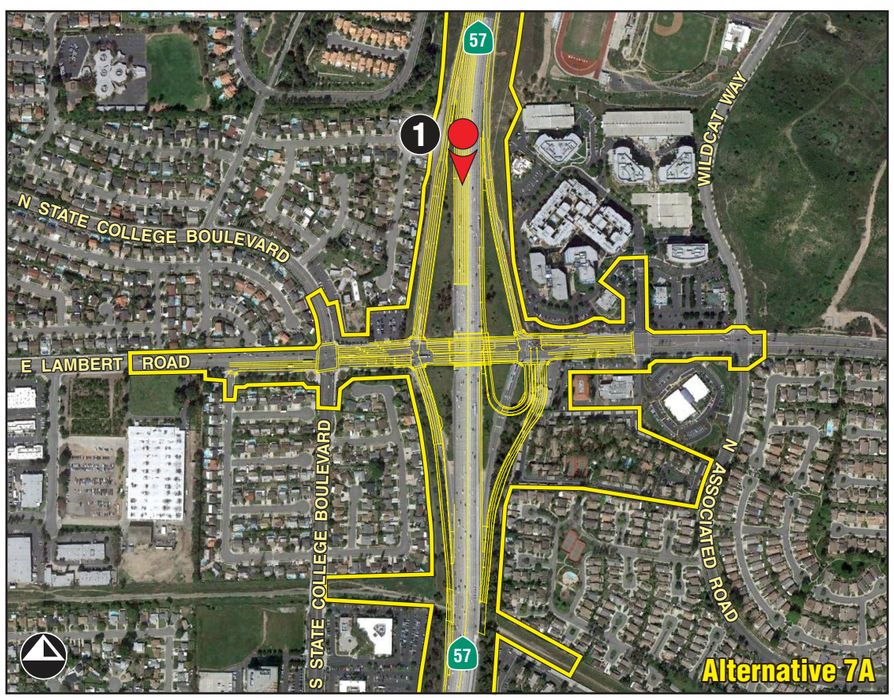

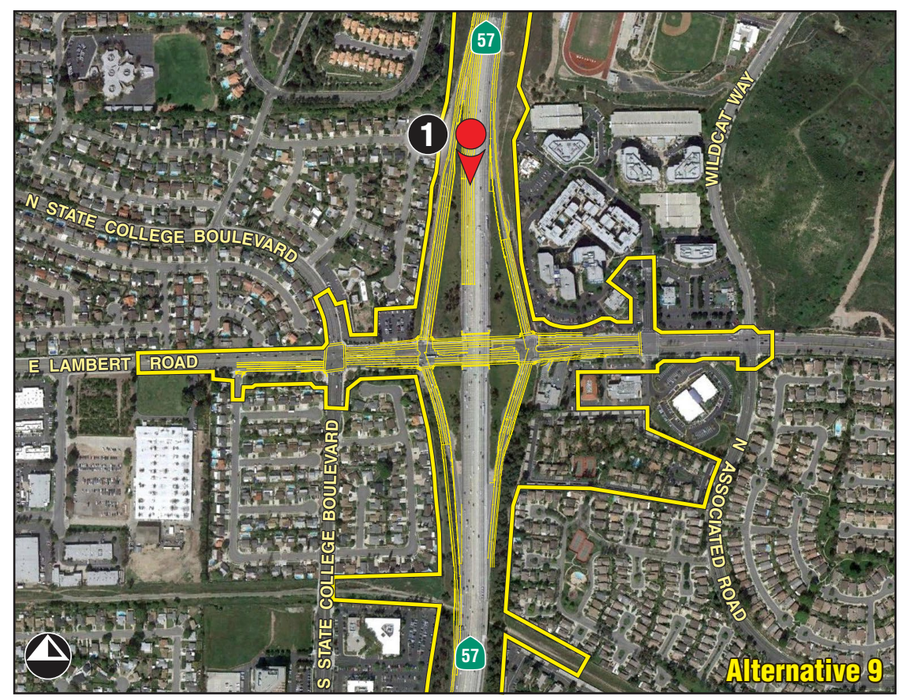

NOTES:

1 "Implementation of architectural treatments (Mitigation Measure [MM]1) consistent with the *Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment Along Orange County's Transportation Network* would be required at this wall feature."

2 "For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

Direction of Photo
Key View Location
Key View Number

Project Limits Boundary
Proposed Improvements

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 1 Proposed Condition - Alternatives 7A and 9

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Figure 2.2.6-9

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Viewer Response – Build Alternatives 7A and 9

The southbound SR-57 traveler would be directly exposed to the changes along the freeway. The viewer exposure duration is ultimately dependent on the density of traffic, especially during peak travel periods. Although southbound travelers may or may not be highly aware in Key View 1 depending on the speed or travel, these viewers would likely notice a change in this portion of the proposed project site. The resulting response for southbound SR-57 travelers would be moderate-high under both Build Alternatives 7A and 9.

Resulting Visual Impact – Build Alternatives 7A and 9

Proposed project improvements would minimally affect existing views of the proposed project site from this Key View for both Build Alternatives (Alternatives 7A and 9). Sensitive viewers would have a moderate-high viewer response to proposed project changes because the proposed project would increase the appearance of hardscape features. To ensure the visual character is not substantially degraded throughout Key View 1, implementation of avoidance, minimization, and/or mitigation measures would require an aesthetic treatment (i.e., color, texture, vine treatment) to be added to the wall structure to minimize aesthetic impacts. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. Impacts to Key View 1 would not be adverse.

Key View 2

SR-57 Northbound Widening Project Features

Completion of the SR-57 Northbound Widening Project did result in visible changes to the existing condition, as seen from this Key View. Visible features would include transition lanes along the freeway (from six to five through lanes), the realigned and widened off-ramp, and a new soundwall (located atop a new retaining wall along the northbound SR-57 off-ramp). These impacts have already been addressed as part of the SR-57 Northbound Widening Project IS/EA and resulting MND and FONSI dated 2007. Therefore, these features are considered only in the context of which they combine with the features of the proposed project under both Build Alternatives (Alternatives 7A and 9).

Proposed Project Features

Build Alternative 7A (Preferred Alternative)

Under Build Alternative 7A (Preferred Alternative), visible proposed project features would include a new loop on-ramp for eastbound Lambert Road travelers. The northbound SR-57 off-ramp would be relocated to the east and widened to four lanes. The current northbound SR-57 on-ramp would remain to provide northbound SR-57 access for westbound Lambert Road travelers. This ramp would be widened to provide for standard inside and outside shoulders and the soundwall would be relocated. Other visible proposed project features would include the top-most portions of re-located retaining wall along the northbound SR-57 off-ramp.

Build Alternative 9

Under Build Alternative 9, visible features of the proposed project would include the widened northbound SR-57 on-ramp (from two to three lanes) and the widened southbound SR-57 off-

ramp (from three to four lanes). Other visible proposed project features would include the wall along the southbound SR-57 on-ramp and the top-most portions of the relocated retaining wall along the northbound SR-57 off-ramp.

Changes to Visual Quality/Character

Build Alternative 7A (Preferred Alternative)

The proposed project changes are consistent with the existing condition of the area; refer to Figure 2.2.6-10, Key View 2 – Proposed Condition, Alternative 7A. The proposed conditions would appear generally similar to the existing conditions regarding color, texture, scale, diversity, and continuity. However, the visible form would be slightly altered due to the reconfigured off-ramp.

Vividness would nominally decrease due to vegetation removal within highway ROW. Hardscape features in this Key View would increase as a result of the vegetation removal and increased paved areas, which would decrease the intactness of this view. Other visible hardscape would include the relocated combination soundwall/retaining wall and retaining wall along the off-ramp. Removal of vegetation within the highway ROW would also result in a decrease in the unity of the view. Distant views to the San Gabriel Mountains remain in this view, which minimize the effect of the additional hardscape in the foreground views. Overall resource change in Key View 2 would be low as the proposed conditions appear generally similar to the existing conditions.

Build Alternative 9

The proposed project changes are consistent with the existing condition of the area; refer to Figure 2.2.6-11, Key View 2 – Proposed Condition, Alternative 9. Although implementation of Build Alternative 9 would result in different off-ramp configuration, the resource change in Key View 2 would be similar to that described for Build Alternative 7A (Preferred Alternative); refer to the discussion above.

Viewer Response – Both Build Alternatives (Alternatives 7A and 9)

The northbound SR-57 traveler would be directly exposed to the changes along the freeway. The viewer exposure duration is ultimately dependent on the density of traffic, especially during peak travel periods. Although northbound travelers may or may not be highly aware in Key View 2 depending on the speed of travel, these viewers would likely notice a change in this portion of the proposed project site. The resulting response for northbound SR-57 travelers would be moderate-high under both Build Alternatives (Alternatives 7A and 9).

Direction of Photo
Key View Location
Key View Number
Project Limits Boundary
Proposed Improvements

NOTES:

1 "Implementation of architectural treatments (Mitigation Measure [MM]1) consistent with the *Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment Along Orange County's Transportation Network* would be required at this wall feature."

2 "For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 2 Proposed Condition - Alternative 7A

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Figure 2.2.6-10

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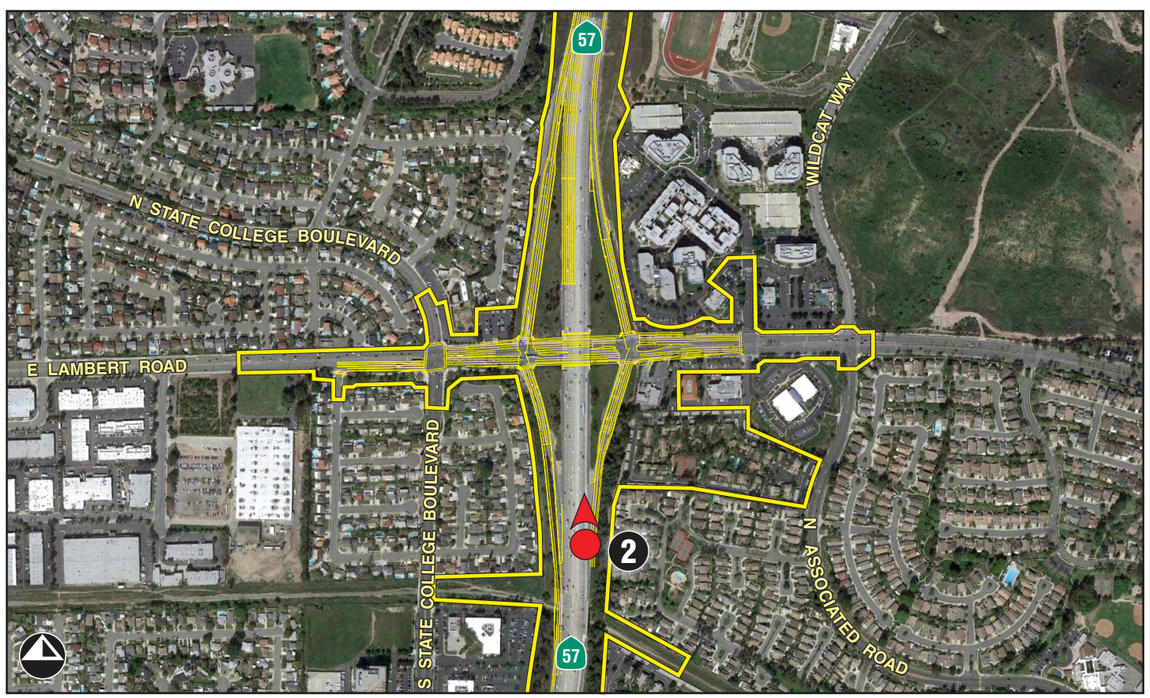

Direction of Photo
Key View Location
Key View Number
Project Limits Boundary
Proposed Improvements

NOTES:

1 "Implementation of architectural treatments (Mitigation Measure [MM]1) consistent with the *Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment Along Orange County's Transportation Network* would be required at this wall feature."

2 "For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 2 Proposed Condition - Alternative 9

7/31/13 JN 10-107792-18226 MAS

Figure 2.2.6-11

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Resulting Visual Impact

Build Alternative 7A (Preferred Alternative)

Proposed project improvements would be consistent with the existing condition of the area. The overall resource change in Key View 2 would be low. For motorists traveling northbound on SR-57, implementation of the proposed project would decrease vividness and increase hardscape features within the area by removing vegetation within the highway ROW and increasing the visible hardscape. Background views to distant hills remain.

To ensure the visual character is not substantially degraded throughout Key View 2, implementation of avoidance, minimization and/or mitigation measure VIS-1 require an aesthetic treatment (i.e., color, texture, vine treatment) to be added to the relocated wall structure to minimize aesthetic impacts. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. VIS-2 would require the replanting of native landscaping within the highway ROW. Implementation of avoidance, minimization and/or mitigation measures would reduce impacts and visual impacts would not be adverse.

Build Alternative 9

Proposed project improvements would be consistent with the existing condition of the area. The overall resource change in Key View 2 would be low. Implementation of the proposed project would result in the slight decrease in vividness and increase in hardscape as a result of the widened SR-57 off-ramp and relocated wall features. Background views to distant hills remain. Avoidance, minimization, and/or mitigation measures would reduce impacts and impacts would not be adverse.

Key View 3

SR-57 Northbound Widening Project Features

Completion of the SR-57 Northbound Widening Project did result in visible changes to the existing condition, as seen from this Key View. Visible features would include the widened northbound SR-57 off-ramp (from two to three lanes). These impacts have already been addressed as part of the SR-57 Northbound Widening Project IS/EA and resulting MND and FONSI dated 2007. Therefore, these features are considered only in the context of which they combine with the proposed project's features under both Build Alternatives (Alternatives 7A and 9).

Proposed Project Features

Build Alternative 7A (Preferred Alternative)

Under Build Alternative 7A (Preferred Alternative), visible proposed project features would include a new northbound SR-57 loop on-ramp for eastbound Lambert Road travelers. The northbound SR-57 off-ramp would be relocated to the east to allow for the new loop on-ramp. The current northbound SR-57 on-ramp would remain to provide northbound SR-57 access for westbound Lambert Road travelers. This ramp would be widened to provide for standard inside and outside shoulders. The left-turn movement from eastbound Lambert Road to the northbound SR-57 on-ramp would be removed. Lambert Road would be widened from 1,000 feet west of State College

Boulevard to Pointe Drive to accommodate the required turn lanes. The Lambert Road profile (between State College Boulevard and Pointe Drive) would also be lowered to provide 15-foot standard vertical clearance under the Lambert Road Undercrossing bridge structure. Other proposed project features visible would include the re-located retaining walls along the northern portion of Lambert Road.

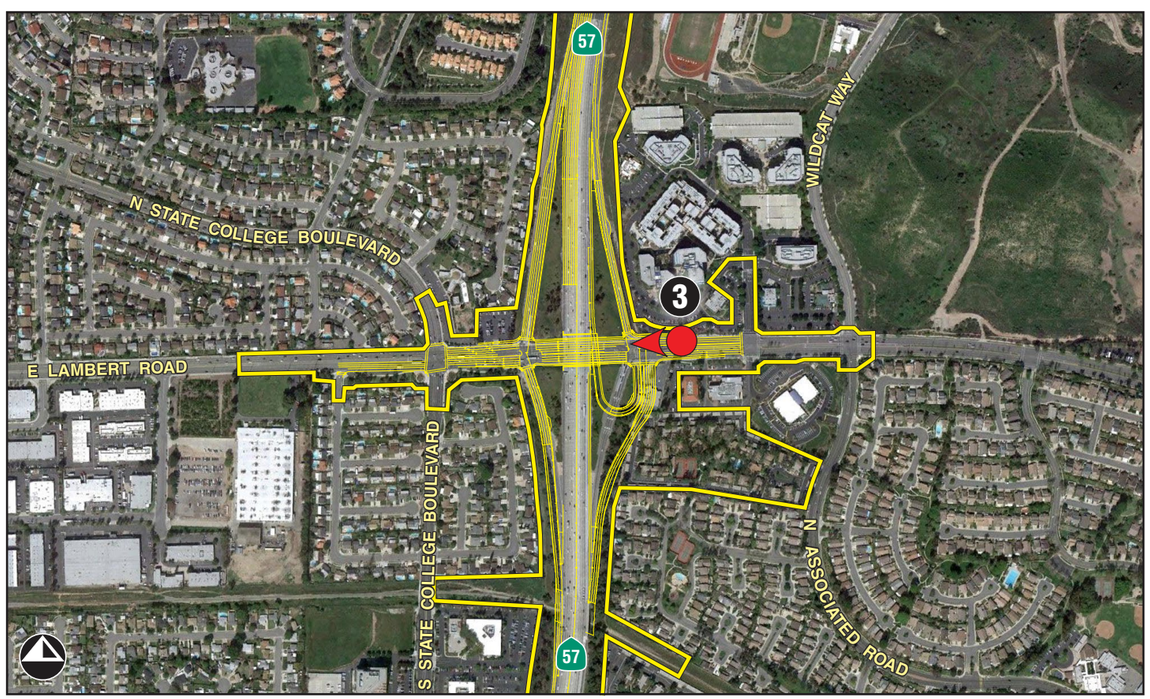
Build Alternative 9

Under Build Alternative 9, visible proposed project features would include the widened northbound SR-57 on-ramp (from two to three lanes) and the widened southbound SR-57 off-ramp (from three to four lanes). Lambert Road would be widened from 1,000 feet west of State College Boulevard to Pointe Drive to accommodate the required turn lanes. The Lambert Road profile (between State College Boulevard and Pointe Drive) would also be lowered to provide 15-foot standard vertical clearance under the Lambert Road Undercrossing bridge structure. Other proposed project features visible would include the re-located retaining walls along the north side of Lambert Road.

Changes to Visual Quality/Character

Build Alternative 7A (Preferred Alternative)

The visible form of the SR-57/Lambert Road interchange would be altered due to the introduction of the new northbound SR-57 loop on-ramp. The scale of this view would also appear wider due to the widened Lambert Road. The proposed project would appear similar to existing conditions regarding color, texture, and continuity; refer to Figure 2.2.6-12, Key View 3 – Proposed Condition, Alternative 7A. Diversity would change due to the removal of commercial development for the accommodation of the loop on-ramp. Mature trees and vegetation in the foreground and middleground would be removed. The widened Lambert Road, retaining walls, and new loop on-ramp would result in increased hardscape features. Increased hardscape and vegetation removal activities would result in the decrease of vividness, intactness, and unity, as seen from this Key View. Overall, the resource change in Key View 3 would be considered moderate due to the increase in hardscape.



Direction of Photo
Key View Location
Key View Number
Project Limits Boundary
Proposed Improvements

NOTES:

1 "Implementation of architectural treatments (Mitigation Measure [MM]1) consistent with the *Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment Along Orange County's Transportation Network* would be required at this wall feature."

2 "For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

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Key View 3 Proposed Condition - Alternative 7A

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Figure 2.2.6-12

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Build Alternative 9

The visible form of the SR-57/Lambert Road interchange would be generally similar to the existing conditions; refer to Figure 2.2.6-13, Key View 3 – Proposed Condition, Alternative 9. The widening of Lambert Road would result in an increased scale of this view. The proposed project would appear similar to the existing conditions regarding color, texture, diversity, and continuity.

The widened Lambert Road and increased visible retaining wall faces would result in increased hardscape. Fewer vegetation removal activities, compared to that analyzed in Build Alternative 7A (Preferred Alternative), would occur; thus resulting in fewer impacts to overall visual unity within this Key View than under Build Alternative 7A (Preferred Alternative). Increased hardscape would result in the decrease of vividness and intactness, as seen from this Key View. Overall resource changes to this Key View would be moderate-low due to the slight increase in hardscape.

Viewer Response – Both Build Alternatives (Alternatives 7A and 9)

The local roadway traveler would be directly exposed to the changes occurring at the SR-57/Lambert Road interchange. Sensitivity to visual change would be moderate for westbound Lambert Road travelers. Under both Build Alternatives, travelers along Lambert Road would have short duration views of the proposed project features. Viewers would be moderately aware of proposed project features. The resulting response for westbound Lambert Road travelers would be moderate under both Build Alternatives (Alternatives 7A and 9).

Resulting Visual Impact

Build Alternative 7A (Preferred Alternative)

Proposed project improvements would alter the existing views of the proposed project site from this Key View. Diversity would change due to the removal of commercial development for the accommodation of the loop on-ramp. Mature trees and vegetation in the foreground and middleground would be removed. The widened Lambert Road, retaining walls, and new loop on-ramp would result in increased hardscape features. The overall resource change in Key View 3 would be considered moderate due to the increase in hardscape. To reduce the appearance of hardscape features and potential light reflectivity and glare from the increased retaining wall surfaces (refer to the Light and Glare section, below), avoidance, minimization, and/or mitigation measure VIS-1 requires aesthetic or landscape treatments. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. VIS-2 requires the replacement of vegetation. Visual impact would not be adverse.

Build Alternative 9

Proposed project improvements would alter the existing views of the proposed project site from this Key View. The widened Lambert Road and increased visible retaining wall faces would result in increased hardscape. Fewer vegetation removal activities, compared to that analyzed in Build Alternative 7A (Preferred Alternative), would occur; thus resulting in fewer impacts to overall visual unity within this Key View than under Build Alternative 7A (Preferred Alternative). Overall resource changes to this Key View would be moderate-low. To reduce the appearance of

hardscape features and potential light reflectivity and glare from the increased retaining wall surfaces (refer to the Light and Glare section, below), avoidance, minimization, and/or mitigation measure VIS-1 requires aesthetic or landscape treatments. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. VIS-2 requires the replacement of vegetation. Visual impact would not be adverse.

Key View 4

SR-57 Northbound Widening Project Features

Completion of the SR-57 Northbound Widening Project did not result in visible changes to the existing condition, as seen from this Key View. These impacts have already been addressed as part of the SR-57 Northbound Widening Project IS/EA and resulting MND and FONSI dated 2007. Therefore, these features are considered only in the context of which they combine with the proposed project's features under both Build Alternatives (Alternatives 7A and 9).

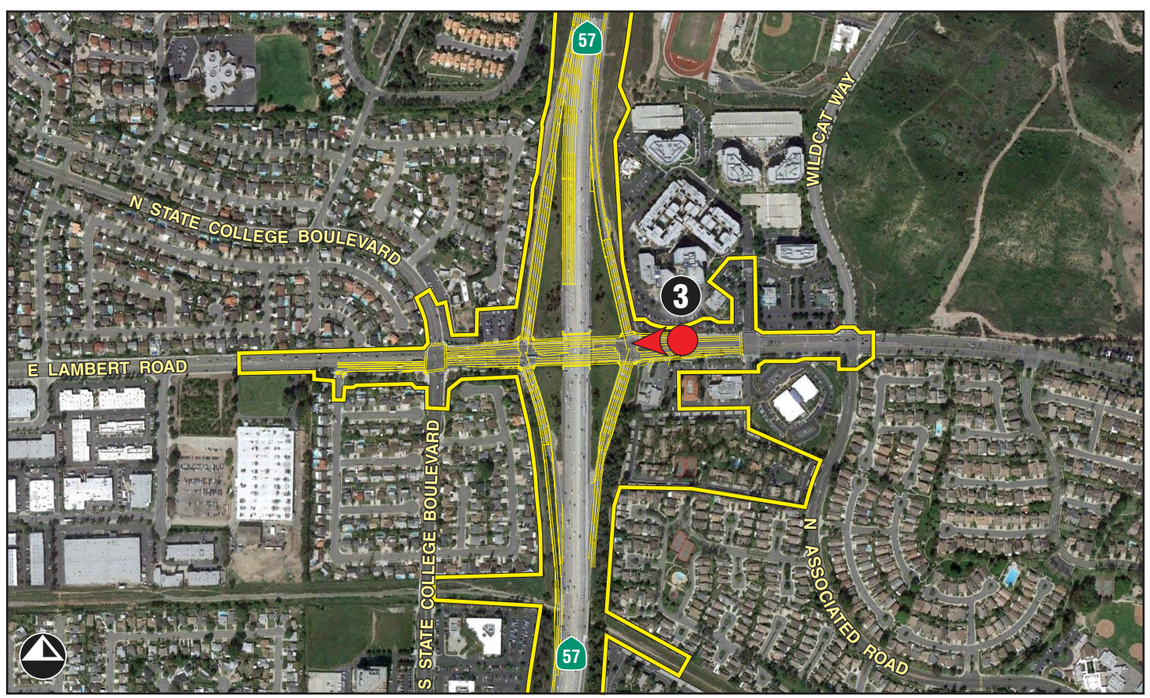
Proposed Project Features – Both Build Alternatives (Alternatives 7A and 9)

Under both Build Alternatives 7A and 9, the southbound SR-57 off-ramp would be widened to provide a fourth lane as the ramp approaches Lambert Road. A third receiving lane would be added to the southbound on-ramp at the intersection with Lambert Road. The proposed project would widen the south side of Lambert Road (between State College Boulevard and the SR-57 southbound ramps/Lambert Road intersection) in order to provide one right-turn lane and one through/right-turn lane from eastbound Lambert Road to the SR-57 southbound on-ramp. Lambert Road would be widened from 1,000 feet west of State College Boulevard to Pointe Drive to accommodate the required turn lanes. The Lambert Road profile would also be lowered to provide 15-foot standard vertical clearance under the Lambert Road Undercrossing bridge structure. Retaining walls along the Lambert Road Undercrossing would be relocated and increased in size.

Changes to Visual Quality/Character – Both Build Alternatives (Alternatives 7A and 9)

Visible surface hardscape would nominally increase due to the widening of Lambert Road and retaining walls along the Lambert Road undercrossing. The modified southbound ramps would not substantially increase the hardscape appearance from Key View 4; refer to Figure 2.2.6-14, Key View 4 – Proposed Condition, Alternatives 7A and 9.

The proposed project would appear similar to the existing conditions with regard to color, scale, diversity, and continuity. Foreground views to hardscape and vegetation appear similar to the existing conditions. Middleground views to a slightly altered sidewalk, modified lanes along Lambert Road, and increased visible retaining wall surfaces would be afforded. Vividness and unity would remain moderate, similar to existing conditions. Overhead power lines remain, similar to existing conditions. Increased retaining wall surfaces result in a moderately low visual intactness (as seen from this Key View). Overall resource changes in Key View 4 would be low as a result of minimal increase in surface hardscape.



Direction of Photo

Key View Location

3 Key View Number

Project Limits Boundary

Proposed Improvements

NOTES:

1 "Implementation of architectural treatments (Mitigation Measure [MM]1) consistent with the *Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment Along Orange County's Transportation Network* would be required at this wall feature."

2 "For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

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Key View 3 Proposed Condition - Alternative 9

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Figure 2.2.6-13

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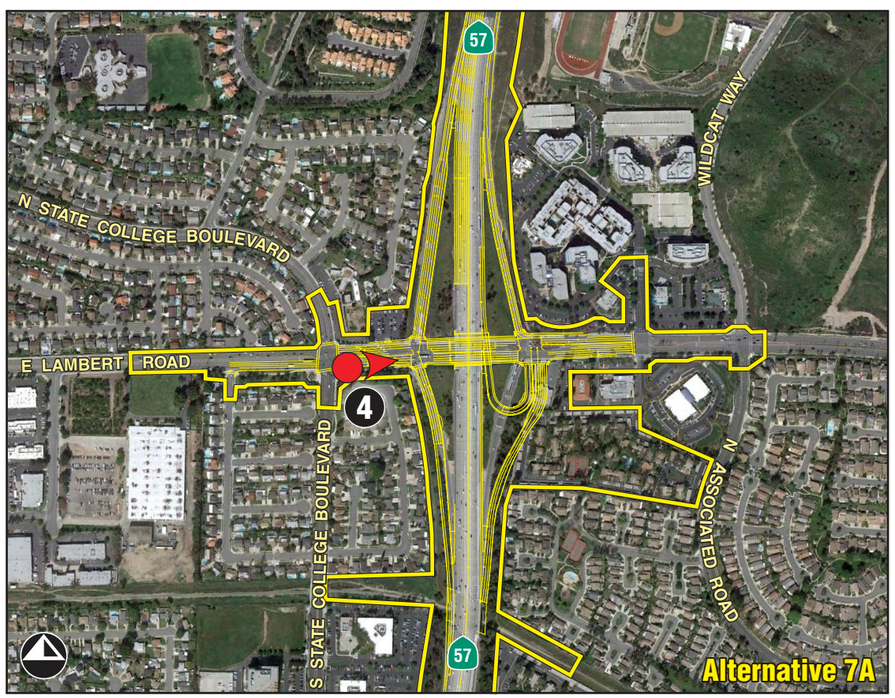

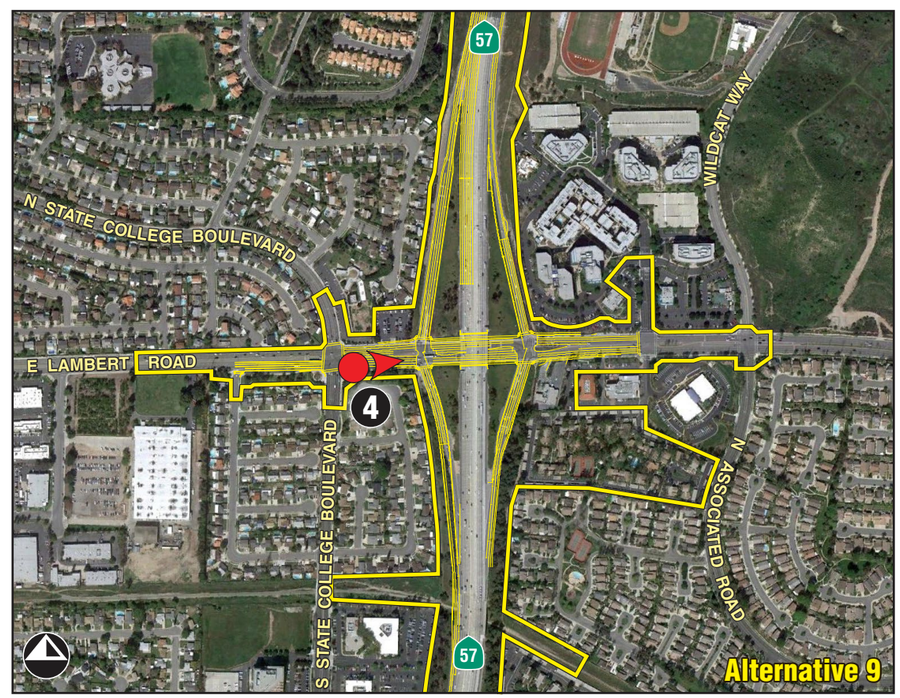

"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

Direction of Photo
Key View Location
Key View Number
Project Limits Boundary
Proposed Improvements

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Key View 4 Proposed Condition - Alternatives 7A and 9

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Figure 2.2.6-14

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Viewer Response – Both Build Alternatives (Alternatives 7A and 9)

The local roadway traveler in Key View 4 would be directly exposed to the changes occurring at the SR-57/Lambert Road interchange. Sensitivity to visual change would be moderate for eastbound Lambert Road travelers in this Key View. Roadway travelers would have short duration views of the interchange improvements and would be moderately aware of the proposed project. The overall viewer response to change from travelers is moderate under both Build Alternatives (Alternatives 7A and 9).

Resulting Visual Impact – Both Build Alternatives (Alternatives 7A and 9)

Proposed project improvements would be consistent with the existing condition of the area. Visible surface hardscape would nominally increase due to the widening of Lambert Road and retaining walls along the Lambert Road undercrossing. The modified southbound ramps would not substantially increase the hardscape appearance from Key View 4. Impacts of views to the additional retaining wall surfaces at the Lambert Road Undercrossing bridge structure would be minimized through implementation of avoidance, minimization, and or mitigation measures and the resulting visual impact would not be adverse.

Summary of Permanent (Operational) Visual Impacts

Table 2.2.6-2, Narrative Ratings for Each Key View, presents a summary of the ratings for visual resource change and viewer response between alternatives for each key view. Commercial and residential users, pedestrians/bicyclists, and motorists located throughout the proposed project area range from moderate-high viewer response to the proposed project changes.

Table 2.2.6-2 Narrative Ratings for Each Key View

Key View	Alternative 7A		Alternative 9	
	Resource Change	Viewer Response	Resource Change	Viewer Response
Key View 1	L	MH	L	MH
Key View 2	L	MH	L	MH
Key View 3	M	M	ML	M
Key View 4	L	M	L	M

Source: Visual Impact Assessment, 2014

Both Build Alternatives 7A and 9

Implementation of the proposed project, both Build Alternatives 7A and 9, would result in modifications to the SR-57/Lambert Road interchange. The proposed project would provide additional capacity and improve the overall operational performance of the interchange. Proposed project implementation would result in the widening of existing roadways, relocation and installation of both existing and proposed wall features, vegetation removal, and construction of a soundwall in the northeast quadrant of the project.

Implementation of both Build Alternatives 7A and 9 would result in additional hardscape surfaces within the visual assessment unit as a result of the SR-57/Lambert Road interchange improvements. One new soundwall is proposed along the El Torito Grill Restaurant outdoor patio. The overall visual resource change in the visual assessment unit as a result of both Build

Alternatives 7A and 9 would to be moderate-low. Viewers within the visual assessment unit include northbound and southbound SR-57 travelers, commercial uses, business park uses, residential uses, institutional/recreational uses, and local street users.

Impacts to Institutional and Recreational Users

Brea Canyon High School (located in the northeast quadrant) and Brea Unified Methodist Church (located in the northwest quadrant) would have short to moderate duration views of the proposed project area. As discussed above, these viewers are typically distracted by their respective activities and would not be acutely aware of the proposed project.

Bicyclists and pedestrians would have short to moderate duration views to the proposed project area. Bicyclists and pedestrians accessing the SR-57/Lambert Road interchange would be moderately aware of proposed project changes. Overall viewer response to change from bicyclists and pedestrians would be moderate; however, both Build Alternatives 7A and 9 would not result in a substantial visual impact to recreational viewers in the proposed project area. In addition, avoidance, minimization, and/or mitigation measures VIS-1 and VIS-2 would require aesthetic or landscape treatments and replacement planting for vegetation, respectively. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. No adverse impacts to this viewer group would occur.

Build Alternative 7A (Preferred Alternative)

Impacts to Freeway Travelers

The visual character and quality of the proposed project site and surrounding areas would appear similar to existing conditions upon implementation of Alternative 7A. Key Views 1 and 2 depict typical views from southbound and northbound SR-57 travelers, respectively. Although change would be noticed due to the relocated wall along the northbound Lambert Road off-ramp, Key Views 1 and 2 would appear similar to the existing conditions upon the completion of the proposed project; refer to Figures 2.2.6-9 and 2.2.6-10). Travelers on SR-57 on- and off-ramps would notice the reconfiguration of the ramps, as well as the relocated wall along the northbound SR-57 off-ramp, the new northbound SR-57 loop on-ramp, and the removed commercial structures. Although trees and vegetation would be removed to accommodate the widened Lambert Road and the new loop on-ramp, several existing mature trees within the visual assessment unit and the distant views to the San Gabriel Mountains would remain visible from northbound SR-57 travel lanes. Implementation of recommended avoidance, minimization, and/or minimization measures would ensure the visual character and quality of the proposed project area as viewed from SR-57 travelers is not substantially degraded.

Impacts to Community Residents

Several carport structures and two apartment buildings would be removed and an internal access road would be realigned as part of Build Alternative 7A (Preferred Alternative) at the Country Woods Apartment Homes. The residents at Country Woods Apartment Homes would have long-duration views to proposed project improvements and would have a high awareness of the proposed project changes. Implementation of Build Alternative 7A (Preferred Alternative) would result in direct views to the proposed northbound SR-57 on- and off-ramps from these residences. To reduce impacts, avoidance, minimization, and/or mitigation measure VIS-3 requires the

installation of a visual barrier (i.e., opaque perimeter fencing or vegetation materials) that would screen direct views from residents in this community to transportation uses at the proposed project site. Thus impacts would not be adverse.

Impacts to Commercial Area Employees and Customers

Build Alternative 7A (Preferred Alternative) would result in the relocation of the Brea Auto Spa. Under Build Alternative 7A (Preferred Alternative), commercial users would have moderate duration views of the proposed project features. Viewers would be moderately aware of proposed project features. Overall, Build Alternative 7A (Preferred Alternative) would not substantially impact commercial viewers in the proposed project vicinity. To ensure that the visual character and quality of the proposed project area is not substantially degraded, avoidance, minimization, and/or mitigation measures VIS-1 and VIS-2 would require aesthetic or landscape treatments and replacement planting for vegetation, respectively. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. Impacts to this viewer group would not be adverse.

A soundwall would be installed along northbound SR-57 along the outdoor patio for the El Torito Grill Restaurant; refer to Figure 2.2.6-15, Proposed Soundwall Renderings. A new block soundwall would obstruct view of the surrounding developed area of Brea from the El Torito Grill Restaurant outdoor patio area, as well as change the character of the landscape for these viewers. Implementation of mitigation measure VIS-5 would require a transparent soundwall. As illustrated in Figure 2.2.6-15, this measure would ensure that surrounding views would be retained to the furthest extent possible.

Impacts to Business Park Employees and Customers

The implementation of the proposed project would not result in visual impacts to business park employees and customers under Build Alternative 7A (Preferred Alternative). These viewers do not have direct, unobstructed views to the proposed project site, thus, viewers would not be aware of proposed project changes.

Impacts to Local Street Users

Key View 3 depicts a typical view from a westbound Lambert Road traveler (Figure 2.2.6-12) while Key View 4 depicts a typical view from an eastbound Lambert Road traveler (Figure 2.2.6-14). Changes to the visual environment for westbound Lambert Road travelers would be apparent due to the increased hardscape and vegetation removal activities associated with the new SR-57 northbound loop on-ramp and the removal of structures (Country Woods Apartment Homes and Brea Auto Spa). Changes in the visual environment for eastbound Lambert Road travelers would be minimally noticeable due to intervening trees. Overall visual impacts to local street users would be moderate. To ensure that the visual character and quality of the proposed project area is not substantially degraded, avoidance, minimization, and/or mitigation measures VIS-1 and VIS-2 would require aesthetic or landscape treatments and replacement planting for vegetation, respectively. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. Impacts to this viewer group would not be adverse.

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Direction of Photo
Rendering Location
Proposed Soundwall

Index Map

"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area.

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Proposed Soundwall Rendering

2/27/14 JN 10-107792-18226 MAS

Figure 2.2.6-15

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Build Alternative 9

Impacts to Freeway Travelers

The visual character and quality of the proposed project site and surrounding areas would appear similar to existing conditions upon implementation of Build Alternative 9. Key Views 1 and 2 depict typical views from southbound and northbound SR-57 travelers, respectively (refer to Figures 2.2.6-9 and 2.2.6-11). The visual change along the on- and off-ramps would be minimal, as Build Alternative 9 involves a diamond configuration similar to the existing conditions. Although trees and vegetation would be removed to accommodate the widening of Lambert Road, the majority of the existing mature trees as well as distant views of the San Gabriel Mountains would remain visible. The replaced wall along the northbound off-ramp and the retaining walls along the Lambert Road Undercrossing would replace existing walls and would appear similar to existing conditions; therefore, views appear similar to the existing conditions. Implementation of recommended avoidance, minimization, and/or minimization measures would ensure the visual character and quality of the proposed project area as viewed from SR-57 travelers is not substantially degraded. Visual impacts would not be adverse.

Impacts to Community Residents

Implementation of Build Alternative 9 would not require structural demolition or roadway realignment within the Country Woods Apartment Homes. Therefore, residents would not have views to the proposed project after completion of construction, and no avoidance, minimization, or mitigation measures are required.

Impacts to Commercial Area Employees and Customers

Impacts to commercial employees and customers under Build Alternative 9 would be less than the impacts identified under Build Alternative 7A (Preferred Alternative), as no commercial structures would be removed. These viewers would be moderately aware of proposed project features and would not be substantially impacted by implementation of Build Alternative 9. To ensure that the visual character and quality of the proposed project area is not substantially degraded, avoidance, minimization, and/or mitigation measures VIS-1 and VIS-2 would require aesthetic or landscape treatments and replacement planting for vegetation, respectively. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. No adverse impacts to this viewer group would occur.

A soundwall would be installed along northbound SR-57 along the outdoor patio for the El Torito Grill Restaurant; refer to Figure 2.2.6-15, Proposed Soundwall Renderings. A new block soundwall would obstruct view of the surrounding developed area of Brea from the El Torito Grill Restaurant outdoor patio area, as well as change the character of the landscape for these viewers. Implementation of mitigation measure VIS-5 would require a transparent soundwall. As illustrated in Figure 2.2.6-15, this measure would ensure that surrounding views would be retained to the furthest extent possible.

Impacts to Business Park Employees and Customers

The implementation of the proposed project would not result in visual impacts to business park employees and customers under Build Alternative 9. These viewers do not have direct,

unobstructed views to the proposed project site, thus, viewers would not be aware of proposed project changes.

Impacts to Local Street Users

Key View 3 depicts a typical view from a westbound Lambert Road traveler (Figure 2.2.6-13) while Key View 4 depicts a typical view from an eastbound Lambert Road traveler (Figure 2.2.6-14). Changes to the visual environment for westbound Lambert Road travelers would be minimal as no structures would be removed and a diamond interchange configuration would be maintained. Changes to the visual environment for eastbound Lambert Road travelers would be minimal due to intervening trees. Overall visual impacts to local street users would be moderate-low. To ensure that the visual character and quality of the proposed project area is not substantially degraded, avoidance, minimization, and/or mitigation measures VIS-1 and VIS-2 would require aesthetic or landscape treatments and replacement planting for vegetation, respectively. Any architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect. No adverse impacts to this viewer group would occur.

Temporary (Short-Term) Impacts

Implementation of the proposed project would expose sensitive users to views of the proposed project site. Construction-related vehicle access and staging of construction materials would occur within California Department of Transportation (Caltrans) and City ROW and disturbed or developed areas along the length of the proposed project site. The proposed project construction would expose surfaces, construction debris, equipment, and truck traffic to nearby sensitive viewers. Construction vehicle access and staging of construction materials would be visible from motorists traveling through the proposed project site as well as residents located in the vicinity. These impacts are short-term and would cease upon completion of the proposed project. Adhering to Caltrans Standard Specifications for Construction would minimize visual impacts through the use of opaque temporary construction fencing that would be situated around construction staging areas.

Both Build Alternatives 7A and 9 would require nighttime construction for on- and off-ramps, with the exception of Alternative 7A at the new northbound SR-57 loop on-ramp and off-ramp. Light and glare from nighttime construction lighting would potentially cause a nuisance to nearby residents and motorists traveling along the proposed project site. These activities may be required to take place for several months; however, the proposed project area contains existing sources of light (i.e., vehicle headlights, street lights, park lighting, commercial and residential lights).

Nighttime construction would be limited to the hours of 10:00 PM to 6:00 AM, in accordance with Caltrans regulations. Necessary lighting for safety and construction purposes would be directed away from land uses outside the proposed project area, and contained and directed toward the specific area of construction. With implementation of VIS-4, construction lighting types, plans, and placement would be reviewed at the discretion of the District Landscape Architect. Implementation of VIS-4 would ensure that appropriate lighting controls are applied to reduce light and glare impacts to less than substantial levels.

Light and Glare Permanent (Operational) Impacts

Implementation of the proposed project would not introduce additional sources of light and glare to the proposed project area, other than potentially from the proposed wall features. No additional traffic signals or street lighting would be installed. Potential light reflectivity and glare impacts from the wall features would be reduced with implementation of avoidance, minimization, and/or mitigation measures. Sensitive viewer groups in the vicinity of the proposed project site would generally experience similar sources of light and glare, as compared to existing conditions. Thus, implementation of avoidance, minimization, and/or mitigation measures would be required and would reduce impacts.

Implementation of the proposed Build Alternative 7A (Preferred Alternative) would result in the demolition of multiple structures within the Country Woods Apartment Homes and the relocation and installation of ramp structures along the property boundary. The proposed project would install perimeter fencing along the property line in this area. The proposed wall may result in the exposure of the existing residents within the Country Woods Apartment Homes to new lighting from vehicle headlights along SR-57 and associated ramp structures. Implementation of the avoidance, minimization, and/or mitigation measures the proposed project would be required to install opaque fencing material or appropriate vegetation for the purposes of screening the residents from the freeway uses would reduce light/glare associated with vehicle headlights. Lighting impacts from vehicle headlights would not be adverse.

Officially Designated Scenic Highways

As discussed previously, a state route must be included on the list of highways eligible for scenic highway designation in Streets and Highways Code Section 263 in order for it to be nominated for official designation by the local governing body.

The proposed project site does not include any officially designated state scenic highways; however, SR-57 between Imperial Highway and SR-60 is eligible as a California State Scenic Highway. Properties adjoining SR-57 lie within unincorporated Los Angeles and Orange counties. Designating the freeway as an Official Scenic Highway would require a cooperative effort among many agencies to maintain the scenic qualities by minimizing or avoiding hillside development and working through the Department to assign the designation.

Implementation of the proposed project would not adversely impact views along the eligible state scenic highway designated portion of SR-57. There would be no impacts resulting from the proposed project on an officially designated state scenic highway.

2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

VIS-1 To minimize visual quality loss and to minimize the visual disruption from the elements of the highway construction, architectural treatments shall be applied to the relocated walls in general conformance with the proposed treatments installed as part of the SR-57 Northbound Widening Project. All architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect during the Plans, Specifications, and Estimates (PS&E) phase.

VIS-2 To maintain the context of the proposed project area (color, form, and texture), the proposed project shall install landscaping that is compatible with the existing landscape in the area and new landscaping installed as part of the SR-57 Northbound Widening Project along the portion of SR-57 in the proposed project vicinity. Landscaping shall include trees and/or shrub/groundcover mass planting, and landscape treatment along walls to soften the hardscape features and glare and radiant heat from the walls. The landscape concept, plan, and plant palette shall be determined in consultation with, and approved by, the District Landscape Architect during the Plans, Specifications, and Estimates (PS&E) phase. The planting plan shall be reviewed and approved by the Department Biologist to avoid the use of invasive plant species.

Replacement planting implementation shall be under a separate contract within a two-year period following the completion of construction in accordance with Department policies. Trees in the interchange, in conflict with the roadway improvement design, shall be transplanted in the proposed project area in a location in conformance with the planting policy requirements of Caltrans. The District Landscape Architect shall make the determination and the approval of the tree transplantation.

VIS-3 The proposed project shall install either an opaque perimeter wall (similar to the existing cinderblock wall) or appropriate landscaping (landscaped berms or trees) sufficient to screen direct views from the Country Woods Apartment Homes to the proposed project. This architectural feature shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be reviewed and approved by the District Landscape Architect during the Plans, Specifications, and Estimates (PS&E) phase.

VIS-4 Construction lighting types, plans, and placement shall be reviewed at the discretion of the District Landscape Architect, during the Plans, Specifications, and Estimates (PS&E) phase.

VIS-5 The proposed project shall consider implementation of a transparent soundwall, per the Caltrans TNAP, in order to maintain distant views from the outdoor patio of the El Torito Grill Restaurant. The soundwall design and long-term maintenance shall be approved by the Caltrans Landscape Architect and Caltrans Maintenance staff during the PS&E Phase.

2.2.7 CULTURAL RESOURCES

2.2.7.1 Regulatory Setting

The term "cultural resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic 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 Code of Federal Regulations (CFR) 800]. On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, the Federal Highway Administration (FHWA), State Historic Preservation Officer (SHPO), and the Department 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 Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

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 the National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

2.2.7.2 Affected Environment

Information in this section is based upon the Historic Property Survey Report (HPSR) and the Archaeological Survey Report (ASR) prepared in November 2012 for the proposed project.

Area of Potential Effects (APE)

The Area of Potential Effects (APE) encompasses approximately 127 acres and includes all areas where direct or indirect impacts may occur. The areas of direct effects include the areas where physical impacts would occur. These are generally limited to the proposed and existing right-of-way (ROW) for the proposed project and include the horizontal and vertical areas. Project plans indicate average excavation depths of three to four feet in the road bed and up to 12 to 18 feet below the surface for retaining walls, with a maximum depth of 60 feet associated with pile driving and/or cast-in-drilled-hole (CIDH) piles for bridge piles. The areas of indirect effects extend beyond those of the direct effects and incorporate areas that may be indirectly affected by visual, noise, or other effects. The areas of indirect effects generally include all properties that are adjacent to the proposed ROW unless they are undeveloped. In most cases, the APE includes

only the properties adjacent to the proposed ROW and/or temporary construction easements, but where there are small residential properties that may experience indirect impacts, additional parcels may be included. The APE extends around the entirety of those parcels where the built environment would be indirectly affected.

METHODOLOGY

An archaeological/historical resources records search for the APE and the surrounding 0.5-mile radius was conducted on December 16, 2011 at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) located at California State University, Fullerton. Additional record searches were conducted April 18, 2012, regarding one site. The record search included consultation with the following sources:

- National Register of Historic Places
- California Register of Historical Resources
- California Inventory of Historic Resources
- California Historical Landmarks
- California Points of Historical Interest
- California State Historic Resources Inventory (Commission)

The Native American Heritage Commission (NAHC) was contacted on December 8, 2011 in regard to resources listed on the Sacred Lands Inventory. The NAHC responded on December 8, 2011 to say that the Sacred Lands File was negative for the project vicinity, but recommended that 12 Native American individuals representing the Gabrielino, Gabrielino Tongva, and Juaneño groups be contacted for possible additional information.

On December 19, 2011, 12 Native American individuals representing the Gabrielino, Tongva and Juaneño groups were contacted via certified mail. Two rounds of follow-up contact in the form of telephone calls and emails were conducted between January 9 and 16, 2012. A follow-up phone call with the Gabrielino Band of Mission Indians was conducted on April 12, 2012. To date, four responses have been received; two responses were received during the first round of letters and two additional responses were received during the follow-up contact. These responses are summarized below in the subsection titled *Existing Conditions*.

The California Department of Conservation Online Mapping System was searched for the locations of active and inactive oil wells in the proposed project vicinity in April 2012. The Brea Historical Society was contacted on April 19, 2012 regarding cultural/historic resources in the APE. The California Office of Historic Preservation (OHP) was contacted on April 19, 2012 regarding the Brea-Olinda Oil Field. OHP confirmed that no formal evaluation of the site had been submitted.

On December 21, 2011, a survey of the APE was completed. The APE was examined opportunistically wherever there was visible ground.

EXISTING CONDITIONS

The proposed project is located on the western flank of the Peninsular Ranges geomorphic province, in the eastern portion of the Los Angeles Basin (LA Basin). The proposed project is situated on sediments of Holocene alluvial fan deposits associated with the Santa Ana River alluvial system. The majority of the APE is in a modern urban environment and has been disturbed by the construction of SR-57, local roadways, an abandoned railroad grade, residential and commercial properties, and other modern infrastructure. The surrounding built environment is modern.

No prehistoric archaeological resources were identified within 0.5 mile of the APE during the archival research, Native American consultation, and field survey. Archival research identified one historic built-environment resource that extends into the northern portion of the APE on SR-57, and the eastern portion of the APE on Lambert Road. This resource, 30-177012, is known as the Brea-Olinda Oil Field. The oil field was established in 1894 and remains operational today. One component of this resource, Wildcatter's Park, a recent residential developer's name for the ca. 1960 employees' recreation park within the Brea-Olinda Oil Field boundaries, was recommended eligible for listing in the National Register of Historic Places (National Register) and the California Register of Historical Resources (California Register). Wildcatter's Park was located more than one mile east of the APE, but was destroyed sometime after its recordation in 2006. No remnants of the oil field were observed or identified within the proposed project's APE during the field visit. In addition, the previous eligibility recommendation was not reviewed or concurred with by the California Office of Historic Preservation (OHP). According to the California Department of Conservation Online Mapping System, no oil wells have been recorded within the proposed project's APE. The wells nearest the APE have been capped.

Two historic archaeological sites have been identified within a 0.5-mile radius of the APE, 30-001624 and 30-001625. These are both included in the boundaries of the Brea-Olinda Oil Field and are likely associated with historic oil development in the area. No surface evidence of the oil field was observed during the field survey.

The Brea Historical Society was contacted in April 2012, regarding cultural/historic resources in the proposed project area. Information from the Brea Historical Society revealed that there could be possible remains from the historic oil town of Olinda, which was located east of the SR-57/Lambert Road Interchange, but the town limits may not have extended as far west as the APE. The City of Brea itself developed the area in and around the APE in the 1970s and 1980s. Prior to that, the area contained mostly agricultural fields.

Sixteen (16) cultural resources studies have been conducted within a 0.5-mile radius of the APE. Of these studies, three included portions of the proposed project's APE resulting in approximately 50 percent of the entire APE having been previously surveyed. The California Historic Resources Inventory lists 15 properties that have been evaluated for historical significance within a 0.5-mile radius of the APE. There are no resources within 0.5 mile of the APE that are listed in the National Register, the California Register, California Historical Landmarks, or as a California Point of Historical Interest.

Three state agency bridges are within the APE. State agency bridges (55 0482, 55 0485, and 55 0492) were constructed in 1971. They are listed in the California Historical Significance State Agency Bridges List of October 2011 as Category 5 Bridges and are not eligible for the National Register.

During consultation with Native American individuals representing Gabrielino, Gabieline Tongva and Juaneño groups, two responses were received by January 1, 2012, two additional comments were received January 13 and 23, 2012, and a follow-up comment was received on April 12, 2012. In general, the majority of the responses noted no knowledge of specific sites within the proposed project boundaries; however, sensitive areas to the tribes occur in Brea Canyon, Carbon Canyon, and along San Jose Creek. The comments are summarized as follows:

1. John Tommy Rosas, Tongva Ancestral Territorial Tribal Nation, replied by email on December 19, 2011 to confirm that he received the information. To date, no further comment has been received from Mr. Rosas.

2. Andrew Salas, Gabrieleno Band of Mission Indians, replied by email on January 1, 2012 to state that the Brea area is considered sensitive to his group. He is aware of villages in the vicinity, and the Native people used the tar that is local to the area for healing as well as utilitarian purposes. He requests monitoring by a qualified monitor from his group during ground-disturbing activities. In a second phone call on April 12, 2012, Mr. Salas expanded on his comments, stating that the Gabrielino continue to gather white sage in the vicinity of the project area along San Jose Creek and also take care of the oak trees in Brea Canyon, sometimes gathering the acorns. He understands that the proposed project will not directly affect these areas, and his intention is not to stop the project, but to preserve any artifacts found for future generations, protect human remains that may be encountered, and teach children about traditional customs and lifeways.

3. Anthony Morales, Gabrieleno/Tongva San Gabriel Band of Mission Indians, called on January 13, 2012 to say that he has no specific knowledge of sites that could be affected and is aware that the project area is disturbed by development. However, he knows that modern roadways such as SR-57 often parallel prehistoric trails and trading routes, and there is always the possibility for discovery of cultural resources. He requests vigilance in the identification of cultural resources should they be present and would like to be notified of any discoveries.

4. Alfred Cruz, Juaneño Band of Mission Indians, called on January 23, 2012 to state the he is very familiar with the project vicinity, as his family is local to the area. He does not know of any specific sites that could be affected by the project, but is aware of habitation sites in nearby Brea and Carbon Canyons. He requests monitoring by a Native American and an archaeologist when project activities are in undisturbed soil.

It is Caltrans policy to avoid cultural resources whenever possible. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find. Additional surveys would be required if the proposed project changes to include areas not previously surveyed.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA 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) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains would contact the City of Brea and Caltrans District 12 Environmental Branch 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.

2.2.7.3 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

Construction (Short-Term) Impacts

No resources were identified within the proposed project. No temporary impacts are anticipated as a result of project implementation.

Operation (Long-Term) Impacts

A review of the SCCIC literature indicates that the Brea-Olinda Oil Field (30-177012) extends into the northern portion of the proposed project APE on SR-57 and the eastern portion of the project APE on Lambert Road. No evidence of the Brea-Olinda Oil Field was observed during the field survey. The APE is within an urban environment and has been completely disturbed by construction of SR-57, existing roads, an abandoned and dismantled railroad grade, modern commercial and residential development, and other modern infrastructure. While the Brea-Olinda Oil Field (30-177012), as it is recorded, extends into the proposed project's APE, the portion of the site that was recommended eligible pertains to one component, Wildcatter's Park, which was located over one mile east of the proposed project and has been destroyed. The portion of the Brea-Olinda Oil Field that is recorded within the APE does not contribute to the overall eligibility of Wildcatter's Park for the National and California Registers. The two historic archaeological sites are both included in the boundaries of the Brea-Olinda Oil Field and are likely associated with historic oil development in the area. No remnants of the Brea-Olinda Oil Field or the associated historic archaeological sites were observed in the APE during the field survey or identified through additional research; therefore, no historic properties would be impacted as a result of either Build Alternative 7A (Preferred Alternative) or 9.

Three bridge structures, built in 1971, are within the APE; however, they are considered to be Category 5 Bridges according to the California Historical Significance State Agency Bridges List of October 2011 and are not eligible for the National Register. The surrounding built environment is modern. No historic structures would be impacted as a result of either Build Alternative 7A (Preferred Alternative) or 9.

No prehistoric resources were identified through the record searches, Native American consultation, and the field survey. The finding for this project, for the purposes of Section 106, is No Historic Properties Affected.

As stated above, if buried cultural materials are encountered during construction, it is Caltrans's policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. An additional archaeological survey would be needed if the proposed project limits are extended beyond the present APE. Avoidance, minimization, and/or mitigation measures are provided to ensure that impacts to unknown cultural resources are minimized or avoided during the construction phase.

No Build Alternative

Under the No Build Alternative, no construction activities would occur, thus removing the potential to encounter cultural resources. No impacts would occur as a result of the No Build Alternative.

2.2.7.4 Avoidance, Minimization, and/or Mitigation Measures

CULT-1 If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. At this time, the person who discovered the remains will contact the City of Brea and the Caltrans District 12 Environmental Branch so that they may coordinate on an appropriate plan of action. If the find is determined by archaeologists to require further treatment, the area of discovery will be protected from disturbance while qualified archaeologists and appropriate officials, in consultation with the State Historic Preservation Officer (SHPO), determine an appropriate treatment plan. An additional archaeological survey will be required if the proposed project limits are extended beyond the present Area of Potential Effects (APE).

CULT-2 If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA 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 Descendent (MLD). At this time, the person who discovered the remains will contact the City of Brea and the Caltrans District 12 Environmental Branch 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.

2.3 PHYSICAL ENVIRONMENT

2.3.1 HYDROLOGY AND FLOODPLAIN

2.3.1.1 Regulatory Setting

Executive Order (EO) 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 Code of Federal Regulations (CFR) 650 Subpart A.

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 affected 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.”

2.3.1.2 Affected Environment

Information in this section is based upon the Phase I Initial Site Assessment (ISA) prepared in January 2013 and the Water Quality Assessment Report prepared in April 2012.

The proposed project is in the San Gabriel - Coyote Creek Watershed, which is located in the Anaheim Hydrologic Area Split (845.60), and covers more than 85 square miles in the northwest corner of Orange County. The Puente and Chino Hills serve as the headwaters for the portion of the San Gabriel - Coyote Creek Watershed in Orange County. From the foothills, water traverses through the cities of Brea, La Habra, Fullerton, Buena Park, La Palma, Cypress, Los Alamitos, unincorporated Orange County, and Seal Beach. The northern portion of the watershed that drains to Coyote Creek continues into Los Angeles County, confluences with the San Gabriel River and then discharges to the Pacific Ocean. Figure 2.3.1-1, San Gabriel River Watershed, shows the watershed and the proposed project in relation to the watershed boundaries. The proposed project has a footprint of approximately 59 acres for Build Alternative 7A (Preferred Alternative) and 56 acres for Build Alternative 9, which are less than 0.01 percent of the San Gabriel - Coyote Creek Watershed.

Surface water/runoff for the proposed project is within the gutters of Lambert Road, which is collected by the City of Brea drainage network and connects to the Loftus Diversion Channel. Loftus Diversion Channel confluences with the East Fullerton Creek Storm Channel (A06S01) and flows into Fullerton Creek Reservoir. The Fullerton Creek Reservoir outlets into Fullerton Channel (A03), which discharges into Coyote Creek Channel just beyond the Orange County

jurisdictional boundary. The Coyote Creek Channel confluences with the San Gabriel River just prior to the San Gabriel Estuary and then discharges into the Pacific Ocean near Alamitos Bay.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (panel number 06059C0042J), the proposed project is located within Zone X, the area is outside the 0.2 percent annual chance floodplain; refer to Figure 2.3.1-2, Floodplain Map.[4] Thus, the proposed project is outside of the 100-year floodplain. According to the City of Brea General Plan, the majority of the proposed project is located outside of a dam or reservoir failure pathway; however, the southern portion of the proposed project is located within a dam or reservoir failure inundation pathway associated with the Orange County Reservoir; refer to Figure 2.3.1-3, Flood Hazard Areas.

2.3.1.3 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

Temporary impacts would not occur because the proposed project is outside of the 100-year floodplain. In addition, standard best management practices (BMPs) would be required in order to reduce any runoff during construction activities, thus ensuring no impacts to the site or the surrounding area.

The proposed project is outside the 100-year floodplain; however, the southern portion of the proposed project is located within the Orange County Reservoir inundation pathway, if dam failure occurs. The proposed project would not include habitable structures and would not increase the current vehicle use of the portion of SR-57 located within the inundation pathway. Conformance with the California Building Code (CBC), as well as adherence to standard Caltrans and City engineering practices would reduce any effects resulting from dam failure.

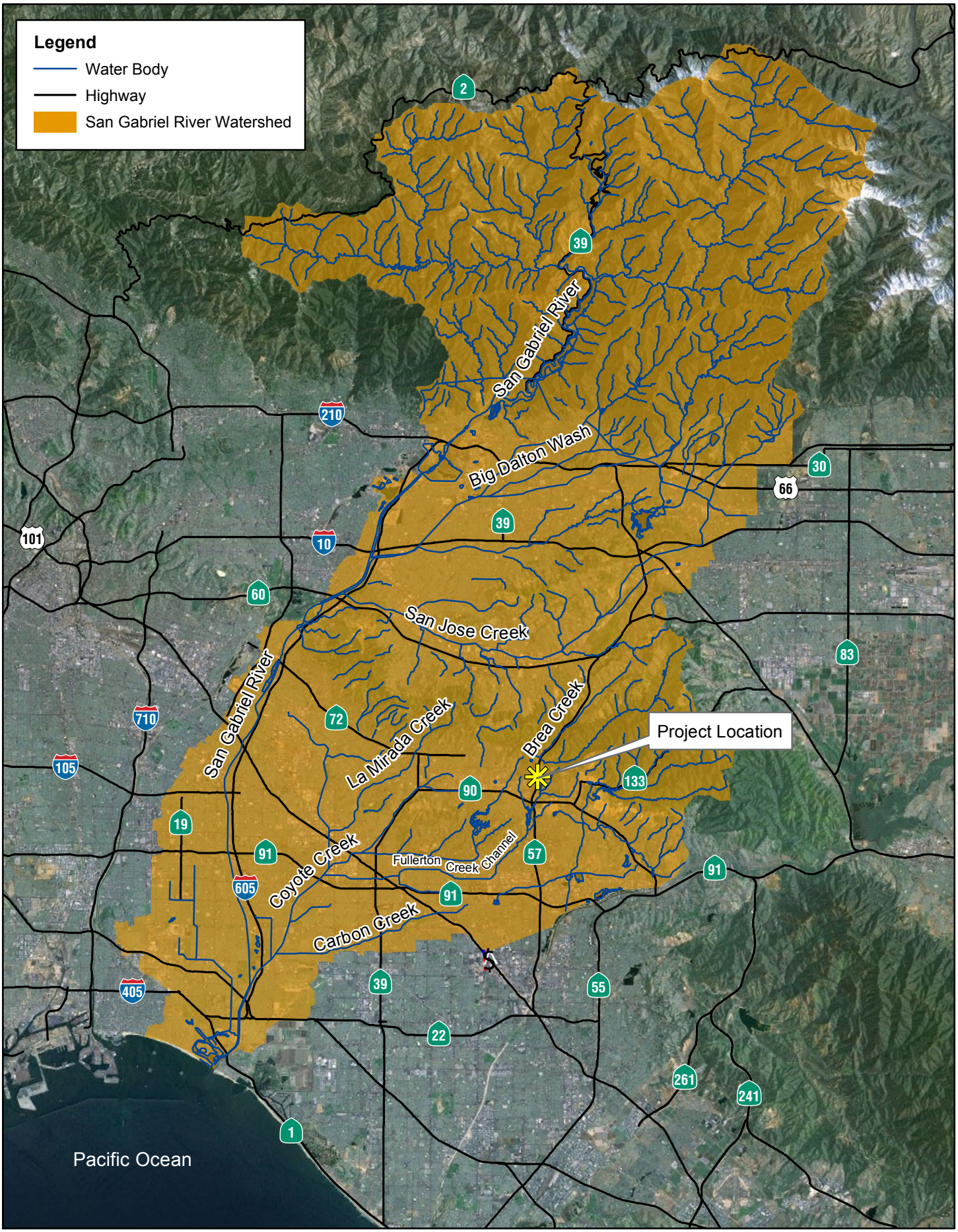
No Build Alternative

Under the No Build Alternative, no construction phase impacts would occur, thus removing the potential to impact hydrology and floodplain conditions.

2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required. Refer to Section 2.3.2, Water Quality and Storm Water Runoff, for avoidance, minimization and/or mitigation measures.

[4] Federal Emergency Management Agency. Flood Insurance Rate Map Panel Number 06059C0042J. Available at http://www.fema.gov/hazard/flood/info.shtm.



0 5 miles

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

San Gabriel River Watershed

3/29/12 JN 10-107792-18226 MAS

Figure 2.3.1-1

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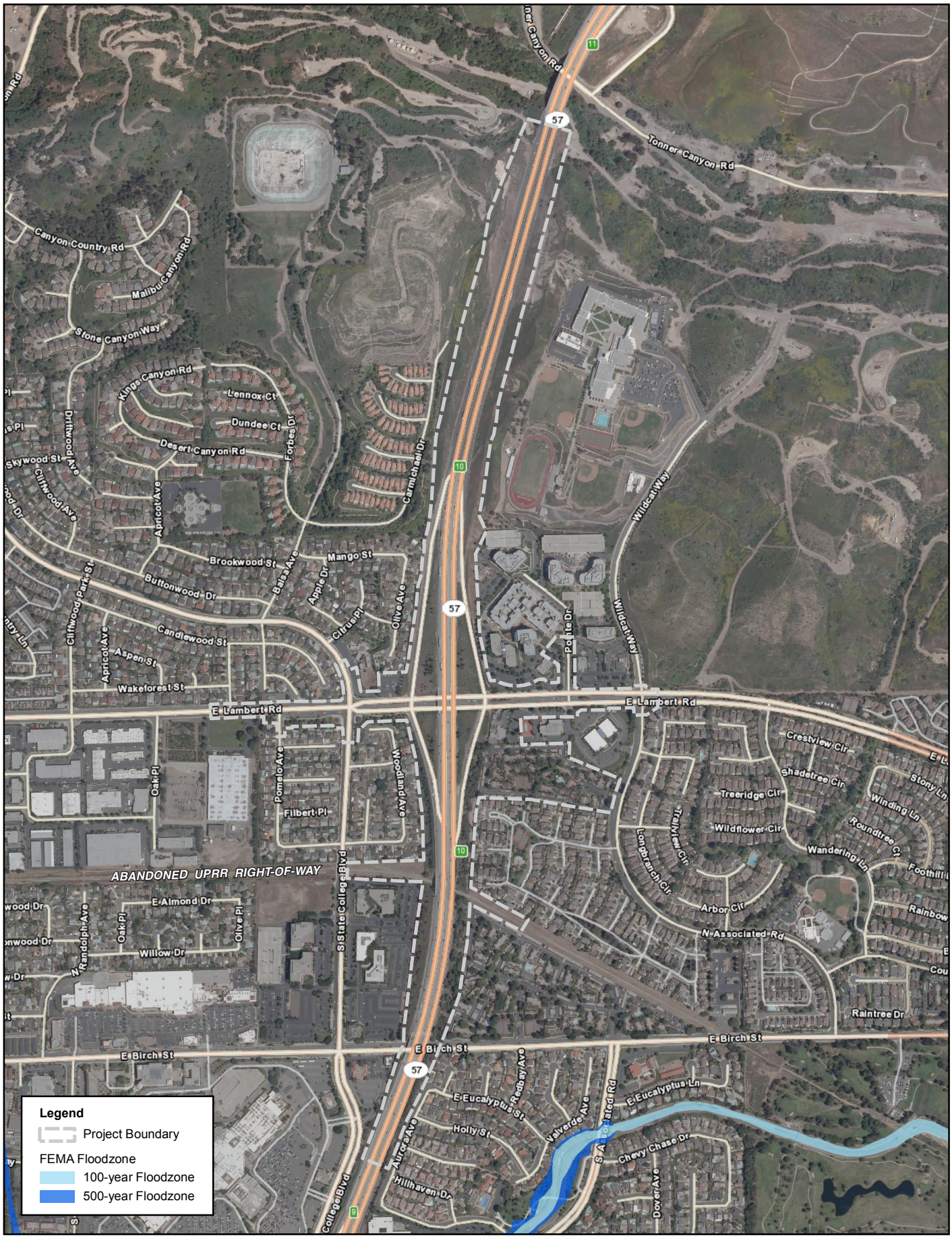

Source: Federal Emergency Management Agency, Digital Flood Insurance Rate Map, Orange County, California, 06059P, effective 12/3/2009; ESRI World Transportation web map service; NAIP 2010 imagery.

0 1000'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Floodplain Map

6/14/12 JN 10-107792-18226 MAS

Figure 2.3.1-2

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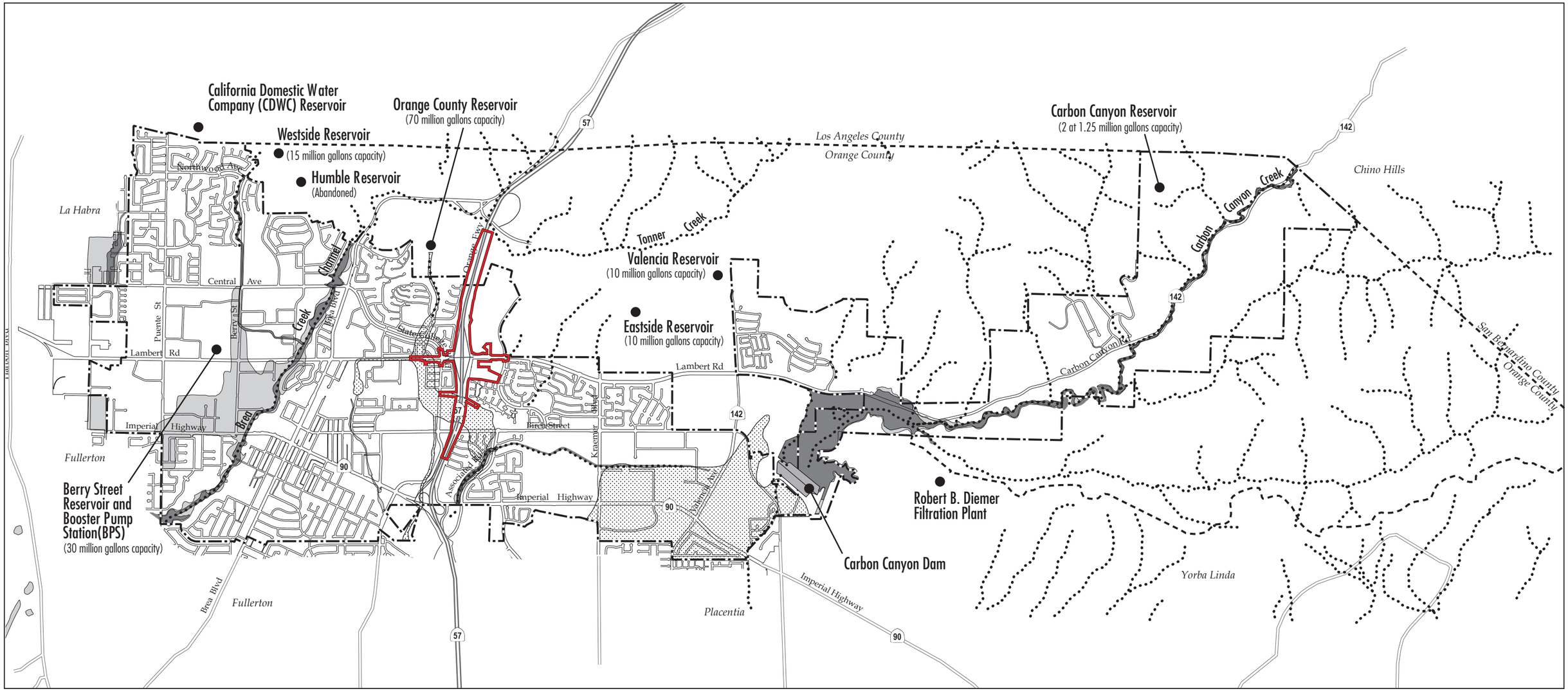

Source: City of Brea General Plan;
Federal Emergency Management Agency-National Flood Insurance Program, May 1996;
Earth Consultants Internation, January 2002; California Governer's Office of Emergency Services (OES);
Los Angeles County Department of Water and Power.

LEGEND

- Project Boundary
- City Boundary
- Sphere of Influence
- Creeks, Streams, and Drainage Channels

FLOODPLAINS

- 100-Year Flooplain
- 500-Year Floodplain

DAM FAILURE INUNDATION AND RESERVOIR LOCATION

- Reservoir
- Dam/Reservoir Failure Inundation Pathway

0 0.5 1 mile

6/5/12 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Flood Hazard Areas

Figure 2.3.1-3

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2.3.2 WATER QUALITY AND STORM WATER RUNOFF

2.3.2.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an application for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: Standard and General Permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the USACE’s Standard permits. There are two types of Standard permits: Individual permits and Letter of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a less environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would

have lesser effects on waters of the U.S. and not have any other adverse environmental consequences. According to the Guidelines, documentation is needed to prove that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[5] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters Section (Section 2.4.2 of this document).

State Requirements

Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant". Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdiction and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

[5] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

National Pollution Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water dischargers, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water." The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans' MS4 permit covers all Caltrans right-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit (Order No. 2012-0011-DWQ) was adopted on September 19, 2012 and became effective on July 1, 2013. The permit has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);

2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project would be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit (Order No. 2009-0009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction

sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans' Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.3.2.2 Affected Environment

Information in this section is based upon the Water Quality Assessment Report (WQAR) prepared in April 2012 for the proposed project.

Methodology

Data and other pertinent records regarding surface and groundwater resources, as well as impaired water bodies were reviewed in January/February 2012. This included the review of files at the California Department of Water Resources Water Data Library. All available stream data and stream monitoring locations were researched to determine if in-stream monitoring data was available near the proposed project limits.

Setting

The proposed project is in the San Gabriel - Coyote Creek Watershed, which is located in the Anaheim Hydrologic Area Split (845.60), and covers more than 85 square miles in the northwest corner of Orange County. The Puente and Chino Hills serve as the headwaters for the portion of the San Gabriel - Coyote Creek Watershed in Orange County. From the foothills, water traverses through the cities of Brea, La Habra, Fullerton, Buena Park, La Palma, Cypress, Los Alamitos, unincorporated Orange County, and Seal Beach. The northern portion of the watershed that

drains to Coyote Creek continues into Los Angeles County, confluences with the San Gabriel River and then discharges to the Pacific Ocean. Figure 2.3.1-1, Hydrology and Floodplain, in Section 2.3.1, shows the watershed and the proposed project in relation to the watershed boundaries. The proposed project has a footprint of approximately 59 acres for Build Alternative 7A (Preferred Alternative) and 56 acres for Build Alternative 9, which are less than 0.01 percent of the San Gabriel - Coyote Creek Watershed.

Surface water/runoff for the proposed project is within the gutters of Lambert Road, which is collected by the City of Brea drainage network and connects to the Loftus Diversion Channel. Loftus Diversion Channel joins the East Fullerton Creek Storm Channel (A06S01), and flows into Fullerton Creek Reservoir. The Fullerton Creek Reservoir outlets into Fullerton Channel (A03), which then discharges into Coyote Creek Channel just beyond the Orange County jurisdictional boundary. The Coyote Creek Channel joins the San Gabriel River just prior to the San Gabriel Estuary and then discharges into the Pacific Ocean near Alamitos Bay. The proposed project does not discharge directly or indirectly to an Area of Special Biological Significance.

The proposed project is located with the La Habra Groundwater Management Zone. There are no groundwater resources within the project boundaries. The nearest groundwater well with current groundwater level and quality data is located two miles west of the proposed project, near the intersection of Berry Street and Challenger Street in the City of Brea. The depth to groundwater at Well Number 03S10W02N002S in October 2000 was approximately 132 feet. Due to the slope of the project area surface elevations, it is anticipated the groundwater will flow in a southwestern directions. The groundwater in the Orange County Coastal Plan Groundwater Basin is characterized by the Department of Water Resources as primarily sodium-calcium bicarbonate and has a total dissolved solids average concentration of 475 mg/L. The common impairments in the basin are increasing salinity, high nitrates, and Methyl tert-butyl ether (MTBE).

Water Quality Objectives/Standards and Beneficial Uses

Surface Water

As required by the Porter-Cologne Act, the Santa Ana RWQCB has developed water quality objectives for waters within its jurisdiction to protect the beneficial uses of those waters and has published them in the Basin Plan. The Basin Plan also establishes implementation programs to achieve these water quality objectives and requires monitoring to evaluate the effectiveness of these programs. Water quality objectives must comply with the state anti-degradation policy (State Board Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are reasonably affected. No water quality objectives are identified for the nearest named water body that the proposed project discharges to, East Fullerton Creek Storm Channel (A06S01). The nearest water body that the Basin Plan identifies water quality objectives for, Coyote Creek Channel, is approximately 10 miles downstream. No numeric water quality objectives have been established for Coyote Creek Channel; however, the Basin Plan identifies narrative water quality objectives.

The beneficial uses of water are defined in the Santa Ana RWQCB's Basin Plan as those necessary for the survival or well-being of humans, plants, and wildlife. Examples of beneficial uses include drinking water supplies, swimming, industrial and agricultural water supply, and the support of freshwater and marine habitats and their organisms. No beneficial uses are identified for the nearest named water body that the proposed project discharges to, Loftus Diversion Channel. The nearest water body that the Basin Plan identifies beneficial uses for is Coyote Creek Channel, approximately 10 miles downstream, and includes the following:

- MUN: Municipal and Domestic Supply;
- REC 1: Water Contact Recreation (swimming/wading);
- REC 2: Non-Contact Water Recreation (boating/fishing);
- WARM: Warm Freshwater Habitat (preservation and enhancement of aquatic habitats); and,
- WILD: Wildlife Habitat (preservation and enhancement of vegetation and animals).

Groundwater

The groundwater quality objectives for the Santa Ana RWQCB's jurisdiction are designated in the Basin Plan by Groundwater Management Zone. The La Habra Groundwater Management Zone does not have numeric water quality objectives, but the Basin Plan identifies groundwater quality narrative objectives.

Groundwater beneficial uses are also identified in the Basin Plan for the proposed project area located in the La Habra Groundwater Management Zone. The beneficial uses are the following:

- MUN: Municipal and Domestic Supply; and,
- AGR: Agricultural use.

Water Quality

Per the California Department of Water Resources Water Data Library, the nearest groundwater well with current groundwater level and quality data is located approximately two miles west of the proposed project, near the Berry Street / Challenger Street intersection in the City of Brea. The depth to groundwater at Well Number 03S10W02N002S in October 2000 was approximately 132 feet. A geotechnical study of the groundwater hydrology within the proposed project area would be conducted during the design phase of the proposed project and a more accurate depth to groundwater would be determined at that time. The groundwater in the Orange County Coastal Plan Groundwater Basin is characterized by the Department of Water Resources as primarily sodium-calcium bicarbonate and has a total dissolved solids average concentration of 475 mg/L. The common impairments in the basin are increasing salinity, high nitrates, and Methyl tert-butyl ether (MTBE). There are no groundwater resources within the proposed project boundaries. The proposed project is not located near drinking water and recharge facilities.

The Orange County Stormwater Program monitors the water quality of the San Gabriel – Coyote Creek Watershed and all watersheds within Orange County. The closest in-stream monitoring station, FCVA03, is in Fullerton Creek Channel near Valley View Street / Fresca Drive intersection, in the City of La Palma, downstream of the proposed project. Table 2.3.2-1 presents the data collected at this monitoring station during the fiscal year 2009-2010.

Table 2.3.2-1. Water Quality Data from Monitoring Station FCVA03, Fullerton Creek Channel, Fiscal Year 2009-2010

Constituent	Stormwater Load Concentration		Flow-Weighted Event Mean Stormwater Concentrations	
Date: December 7-8, 2009	**Total**	**Dissolved**	**Total**	**Dissolved**
Nitrate as Nitrate (NO3)	1,031 mg/L	-	9.0 mg/L	-
Ammonia (NH3) as Nitrogen (N)	34.4 mg/L	-	0.3 mg/L	-
Total Kjeldahl Nitrogen (TKN)	255 mg/L	-	2.23 mg/L	-
Total Phosphate as Phosphate (PO_4)	177 mg/L	-	1.55 mg/L	-
Ortho Phosphate as Phosphorus (P)	13.4 mg/L	-	0.12 mg/L	-
Total Suspended Solids (TSS)	20,375 mg/L	-	178 mg/L	-
Volatile Suspended Solids (VSS)	3,478 mg/L	-	30 mg/L	-
Cadmium (Cd)	0.053 mg/L	0.016 µg/L	0.46 mg/L	0.14 µg/L
Chromium (Cr)	0.653 mg/L	0.114 µg/L	5.7 mg/L	1.0 µg/L
Copper (Cu)	5.982 mg/L	1.634 µg/L	52.4 mg/L	14.3 µg/L
Lead (Pb)	1.015 mg/L	0.074 µg/L	8.89 mg/L	0.65 µg/L
Nickel (Ni)	0.94 mg/L	0.423 µg/L	8.2 mg/L	3.7 µg/L
Silver (Ag)	0.016 mg/L	0.015 µg/L	0.14 mg/L	0.13 µg/L
Zinc (Zn)	12.87 mg/L	2.929 µg/L	113 mg/L	26 µg/L
Arsenic (As)	0.348 mg/L	0.221 µg/L	3.0 mg/L	1.9 µg/L
Selenium (Se)	0.122 mg/L	0.125 µg/L	1.1 mg/L	1.1 µg/L
Hardness as Calcium Carbonate ($CaCO_3$)	13,057 ppm	-	114 ppm	-
December 11-15, 2009	**Total**	**Dissolved**	**Total**	**Dissolved**
Ortho Phosphate as Phosphorus (P)	32.2 mg/L	-	0.03 mg/L	-
Total Suspended Solids (TSS)	14,806 mg/L	-	15 mg/L	-
Volatile Suspended Solids (VSS)	3,862 mg/L	-	4 mg/L	-
Hardness as Calcium Carbonate ($CaCO_3$)	162,872 ppm	-	162 ppm	-
Cadmium (Cd)	-	0.36 µg/L	-	0.36 µg/L
Chromium (Cr)	-	2.096 µg/L	-	2.1 µg/L
Copper (Cu)	-	23.43 µg/L	-	23. 3 µg/L
Lead (Pb)	-	0.51 µg/L	-	0.51 µg/L
Nickel (Ni)	-	4.588 µg/L	-	4.6 µg/L
Silver (Ag)	-	0.251 µg/L	-	0.25 µg/L
Zinc (Zn)	-	33.06 µg/L	-	33 µg/L
Arsenic (As)	-	2.55 µg/L	-	2.5 µg/L
Selenium (Se)	-	1.129 µg/L	-	1.1 µg/L

Source: Water Quality Assessment Report, 2012

The drainage course of water from the proposed project to the Pacific Ocean was used to determine what water bodies are in the area and could potentially receive runoff from the proposed project site. After discharging to the City of Brea's local drainage network, drainage from the proposed project would discharge into Loftus Diversion Channel. Loftus Diversion Channel is not listed as impaired nor has a Total Maximum Daily Load (TMDL) been established. Table 2.3.2-2 summarizes the water bodies that could potentially receive runoff from the proposed

project site and are listed in order of contact from the proposed project site en route to the Pacific Ocean.

Table 2.3.2-2 Summary of 303(d) Listed Constituents and TMDL Constituents

Water Body Name	303(d) List Constituents	TMDL Constituents
East Fullerton Creek Storm Channel (A06S01)	None	None
Fullerton Creek Reservoir	None	None
Fullerton Channel (A03)	None	None
Coyote Creek Channel	Ammonia Dissolved Copper Diazinon Indicator Bacteria Lead Toxicity pH	Copper[1] Lead[2] Zinc[2]
San Gabriel River Estuary	Copper Dioxin Nickel Dissolved Oxygen	None

Source: Water Quality Assessment Report, 2012
Notes: [1] USEPA San Gabriel River Metals TMDL (includes Coyote Creek); Caltrans may have a waste load allocation assigned.

2.3.2.3 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

Construction (Short-Term) Impacts

Table 2.3.2-3 summarizes the disturbed soil area and change in impervious surfaces associated with Build Alternatives 7A and 9.

Table 2.3.2-3 Summary of Build Alternative-Specific Impacts

Impact	Build Alternative 7A (Preferred Alternative)	Build Alternative 9
Disturbed Soil Area	25.5 acres	21.8 acres
Existing Impervious Surface	28.6 acres	26.7 acres
Proposed Impervious Surface	31.1 acres	29.3 acres
Increase in Impervious Surface Area from Existing Impervious Surface Area	2.6 acres	2.6 acres

Source: Water Quality Assessment Report, 2012

During construction, the total disturbed area from the proposed project is estimated to be 25.5 acres for Build Alternative 7A (Preferred Alternative) and 21.8 acres for Build Alternative 9.

Increased sediment would occur during construction of the proposed project, under both Alternatives 7A and 9. The proposed slopes of the proposed project would be stabilized with temporary water pollution control materials during the construction of either Build Alternatives 7A or 9. The proposed slopes of the roadway would be the same as the existing slopes, which have a ratio of 4:1 (h:v). The proposed project includes retaining walls where grading cannot be maintained at a 4:1 slope or flatter. Turbidity in the downstream water bodies would temporarily increase due to the additional impervious area from the proposed improvements, including changes in the on- and off-ramps as well as the widening of Lambert Road. Construction activities would increase sediment exposure under both Alternatives 7A and 9, due to activities such as reconfiguring roadways, excavation and grading, and constructing the new roadway segments and bridge abutments. Implementation of the avoidance and minimization measures provided in Section 2.3.2.4, would result in no adverse water quality impacts to occur during construction.

Construction activities would involve the use of some hazardous materials, such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum based products, although these materials are commonly used during construction activities and would not be disposed of on the project site. Any hazardous waste or debris that is generated during construction of the proposed project would have the potential to enter into downstream waterbodies. However, this material would be collected and transported away from the site, and disposed of at an approved off-site landfill or other such facility. Implementation of the avoidance and minimization measures provided in Section 2.3.2.4, would result in no adverse water quality impacts to occur during construction.

There are no apparent impacts to any Aquifer Recharge/Groundwater resulting from the proposed project. The proposed project is not sited in a location used by the Orange County Water District or any other local water district for aquifer recharge. Groundwater beneath the proposed project area is not expected to be encountered within 10 feet below ground surface. De-watering activities are not anticipated to occur as a result of the construction activities for the proposed project; however, the avoidance and minimization measure (WQ-3) provided in Section 2.3.2.4, would result in no adverse water quality impacts in the event that groundwater is unexpectedly encountered and de-watering becomes necessary.

Under the Construction General Permit, the proposed project is required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and implement erosion and sediment control BMPs detailed in the SWPPP to be implemented during construction. If construction BMPs are properly designed, implemented, and maintained, as presented in the Avoidance and Minimization Measures, Section 2.3.2.4, no adverse water quality impacts would occur during construction.

Operation and Maintenance (Long-Term) Impacts

The proposed project does not have a baseflow[6] condition and the Orange County Hydrology Manual states that, “In fully urbanized areas baseflow can be entirely neglected” when performing a Unit Hydrograph Analysis for a catchment. Thus no baseflow changes would result from the proposed project.

The proposed project would not change the existing drainage patterns. The primary concentration of flow would remain in the local storm drain, outlet into the Loftus Diversion Channel, and ultimately reach the San Gabriel River via Coyote Creek. There would be a small differential increase in flow rates and discharge volumes when compared to the existing condition. The

[6] Baseflow is the result of groundwater entering mountain streams that cross many geologic strata.

addition of new impervious area would marginally increase the flow rates and discharge volumes at the individual on-site pipes. Regionally, the Loftus Diversion Channel Hydrology uses a fully developed condition for the state ROW, and therefore already accounts for these improvements in the channel design. Changes to flow depths in the local on-site systems would marginally increase by approximately 0.1 to 0.2 feet; however, this would remain within the pipes or within the provided freeboard of the improved channels. Loftus Diversion Channel depths would not be measurably altered by the proposed project. No seasonal changes would occur as a result of the proposed project.

The primary pollutants of concern are defined in the County of Orange's Drainage Area Management Plan as pollutants that are "expected to be generated by the project which are causing a Clean Water Act Section 303(d) impairment of receiving waters shall be considered primary pollutants of concern."

The proposed project would not change the sediment at the bottom of the Loftus Diversion Channel, nor would it increase erosion or accretion patterns. The proposed slopes of the proposed project would be stabilized with slope stabilization measures such as erosion control and highway planting upon construction completion. The proposed slopes of the roadway would be the same as the existing slopes, which have a ratio of 4:1 (h:v). The proposed project includes retaining walls where grading cannot be maintained at a 4:1 slope or flatter. Turbidity in the downstream water bodies could increase slightly due to the additional impervious area from the proposed improvements, including changes in the on- and off-ramps as well as the widening of Lambert Road. Implementation of the avoidance and minimization measures provided in Section 2.3.2.4, would result in no adverse water quality impacts to occur during operation.

During operation, there is potential for oil, grease, metals, and chemical pollutants to enter into downstream water bodies. In addition, the proposed project includes landscaped areas, and therefore may be a source of pesticides and fertilizers. The nutrients in the fertilizers may cause oxygen depletion and a rise in temperature. Implementation of the avoidance and minimization measures provided in Section 2.3.2.4, would result in no adverse water quality impacts to occur during operation.

The potential increase in runoff associated with the increase in impervious area would potentially cause or contribute to an alteration of water quality and the beneficial uses of downstream water bodies. The County of Orange's NPDES Permit requires street, road, highway, or above ground lined drainage facilities to comply with the US EPA guidance "Managing Wet Weather with Green Infrastructure: Green Streets". The objective of the guidance is to reduce the discharge of pollutants and the effects of changes to runoff patterns caused by land use modifications. As prescribed by the NPDES Permit, Low Impact Development (LID) BMPs would be considered first and then traditional structural and non-structural BMPs. The table below summarizes the Low Impact Development (LID) BMPs that would treat the pollutants of concern as stated in Table 7.II-4 of the County of Orange's Model Water Quality Management Plan template.

Table 2.3.2-4 LID BMPs by Category

Infiltration	Evapotranspiration and Evaporation	Harvest and Use	Biotreatment
Infiltration Trenches Infiltration Basins Bioretention Without Underdrains Drywells Permeable Pavement Proprietary Infiltration	Green Roofs Brown Roofs Blue Roofs	Cisterns Underground Detention Irrigation Use Domestic Use	Biotreatment With Underdrains Stormwater Planter Boxes With Underdrains Constructed Wetlands Vegetated Swales Vegetated Filter Strips Dry Extended Detention Basins Wet Extended Detention Basins Proprietary Detention

Source: Water Quality Assessment Report, 2012

Structural treatment control BMPs would be implemented to target the constituents of concern in the stormwater, as well as non-stormwater sources, in runoff from the proposed project. Any BMPs located within Caltrans right-of-way would be selected from the Caltrans approved treatment list. Where feasible, structural treatment control and non-structural source control BMPs would be incorporated into the proposed project. The technologies that would be considered to address the pollutants of concern for the proposed project are infiltration devices, filtration devices, biofiltration devices, or equivalent devices.

Conclusion

Compliance with the requirements of the Clean Water Act, the Santa Ana RWQCB, the Orange County Drainage Area Management Plan (DAMP), and appropriate, Caltrans approved, non-structural and structural treatment control BMPs to address potential short- (during construction) and long-term (post construction/maintenance) impacts are required for the proposed project. In addition, avoidance, minimization and/or mitigation measures have been provided to further reduce impact resulting from the proposed project.

No Build Alternative

Under the No Build Alternative, no construction phase impacts would occur, thus removing the potential to impact water quality and storm water during construction.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

WQ-1 The project will comply with the provisions of the Caltrans Statewide NPDES Permit (Order Number 2012-0011-DWQ, NPDES Number CAS000003) and the NPDES General Permit, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activities (Order Number 2009-0009-DWQ, NPDES Number CAS000002) and any subsequent permit in effect at the time of construction.

WQ-2 A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP shall identify the sources of pollutants that may affect the quality of stormwater and include the construction site best management practices (BMPs) to control pollutants such as

sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All construction site BMPs shall follow the latest edition of the Storm Water Quality Handbooks: Construction Site Best Management Practices (BMPs) Manual (Caltrans, 2003) to control and minimize the impacts of construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.

WQ-3 Construction site dewatering will comply with the Santa Ana Regional Water Quality Control Board's (RWQCB's) Order R8-2009-0003, NPDES Permit Number CAG998001, for discharges to surface waters that pose an insignificant (de minimus) threat to water quality. If dewatering occurs during construction of the project, it will comply with this permit including but not limited to, the specific reporting and notification requirements.

WQ-4 Caltrans approved treatment Best Management Practices (BMPs) will be implemented consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Stormwater Permit, and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans) Properties, Facilities, and Activities (Order Number 2012-0011-DWQ, NPDES Number CAS000003) and any subsequent permits. Treatment BMPs include, but are not limited to, biofiltration strips/swales, infiltration basins, detention devices, dry weather flow diversion, Gross Solids Removal Devices (GSRDs), media filters, and wet basins.

WQ-5 Design Pollution Prevention Best Management Practices (BMPs) shall be implemented. These include, but are not limited to, preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes and swales, overside drains, flared end sections, and outlet protection/velocity dissipation devices. This includes, but is not limited to:

a. All equipment maintenance staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated disturbed/developed areas. They will be located such that runoff from the designated areas will not enter gnatcatcher-designated critical habitat.

2.3.3 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

2.3.3.1 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 (CEQA).

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. Structures are designed using the Department's Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see Caltrans' Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

2.3.3.2 Affected Environment

Information in this section is based upon the Phase I Initial Site Assessment (ISA) (January 2013) and Water Quality Assessment Report prepared in April 2012, the Paleontological Resources Identification and Evaluation Report (PIR/PER) prepared in June 2012 for the proposed project.

Topography

The existing topography within the proposed project along Lambert Road ranges from approximately 700 feet above mean sea level (msl) to approximately 360 feet above msl, with a gentle slope to the south/southwest.

Geology and Soils

The proposed Project is located in the Peninsular Ranges Geomorphic Province of Southern California. The proposed project area consists of a stratified sequence from the Cenozoic Era. Specifically, the geologic formations, which have the potential for differential expansion, within the proposed project area include: Holocene Landslide Deposits, early to middle Pleistocene Alluvial Fan Deposits, the early to middle Pleistocene La Habra Formation, and the Pliocene Fernando Formation.

- Holocene Landslide Deposits (Qyls) - These landslides formed during the last 10,000 years as canyon cutting and aqueous erosion caused slope failure. Their composition is dependent on the underlying sediments; however, sediments that have higher silt sand clay content are usually more prone to landslides. Within the project area, these deposits originate within the upper member of the Topanga Formation. These sediments appear to have been removed during construction of SR-57.
- Alluvial Fan Deposits (Qvof) - These sediments were deposited by streams and rivers, and are generally located close to mountains and hills. They can also be found on elevated terraces above the active stream channel, or at depth beneath an active stream channel. The Very Old Alluvial Fan Deposits were likely deposited during the middle to late

Pleistocene (300,000 to 10,000 years ago) with the older age being constrained by the presence of the La Habra Formation (see discussion below) located in the hills to the north. These Deposits are composed mixtures of coarse-grained sand, cobble- and gravel-sand deposits, and sometimes silty sand. Alluvial Fan Deposits sometimes contain larger-sized boulders and cobbles, especially close to the mouths of canyons. These deposits are generally moderately to well consolidated, have been dissected by erosional gulleys, and have some soil development.

- La Habra Formation (Qlh) - The La Habra Formation was deposited by a braided stream, most likely the remnants of the Coyote Creek drainage of the San Gabriel Mountains. Most of the clasts in the La Habra Formation were derived from the adjacent Puente Hills, and some may have been transported by the Santa Ana River. The La Habra Formation was deposited during the middle Pleistocene and is likely no younger than the Blancan-Rancholabrean North American Land Mammal Age (approximately 300,000 years ago). It is intensively interbedded, and the units range from coarse sandstone through siltstone to fine-grained clay deposits.

- Fernando Formation (Tfu) – the Fernando Formation was deposited in a marine environment during the middle Pliocene to early Pleistocene (3.5 to 1.6 million years ago). Within the Puente Hills, this Formation is divided into an informal Upper Member and an informal Lower Member, with the Upper Member being deposited during the middle Pliocene to late Pleistocene and the Lower Member being deposited during the middle Pliocene. The Upper Member corresponds to the Pico Formation, and the lower Pliocene to the Repetto Formation, as named by earlier researches. The Upper Member is the only Member present within the portion of the proposed project where excavation is proposed. The Lower Member is present within a small portion of the proposed project, where no excavation is planned, only signage or lane restriping.

    - The Lower Member was deposited in a deep marine (water depths of 3,300 to 13,000 feet) environment and consists primarily of massive to crudely bedded, micaceous, brownish siltstone that contains thin interbeds of pebbly conglomerate. South of Olinda, on the south side of the Puente Hills, the Lower Member reaches a thickness of over 1,150 feet. The Lower Member produces oil in the Coyote Hills Oil Field.

    - The Upper Member was deposited in an outer neritic (water depths of 325 to 650 feet) marine environment, unconformably overlies the Lower Member, and consists primarily of gray to tan fine-grained, silty sandstone, sandstone, pebbly sandstone, and conglomerate. The lower conglomeratic part of the Upper Member is well cemented and forms steep cliffs. The thickest part of the section is north of Yorba Linda, where it is over 1,375 feet thick.

The proposed project site is underlain by the Xerorthents Loamy, Mocho, and Xeralfic Arents soil components. Specifically, the proposed project site is underlain by the Anaheim clay loam (50 to 75 percent slopes), Mocho loam (two to nine percent slopes), Myford sandy loam (two to nine percent slopes and 9 to 15 percent slopes), Nacimiento clay loam (15 to 30 and 30 to 50 percent slopes), Rincon clay loam (two to nine percent slopes), Sorrento loam (two to nine percent slopes), Xeralfic Arents, loamy (9 to 15 percent slopes), and Xerorthents loamy (cut and fill areas, 9 to 15 percent slopes).

- Anaheim clay loam, 50-75 percent slopes (110) – The Anaheim series consists of mainly well drained soils which are formed in hills. Erosion hazard is high. The depth to water table is more than 80 inches. Available water capacity is low (about 3.8 inches).

- Mocho loam, 2 to 9 percent slopes (167) – The Mocho soil series consists of well drained soils that form in alluvial fans. If the soil is bare, runoff tends to be slow to medium and the erosion hazard is slight to moderate. The depth to water table is more than 80 inches. This soil is nonsaline and has a very high available water capacity (about 22 inches).

- Myford sandy loam – The Myford soil series consists of moderately well drained soils that form in terraces. The depth to water table is more than 80 inches. This soil is nonsaline and has a very low water capacity (approximately 2.9 inches).

    - 2 to 9 percent slopes (173) – If this soil is bare, runoff is medium and the erosion tends to be moderate.

    - 9 to 15 percent slopes (175) – This Myford sandy loam can include a few shallow gullies and areas where sheet erosion has been moderate. When this soil is left bare, runoff is rapid, the erosion hazard is high, and the soils have shrink-swell potential.

- Nacimiento clay loam, 15 to 30 percent slopes (180) and 30 to 50 percent slopes (181) - The Nacimiento soil series consists of well drained soils that are formed in mountains. Erosion tends to be high. The depth to water table is more than 80 inches. This soil is nonsaline and has a low available water capacity (about five [5] inches).

- Rincon clay loam, 2 to 9 percent slopes (188) – The Rincon soil series consists of well drained soils that are formed on terraces. If soil is bare, runoff is medium and the erosion hazard is moderate. The depth to water table is more than 80 inches. This soil is nonsaline and has a very high water capacity (approximately 15.5 inches).

- Sorrento loam, 2 to 9 percent slopes (207) – The Sorrento soil series consists of well drained soils that are formed in alluvial fans. If the Sorrento loam is bare, runoff tends to be slow to medium and the erosion hazard is slight to moderate. The depth to the water table is more than 80 inches. The soils are nonsaline and the water capacity is high (approximately 11.4 inches).

- Xeralfic Arents, loamy soil, 9 to 15 percent slopes (218) – The Xeralfic arents soil series consists of well drained soils that are formed in hills. If the soil is bare, runoff tends to be rapid and the erosion hazard is high. The depth to the water table is more than 80 inches. This soil does not flood or pond.

- Xerorthents loam, cut and fill areas, 9 to 15 percent slopes (219) – The Xerorthents Loamy soil series consists of well drained soils that are formed in hills. If the soil is bare, runoff is rapid and the erosion hazard is high. The depth to water table is more than 80 inches. This soil does not flood or pond.

Seismicity/Faults

Ground shaking occurs at the earth's surface as a result of a release of energy during an earthquake. A vibrating or seismic wave generates from the source of the earthquake, much like the waves created when a rock is tossed into a pool of water. Generally, the closer the source of seismic event, the more the ground shakes. The proposed project area is located within the seismically active Southern California region and would likely be subject to ground shaking.

The City lies atop the Elysian Park thrust fault, which is located approximately six to ten miles below the surface. This fault has been linked to an earthquake registering 6.0 on the Richter

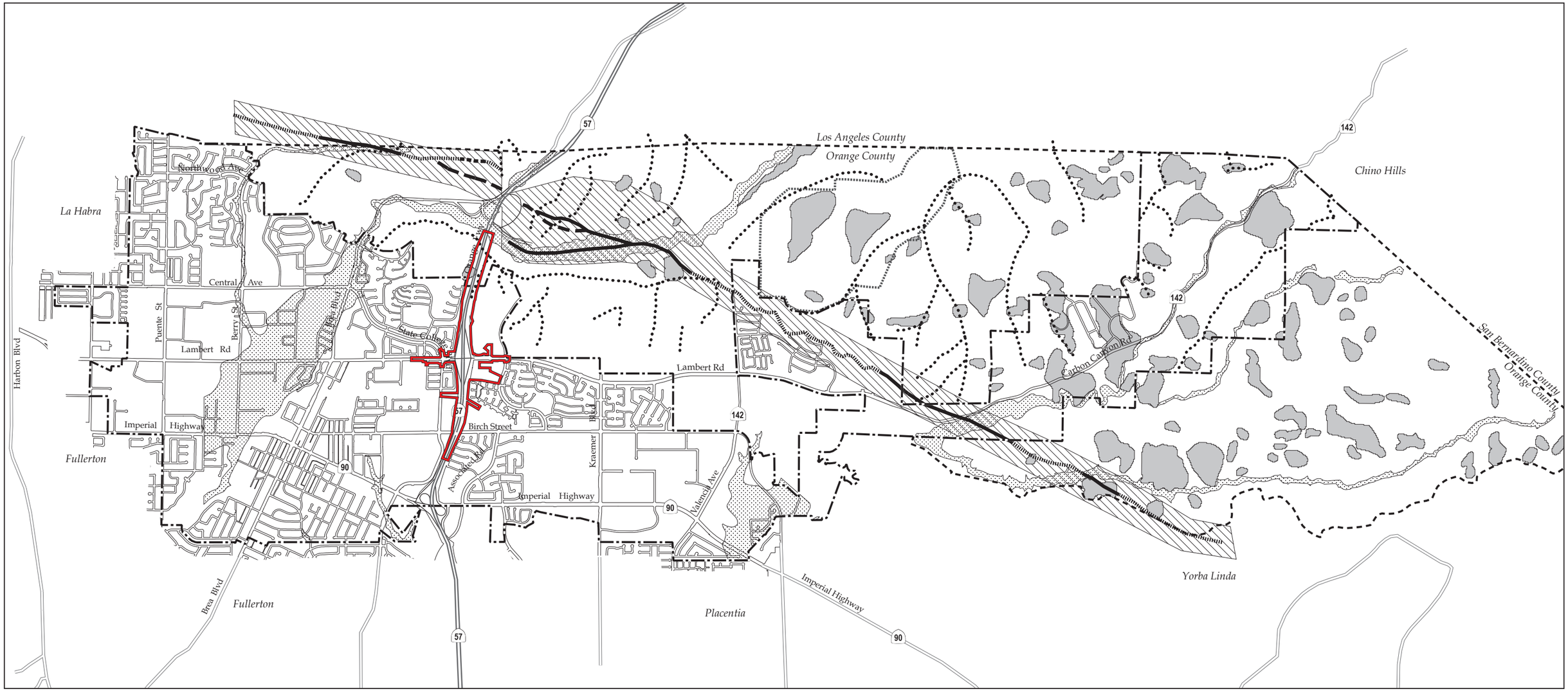
scale in the 1980s. The Whittier-Elsinore fault is located to the north of the proposed project site and is capable of producing an earthquake registering up to 6.9 on the Richter scale. The Puente Hills (Coyote Hills) fault is located to the south of the proposed project and is capable of producing an earthquake registering up to 6.8 on the Richter scale. Figure 2.3.3-1, Geologic and Seismic Hazards, depicts the faults and geologic hazards within the City of Brea and the City's sphere of Influence, as shown in the City of Brea General Plan (2003). In addition, the Norwalk Fault traverses Fullerton and is located approximately two miles south of the proposed project crossing SR-57 near Yorba Linda Boulevard. The low elevation plains and hills along the eastern margin of the Los Angeles Basin are underlain by a series of east-west trending, en echelon, faults and folds in the subsurface; the major faults within this trend are, from north to south, the Los Angeles (Las Cienegas), Santa Fe Springs, and Coyote Hills faults. Other known faults in the area include the Inglewood-Newport fault which is located approximately 17 miles south of the City and the San Andreas Fault which is located approximately 33 miles north of the City. The proposed project is not located within an Alquist-Priolo Fault Zone.[7]

Surface ruptures occur when movement on a fault deep within the earth breaks through to the surface. Not all earthquakes result in surface rupture. Fault rupture almost always follows pre-existing faults, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep.

Liquefaction

Another potential hazard of earthquakes is liquefaction, which is the loss of strength of cohesionless soils when the pore water pressure in the soil becomes equal to the confining pressure. Liquefaction occurs when saturated soils are exposed to ground shaking during seismic occurrences. The shaking can increase water pressure in the pores of the soil particles and cause it to liquefy. Liquefaction generally occurs as a "quicksand" type of ground failure caused by strong ground shaking. The primary factors influencing liquefaction potential are the presence or absence of groundwater, soil type, relative density of the sandy soils confining pressure, and the intensity and duration of groundshaking. As discussed in Section 2.3.2, *Water Quality*, the depth to groundwater at Well Number 03S10W02N002S in October 2000 was approximately 132 feet. Soil borings were taken in 2008 from below the existing SR-57 mainline, and groundwater was encountered at +360.6 feet, which is more than 50 feet below the existing SR-57 mainline. As shown in Figure 2.3.3-1, the proposed project is not located within a liquefaction hazard area.

[7] Sources for this paragraph include: (1) California Department of Transportation. 2014. Caltrans ARS Online. [online]: http://dap3.dot.ca.gov/ARS_Online/index.php. Accessed February 25, 2014. (2) City of Brea. 2003. The City of Brea General Plan. August 2003. [online]: http://www.ci.brea.ca.us/Index.aspx?NID=177. Accessed February 25, 2014. (3) Earth Mechanics, Inc. 2013. Preliminary Geotechnical Design Report for SR-57/Lambert Road Interchange Improvements. July 2013.



Source: City of Brea General Plan;
Earth Consultants Internation, January 2002;
California Division of Mines and Geology, 1980, 1991, and 1998.

LEGEND

- City Boundary
- Sphere of Influence
- Project Boundary

SEISMIC HAZARDS

- Accurate Fault Location
- Approximate Fault Location
- Concealed Fault
- Inferred
- Alquist-Priolo Earthquake Fault Zone
- Liquefaction

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resource Code Section 2693c would be required.

- Mapped Landslides
- Major Ridgelines

0 0.5 1 mile

6/5/12 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Geologic and Seismic Hazards

Figure 2.3.3-1

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2.3.3.3 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

Construction activities, such as grading and trenching, would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. The impact of the construction activities would be short-term and is not considered adverse. The City and Caltrans would be required to comply with standard engineering practices for erosion control and a qualified soils engineer would monitor soil compaction during construction. Implementation of the required SWPPP would minimize potential soil erosion impacts. In addition, implementation of erosion control measures and adherence to all requirements set forth in the NPDES permit required for construction activities would reduce construction-related erosion and siltation impacts (refer to Section 2.3.2, Water Quality and Storm Water Runoff).

Since the proposed project is located within an area where earthquake-induced ground shaking occurs, both build Alternatives 7A and 9 would be affected. Geologic and seismic hazards associated with a potential earthquake occurrence include strong ground shaking and seismic fault settlement, which could damage the structures in the study area; however, this potential hazard is prevalent throughout California and is not unique to the study area. Conformance with the California Building Code (CBC), as well as adherence to standard engineering practices would reduce the effects of seismic ground shaking.

There are soils within the proposed project area, specifically the Myford Soil series that are known for their shrink-swell potential. As with seismic ground shaking, conformance with the CBC as well as adherence to standard engineering practices would reduce the potential effects of expansive soils.

As shown in Figure 2.3.3-1, the proposed project is not located within a liquefaction hazard area. No unusual water extractions or other practices would occur that are typically associated with subsidence/liquefaction effects. In addition, the minor amounts of surface material, which would be removed, and the soils being disrupted/displaced would be compacted during proposed project construction. Adherence to the CBC and standard Caltrans design criteria would continue to be required.

Landslides are mass movements of the ground that include rock falls, relatively shallow slumping and sliding of soils, and deeper rotational movement of soil or rock. As depicted in Figure 2.3.3-1, the proposed project is not located within, or near, a landslide hazard area. The proposed project area consists of gently sloping topography and surrounding areas are gently sloping with no unusual geographic features. Impacts associated with landslides or mudslides are not anticipated. Measures such as soil compaction requirements set forth within the Geotechnical Investigation prepared for this proposed project, as well as standard Department and City design parameters, would reduce any potential impacts associated with slope stability. In addition, Caltrans' and City's standard design practices would be applied to retaining walls included in the Build Alternatives.

No Build Alternative

Under the No Build Alternative, no construction phase impacts would occur, thus removing the potential of impacts related to geology, seismicity and soils during construction; however, as with Build Alternatives 7A and 9, under the No Build Alternative, the SR-57/Lambert Road interchange and the surrounding area would continue to be vulnerable to seismic activities in the area.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Implement measures WQ-1 through WQ-4, as identified in Section 2.3.2, Water Quality and Storm Water Runoff.

GEO-1 The project will be constructed in accordance with the California Building Code (CBC) and all applicable Caltrans standards and regulations. All construction activities shall adhere to current engineering practices.

If fills must be borrowed from, or disposed of offsite, the construction contractor will identify any necessary borrow and disposal sites and provide this information to the City and Caltrans for review. Caltrans will review borrow and disposal site information and submit the information to the Carlsbad USFWS Office. If borrow or disposal activities may affect a listed species or critical habitat, Caltrans will reinitiate Section 7 consultation.

GEO-2 During final design, appropriate foundation types and depths will be designated (including foundation modifications in the case of existing structures) so that ground movements will not adversely affect the structure.

GEO-3 Appropriate erosion-control measures and siltation controls will be incorporated into the construction documents and implemented during site preparation, grading, and construction. These measures will be installed prior to the onset of vegetation clearing and be maintained in good repair until the completion of project construction. These measures include, but are not limited to, protecting exposed slope areas, control of surface flows over exposed soils, use of wetting or sealing agents and/or sedimentation ponds, and limiting soil excavation in high winds. Erosion and sediment control devices used for the project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.

2.3.4 PALEONTOLOGY

2.3.4.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic records as fossils. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects. 16 United States Code (USC) 431-433 (the "Antiquities Act") prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered "objects of antiquity" by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies. 16 United States Code (USC) 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands. 23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law. 23 United States Code (USC) 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA) and the Public Resources Code (PRC) Section 5097.5.

The Brea General Plan (City of Brea, 2003) does not have a policy that directly relates to paleontological resources; however, policies CR-14.1 and CR-14.3 state that the City's Development Services Department should assess development proposals for potential impacts to significant historic and cultural resources pursuant to State CEQA Guidelines, Section 15064.5. Oftentimes paleontological resources are classified as cultural resources.

2.3.4.2 Affected Environment

Information in this section is based upon the Paleontological Resources Identification and Evaluation Report (PIR/PER) prepared in June 2012 for the proposed project.

Area of Project Disturbance (APD)

The Area of Project Disturbance (APD) for the proposed project includes all areas where excavation is proposed. The APD is generally considered the same as the proposed project boundaries shown in Figure 1-2, Project Vicinity. The APD is based on the horizontal and vertical extent of anticipated ground-disturbing activities.

Methodology

A locality search was completed through the Natural History Museum of Los Angeles County (LACM) in December 2011. The locality search included a review of area geology and any fossil resources recovered within similar sediments to those within the proposed project area. In addition, the sensitivity of the sediments exposed in the proposed project area was determined based on fossil finds from similar sediments in Southern California. The locality search included a one-mile buffer from the APD identified for this proposed project.

On December 21, 2011, a survey of the APD was completed. The APD was examined opportunistically wherever there was visible ground. Special attention was given to areas that had exposed ground surfaces, as well as rodent borrow back dirt.

Existing Conditions

According to the PIR/PER, the proposed project is located near the border of the northern Peninsular Ranges Geomorphic Province and the south-central portion of the Transverse Range Geomorphic Province of Southern California. The Peninsular Range Geomorphic Province is 900 miles in length stretching from Baja California to the Transverse Ranges and is characterized by mountains and valleys that trend in a northwest-southeast direction that roughly parallels the San Andreas Fault. The Peninsular Range contains Cretaceous (more than 65 million years ago) and pre-Cretaceous igneous and metamorphic rock covered by limited exposures of post-Cretaceous sedimentary deposits. The Transverse Range Geomorphic Province is characterized by steep mountains and valleys that trend in an east-west direction. The Transverse Range contains thick sequences of Cenozoic, organic-rich sedimentary rocks. The geologic units and formations that have the potential to be encountered within APD include: Holocene (Quaternary Period) Landslide Deposits, early to middle Pleistocene Alluvial Fan Deposits, the early to middle Pleistocene La Habra Formation, and the Pliocene Fernando Formation. Artificial Fill occurs within the proposed project area and was observed during the site visit.

The LACM has no records of vertebrate fossil localities within the APD; however, known localities have been recovered nearby from formations/units that are mapped as being within the proposed project limits. LACM stated that all units within the proposed project's APD have the potential to contain significant paleontological remains. The Quaternary Landslide Deposits have a potential for fossils within the sediments if the rock unit that slid contained fossils; however, the movement of these deposits has them out of context and they are not considered to be scientifically significant.

Pleistocene Alluvium, which includes Very Old Alluvial Fan Deposits, is defined as having been deposited during the Pleistocene (1.8 million to 10,000 years ago). Fossils are known in similar deposits from excavations for roads, housing developments, and quarries within the Southern California area. Mammoths are the indicator fossil for the Pleistocene Epoch, which is divided into the older Irvingtonian North American Land Mammal Age (NALMA) that spans the period between 1.8 million and 300,000 years ago, and the Rancholabrean NALMA, which spans the last 300,000 years of the Pleistocene. The indicator fossil for the Rancholabrean NALMA is Bison sp. Both NALMAs contain other fossils such as horse, coyote, rodents, birds, reptiles, and fish that help describe climatic and habitat conditions during the last 2 million years. There is a potential for these types of fossils whenever Pleistocene alluvial sediments are exposed. Within the surface of the proposed project area, Morton and Miller (2006) have mapped these sediments as being on the older end of the spectrum, ranging in age from the middle to early Pleistocene (1.8 million to 300,000 years ago), but earlier work by Yerkes (1972) maps these sediments as being from the middle to late Pleistocene (300,000 to 10,000 years ago). Based on the closeness of the older La Habra Formation in the hills to the north of where these sediment outcrop, the younger age is likely correct, and these sediment would likely contain fossils from the Rancholabrean NALMA. There is a potential for these types of fossils in all Pleistocene alluvial sediments. The LACM has records of vertebrate localities southwest of the proposed project, within the Older Quaternary Alluvial sediments, that contain a skeleton of a fossil duck (*Chendytes milleri*), remains of an Imperial Mammoth (*Mammuthus imperator*), and a suite of fossils including white shark (*Carcaharodan arnoldi*), turkey (*Meleagris californica*), ground sloth (*Paramylodon* sp.), mastodon

(*Mammut* sp.), mammoth (*Mammuthus* sp.), horses (*Equus* sp.), camel (*Camelops* sp.), deer (*Odocoileus* sp.), and pronghorn antelope (*Antiliocapra Americana*).

The La Habra Formation has a rich vertebrate, botanical, and invertebrate documented record. Remains of Rancholabrean and Irvingtonian type animals such as camel, lion, ring-tailed cat, tapir, vole, flightless bird, elephant, frog, salamander, snake, lizard, horse, saber tooth cat, deer, sloth, and plant material are known from these sediments. Based on the lack of Bison sp, aside from one potential skeletal element from this Formation, it is likely that it may have been deposited close to the end of the Irvingtonian and the beginning of the Rancholabrean. Many of the fossils from the La Habra Formation have been collected at Ralph B. Clark Regional Park in Buena Park, approximately six miles to the southwest. The record search conducted for this proposed project shows that a fossil tusk of an *Elephas imperator* [now known as *Mammuthus imperator* (Imperial Mammoth)] was found at the base of the La Habra Formation along Imperial Highway, west of the West Coyote oil field and more than five miles to the southwest of the proposed project. One locality was listed from the La Habra Formation (MLP135) that contained fossil invertebrates. This locality is located approximately six miles southwest of the proposed project. The record search found that the La Habra Formation has produced terrestrial lowland vertebrate fossils such as rabbit, deer, horse, camel, and sloth, and that Ralph Clark Regional Park in Buena Park has an excellent museum displaying many of these fossils. The La Habra Formation has numerous vertebrate fossil localities primarily along Coyote Creek in the west Coyote Hills. The closest locality from the La Habra Formation is south-southwest of the proposed project and includes a specimen of a fossil horse (*Equus* sp.).

The middle to late Pliocene, and possibly early Pleistocene (3.5 to 1.6 million years) Upper Member of the Fernando Formation has produced fossils that include fish otoliths (ear bones), echinoids, mollusks, and foraminifera. According to the record search results, marine mollusks occur in the upper part of the Upper Member of the Fernando Formation. The Fernando Formation has produced abundant invertebrates and occasional vertebrate remains. Five localities were identified during the record search from the Fernando Formation from areas in the Santa Ana Mountains that contain invertebrate remains of gastropods, bivalves, and a barnacle. The closest vertebrate localities that the LACM has identified within the Fernando Formation are located east of the proposed project and include deep-water fish (*Laytonia californica*) and northwest of the proposed project and include a fossil-toothed whale (*Odontoceti* sp.). Additional fossil specimen were recovered from the Fernando Formation within the Puente Hills Landfill, approximately 10 miles northwest of the proposed project; the fossils specimen included a suite of fossil marine vertebrate.

Artificial Fill can contain fossils, but these fossils have been removed from their original location and are thus out of context, therefore, they are not considered to be important for scientific study. The pedestrian survey identified Artificial Fill south of Lambert Road and west of SR-57 and on the southbound SR-57 on- and off-ramps as well as the existing northbound SR-57 off-ramp. Exposure to bedrock from the La Habra Formation and the Fernando Formation was identified at the northern end of the proposed project. No paleontological resources were observed during the field survey.

2.3.4.3 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

There are two generally recognized types of paleontological significance:

- **National:** A National Natural Landmark eligible paleontological resource is an area of national significance (as defined under 36 Code of Federal Regulations [CFR] 62) that contains an outstanding example of fossil evidence of the development of life on earth. This is the only codified definition of paleontological significance.
- **Scientific:** Definitions of a scientifically significant paleontological resource can vary by jurisdictional agency and paleontological practitioner.

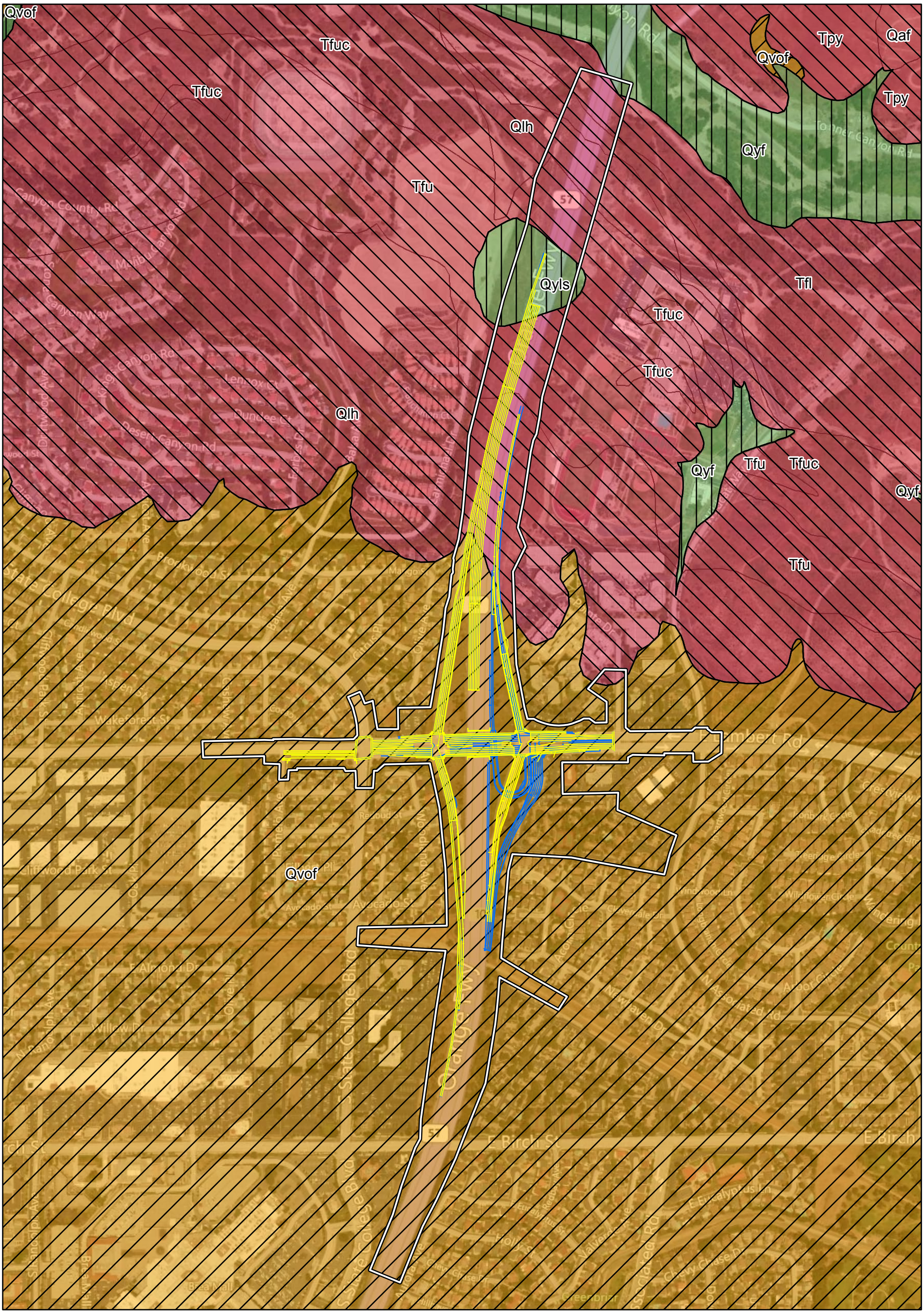
All vertebrate fossils that can be related to a stratigraphic context are significant and are considered a significant nonrenewable paleontological resource. Invertebrate and plant fossils as well as other environmental indicators associated with vertebrate fossils are considered significant. Certain invertebrate and plant fossils that are regionally rare or uncommon, or help to define stratigraphy, age, or taxonomic relationships are considered significant. During the record search, LACM stated that all units within the proposed project's APD have the potential to contain significant paleontological remains.

Sensitivity is often stated "potential" since decisions about how to manage paleontological resources must be based on "potential," as the actual situation cannot be known until construction excavation for the proposed project is underway. In accordance with the California Department of Transportation (Caltrans) Standard Environmental Reference (SER) guide for paleontology, the sensitivity of rock units and formations that may contain paleontological resources is assessed on the basis of high, low, or no potential for paleontological resources. The Quaternary Landslide Deposits are generally not conducive for the preservation of paleontological resources, and any paleontological resources that might be within the sediments have moved and are out of context, therefore, these sediments are assigned a low sensitivity rating. Sensitivities for the Very Old Alluvial Fan Deposits, the La Habra Formation, and the Fernando Formation are high based on the presence of significant fossil remains that have been recovered from these units in other areas. Artificial Fill is usually assigned a sensitivity of "low" in the event that excavation extends below the fill to the underlying formation or unit. These sensitivity areas are depicted in Figure 2.3.4-1, Paleontological Resource Sensitivity.

No paleontological resources were observed during the field survey in December 2011. No paleontological localities are known to exist within the boundaries of the APD; however, all units that the proposed project crosses have the potential to contain significant paleontological remains. Since the Alluvial Fan Deposits, the La Habra Formation, and the Fernando Formation all have the potential to contain paleontological resources and have a high paleontological sensitivity rating with potential for significant resources; avoidance, minimization, and/or mitigation measures are recommended. With implementation of the avoidance, minimization, and/or mitigation measures, effects to nonrenewable paleontological resources are not adverse.

No Build Alternative

Under the No Build Alternative, no construction phase impact would occur, thus removing the potential to encounter paleontological resources during construction.



Source: Bing (c. 2008); Morton & Cox (2001); RBF (01/20/2012).

SURFICIAL UNITS

Qyf	Young alluvial fan deposits
Qyls	Young landslide deposits
Qvof	Very old alluvial fan deposits
Tfu	Fernando Formation, upper member
Tfuc	Fernando Formation, upper member, conglomerate
Tfl	Fernando Formation, lower member
Qlh	La Habra Formation
Tpy	Puente Formation, Yorba Member

LEGEND

- Project Limits of Disturbance
- Alternative 7A
- Alternative 9

PALEONTOLOGICAL SENSITIVITY

- High
- High below 3'
- Low

0 600'

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Paleontological Resource Sensitivity

Figure 2.3.4-1

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2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

PALEO-1 Prior to final design, a monitoring program (Paleontological Mitigation Plan) will be developed by a qualified paleontologist for the excavation in the Alluvial Fan Deposits, the La Habra Formation, and the Fernando Formation to minimize effects on nonrenewable paleontological resources. It is possible that as details of the proposed project, such as proposed excavation depths, are better refined, it will be determined that areas identified as having high sensitivity will in fact not require monitoring during excavation, as the ground disturbance will not extend deep enough below the surface to encounter paleontological resources. The monitoring program will include, but is not limited to, the following:

- A pre-construction, one-hour Paleontological Awareness Training will be conducted in which a qualified principal paleontologist (MS or PhD in paleontology or geology familiar with paleontological procedures and techniques) will identify areas subject to monitoring and explain procedures necessary to protect and safely avoid impacts to potentially significant fossil materials for study and curation. This one-hour Paleontological Awareness Training will be given to all construction field staff prior to the initiation of any ground disturbing activities.

- During construction excavation, a qualified vertebrate paleontological monitor will initially be present on a full-time basis whenever excavation occurs within the sediments that have a high paleontological sensitivity rating, and on a spot-check basis for excavation in sediments that have a low sensitivity rating. Monitoring may be reduced to a part-time basis if no resources are being discovered in sediments with a high sensitivity rating (monitoring reductions, when they occur, will be determined by the qualified Principal Paleontologist). The monitor will inspect fresh cuts and/or spoils piles to recover paleontological resources. The monitor will be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor will be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, Caltrans will consider using heavy equipment on site to assist in the removal and collection of large materials.

- Localized concentrations of small (or micro-) vertebrates may be found in all native sediments. Therefore, these sediments will occasionally be spot-screened on site through 1/8- to 1/20-inch mesh screens to determine whether microfossils are present. If microfossils are encountered, sediment samples (up to 3 cubic yards, or 6,000 pounds) will be collected and processed through 1/20-inch mesh screens to recover additional fossils.

- If fossil remains are found, the recovered specimens will be prepared to the point of identification and permanent preservation. This includes the sorting of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens.

- If fossil remains are found, the recovered specimens will be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution will be a local museum or university with a curator who can retrieve the specimens on request. A draft curation agreement will be in place with an approved curation facility prior to the initiation of any paleontological monitoring or mitigation activities.

- The methods employed during monitoring and/or recovery of fossil specimens will be documented in a Paleontological Mitigation Report, which will be prepared following Caltrans' SER Guidelines.

2.3.5 HAZARDOUS WASTE/MATERIALS

2.3.5.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as "Superfund", is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and 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 (EO) 12088, *Federal Compliance* with *Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

2.3.5.2 Affected Environment

Information in this section is based upon the Phase I Initial Site Assessment (ISA) prepared in January 2013 and the Phase II Subsurface Investigation Report prepared in August 2013 for the proposed project. As part of the ISA, a Regulatory Database Search was provided by Environmental Data Resources (EDR).

Methodology

A site inspection was performed on December 21, 2011, which consisted of visual examination of the proposed project site for visual evidence of potential environmental concerns including existing or potential soil and groundwater contamination. A review and investigation of historical use of the proposed project site was undertaken by examining locally available aerial photographs and other readily available historical information, for evidence of potential environmental concerns associated with prior land use. A review of information and environmental records was also conducted for general geology and topography, local groundwater conditions, and regulatory agency reports, permits, registrations for evidence of potential environmental concerns. In addition, the following files were reviewed during the preparation of the ISA:

- California Department of Oil, Gas, and Geothermal Resources (DOGGR) Wildcat maps were reviewed on January 24, 2012;
- Department of Toxic Substance Control (DTSC), Regional Water Quality Control Board (RWQCB), and files were reviewed on January 12, 2012;
- Orange County Health Care Agency files were requested on January 12, 2012 and reviewed on February 22, 2012;
- Brea Fire Department files were requested on January 25, 2012 and reviewed on February 1, 2012; and
- A review of a commercial database summary (provided by EDR) of Federal, State, tribal, and local regulatory agency records pertinent to the project site and off-site facilities located within ASTM-specified search distances for the project site on January 5, 2012 and reviewed .

Additional site observations were made and soil samples were obtained from the Brea Car Wash & Detail Center (1700 East Lambert Road) on July 16 and 17, 2013. Twenty-one (21) soil samples from seven soil boring locations were analyzed for total petroleum hydrocarbons as gasoline (TPHg), TPH as diesel (TPHd), and benzene, toluene, ethylbenzene, and xylene (BTEX) by USEPA Methods 8015M and 8260B/5035. Soil borings were advanced to a maximum depth of 25 feet below ground surface. There were no detections of TPHg, BTEX, or fuel oxygenates in any of the samples. There was a single detection of TPHd above the laboratory method reporting limits (MRLs) at 20 feet below ground surface; however, the soil sample taken at the same boring location at 25 feet below ground surface did not identify a THPd level above the laboratory MRLs. For additional details, refer to subsection *Brea Car Wash & Detail Center (1700 East Lambert Road)*, below. Based on the field observations and laboratory results, no hydrocarbon impacts were observed and no additional investigations are considered necessary for the site.

Regulatory Database and Record Search Findings

According to the ISA, approximately 29 listed regulatory sites are located within a one-mile radius of the proposed project site and are listed in one or more of the regulatory databases; refer to Figure 2.3.5-1. All 29 of the listed regulatory sites are considered to have a low potential of affecting the project site for one or more of the following reasons: distance from the project site, direction of anticipated groundwater flow, site status, and/or no contamination has been reported.

Brea Car Wash & Detail Center (1700 East Lambert Road)

The DTSC and RWQCB do not maintain records for the proposed project site. The Brea Fire Department and the Orange County Health Care Agency maintain files for the Brea Car Wash & Detail Center (1700 East Lambert Road).

This property is located within the proposed project boundaries and is listed within the UST and HAZNET databases. This site is reported to maintain a UST. This site is also reported to contain off-specification, aged, or surplus organics in 2001; tank bottom waste in 2005; unspecified oil-containing waste in 2007; and tank bottom waste in 2010. Reported disposal methods include storage, bulking, and/or transfer off-site (no treatment/recovery), and discharge to sewer (of tank bottom waste).

The Brea Fire Department and Orange County Health Care Agency records indicate that there are three, 10,000-gallon USTs containing 87 unleaded fuel, 89 power plus fuel, and 92 power premium fuel; no releases were reported. The records also reported three, 200-gallon oil storage containers and one 300-gallon waste oil storage container; no releases were reported. The ISA states that coordination with the Orange County Health Care Agency identified the USTs to be installed around 1996. The records also reported that flammable liquids are stored on the property. Both the Brea Fire Department and Orange County Health Care Agency records included multiple routine inspection reports; any violations reported (regarding the storage of flammable liquids and fire sprinkler systems, the amount of window cleaner stored on-site, chemical inventory reports, and updates to the business emergency plan) were cleared. Multiple chemicals were noted to be stored on-site, including extra heavy upholstery shampoo, car wash hot and cold wax, and maxi suds. The records included the facility's business emergency plan, which stated that there is a UST monitoring system on-site. The business emergency plan also stated that there is an aboveground storage tank (AST) in the lube center as well as chemical storage drums in the basement. The records also reported a change of ownership in 2007.

Twenty-one (21) soil samples from seven soil boring locations were obtained from the site on July 16 and 17, 2013. The samples from all seven boring locations were found to be below the laboratory method reporting limits (MRLs), with the exception of the sample collected from 20 feet below ground surface from soil boring 1 (SB-1), located immediately adjacent to a UST. TPHd level were detected in this sample at a concentration of 5.8 milligrams per kilogram (mg/kg), which is above the 5.0 mg/kg MRL. The sample collected from 25 feet below ground surface at SB-1 did not show any hydrocarbon detections.

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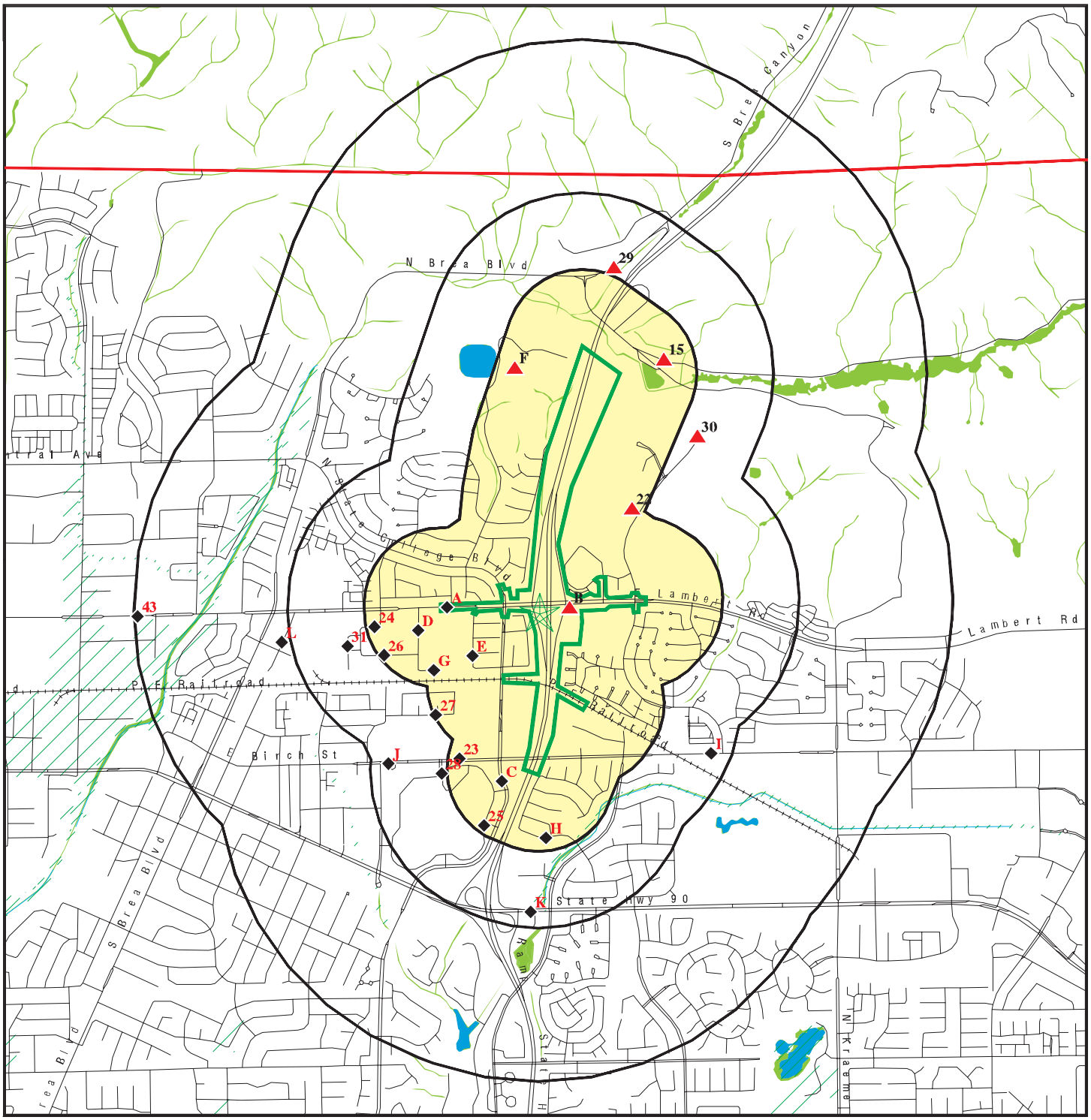

Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

County Boundary

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

0 1/4 1/2 1 Miles

Source: EDR, Inc., 2011

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Regulatory Properties within One-Mile of the Project Site

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Figure 2.3.5-1

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Historical Land Uses

According to the ISA, the historical map and building permit review identified sparse structures, a railroad, infrastructure and agricultural uses within and adjacent to the proposed project site until 1964. By 1964, the railroad was identified as the Pacific Electric Railroad, the City of Brea was developing and several water bodies appeared on the USGS maps, and new residential buildings were identified on Pomelo Avenue. By 1972, SR-57 and surrounding roadways were constructed, Brea Olinda High School and other development were present. By 1990, the area was developed and the vacant and agricultural lands were replaced by residential, institutional, and commercial land uses.

The ISA identified historical oil and gas wells within the immediate vicinity of the proposed project. No oil or gas wells are located within the proposed project boundaries. The Olinda Oil Field is located north and east of the proposed project and the nearest wells, which are outside the project limits, have been capped; refer to Section 2.2.7, Cultural Resources, for additional information.

Asbestos Containing Materials

Based on historical aerial photographs, the two structures and multiple carports associated with the Country Woods Apartment Homes located at APN 320-101-10 (315 Associated Road) appear to have been constructed between 1968 and 1977. Due to the age of the structures, there is the potential for encountering asbestos containing materials (ACMs) at the Country Woods Apartment Homes. The on-site structures appeared to be in fair condition and did not appear to be flaking or fraying at the time of the field visit.

Based on historical aerial photographs, the structure associated with the Brea Car Wash & Detail Center located at APN 320-101-17 (1700 East Lambert Road) appears to have been constructed between 1990 and 1995 and is not expected to contain ACMs.

Lead Based Paint

Lead-Based Paints (LBPs) were commonly used in yellow traffic striping materials before the discontinued use of lead chromate pigment in yellow traffic striping/marking materials and hot-melt Thermoplastic stripe materials (discontinued in 1996 and 2004, respectively). Yellow traffic striping along the SR-57 ramps and Lambert Road was observed during the December 21, 2011 site visit.

Until 1978, when the U.S. Consumer Product Safety Commission (CPSC) phased out the sale and distribution of residential paint containing lead, many homes were treated with paint containing some amount of lead. It is estimated that over 80 percent of all housing built prior to 1978 contains some LBP. The mere presence of lead in paint may not constitute a material to be considered hazardous; if in good condition (no flaking or pealing), most intact LBP is not considered to be a hazardous material. In poor condition, LBPs can create a potential health hazard for building occupants, especially children.

Based on historical aerial photographs, the two structures and multiple carports associated with the Country Woods Apartment Homes are located at APN 320-101-10 (315 Associated Road) appear to have been constructed between 1968 and 1977. There is potential for the presence of lead based paint on structures and infrastructure associated with the apartments. The on-site structures appeared to be in fair condition and did not appear to be flaking or fraying at the time of the field visit.

Aerially Deposited Lead

Until the mid-1980s, gasoline and other fuels contained lead, a toxic metal. As each car or truck traveled highways and roads, tiny particles of lead were released in the exhaust and settled on the soils next to the road.

Caltrans has sampled sediment adjacent to traffic lanes in major metropolitan areas and determined that lead from leaded gasoline emissions is present. Elevated lead levels have been found to be highest at the surface (zero to six inches) and decreases with depth. Total lead levels on average are not greater than the Total Threshold Limit Concentration (TTLC) but will often exceed the Soluble Threshold Limit Concentration (STLC) found in Title 22, California Code of Regulations (CCR). If the material exceeds the Threshold Concentration Leaching Potential (TCLP) test limits for lead, it is considered a Federal hazardous waste. Tests conducted by Caltrans have concluded that materials excavated adjacent to freeways rarely exceed the TCLP threshold.

According to historical aerial photographs, SR-57 has been utilized by traffic since prior to 1977, and the freeway interchange appears to have been improved between 1995 and 2005. ADL testing within right-of-way along the Northbound SR-57 Widening Project (located within the southern portion of the project site and extending south) occurred in 2009. Analytical results for soil samples collected from the 0.5-foot depth along SR-57 indicate soluble lead concentrations above five milligrams per liter (mg/L). Therefore, soil at this depth is considered hazardous waste per CCR Title 22 regulations; however, it is within the parameters of the California Environmental Protection Agency (CalEPA) DTSC variance for lead-contaminated soils.

Based on the as-built drawings, the northbound and southbound SR-57 off-ramps at Lambert Road were improved in 2001 and 2002, and it is anticipated that fill materials were used to construct these ramps.

Radon

Radon is a radioactive gas that is found in certain geologic environments and is formed by the natural breakdown of radium, which is found in the earth's crust. Radon is an invisible, odorless, inert gas that emits alpha particles, known to cause lung cancer. Radon levels are highest in basements (areas in close proximity to the soil) that are poorly ventilated. According to the U.S. Environmental Protection Agency (EPA) Map of Radon Zones, Orange County is located within Zone 3, which has a predicted average indoor screening level of less than 2.0 Picocuries per liter (pCi/L). The EPA recommends remedial actions when radon levels are greater than 4.0 pCi/L. A radon survey was not conducted as part of this proposed project.

Utilities

Typical roadside utilities (i.e., electrical boxes, water utilities, sewer manholes) were noted during the site inspection. A Southern California Gas Company gas pipeline trending along the historical railroad, currently within City-owned right-of-way (ROW), which traverses the southern portion of the proposed project site, was identified and found to extend in the east-west direction. No staining or leaking was observed in association with on-site utilities during the December 21, 2011 site inspection.

Pole-Mounted Transformers

Two pole-mounted transformers were present within the proposed project boundaries. The transformers appeared to be in good condition and no staining or leaking was noted during the December 21, 2011 site inspection.

Aboveground / Underground Storage Tanks

During the December 21, 2011 site inspection, fuel islands were noted at the 76 Gas Station (associated with Brea Car Wash and Detail Center) located on-site at APN 320-101-17 (1700 East Lambert Road), suggesting the presence of on-site USTs. No evidence to suggest a recent release was noted.

Former Railroad Land Uses

The City-owned property at the Brea Overhead Bridge was previously maintained as a railroad right-of-way, and as such, there is potential to find presence of petroleum, lead and other hazardous materials. The City is currently developing a bike trail project that will utilize this same former railroad right-of-way. As part of the City's project development activities, a Phase II Environmental Site Assessment report was completed in 2009 and confirmed the presence of arsenic within the vicinity of the Brea Overhead Bridge. In 2010, the northbound side of the Brea Overhead Bridge was widened as part of the SR-57 Northbound Widening Project (EA 0F0324). The former railroad right-of-way was used as a temporary construction staging area and work area for the SR-57 Northbound Widening Project (EA 0F0324). During the construction of the SR-57 Northbound Widening Project (EA 0F0324), work within the City-owned property at the Brea Overhead Bridge was performed in compliance with State regulations pertaining to work in areas containing hazardous materials and a mitigation plan for the presence of arsenic-impacted soil was implemented at this site.

In continuing the delivery of the bike trail project, the City completed preparation of a Removal Action Work Plan in 2013, which will be implemented to complete soil remediation at the Brea Overhead Bridge site by the third quarter of 2015. Construction of the trail under the Brea Overhead Bridge will be completed by the first quarter of 2016. Under this delivery schedule, the arsenic contaminated soil will be remediated prior to construction of the SR-57/Lambert Road Interchange Improvement Project. The Project Development Team (PDT) for the proposed project will continue to monitor the progress of the City's soil remediation efforts. If, due to unforeseen events, the soil is not remediated prior to construction of the SR-57/Lambert Road Interchange Improvement Project, similar mitigation measures would be implemented as was previously executed by the SR-57 Northbound Widening project.

Off-Site Observations

Typical utilities (i.e., electrical boxes, overhead power lines with transformers) were observed during the site visit and no visible signs of staining or leakage were observed off-site. No off-site ASTs or evidence of USTs were visible from the public ROW. No other chemical storage tanks were observed adjoining the project site during the December 21, 2011 site visit. No unusual or suspicious material handling or storage practices were observed with respect to adjoining properties.

2.3.5.3 Environmental Consequences

Both Build Alternatives (Alternatives 7A and 9)

Construction (Short-Term) Impacts

As ACMs are commonly known to be used in building materials for bridge structures, ACMs may be present in the on-site Lambert Road undercrossing structure and Brea overhead structure. The on-site bridge structures appeared to be in fair condition and no visible evidence to suggest the release of ACMs into the environment was observed. Therefore, the bridge structures have not resulted in a REC on the project site as a result of ACMs. An avoidance, minimization, and/or mitigation measure has been included in order to ensure safety concerns during construction with regard the potential hazards if construction activities should result in demolition or renovation.

As LBPs are commonly known to be used in building materials for bridge structures and in yellow traffic striping materials, LBPs may be present in the on-site Lambert Road undercrossing structure, the Brea overhead structure, and the yellow striping along SR-57 and Lambert Road. The on-site bridge structures appeared to be in fair condition while the yellow striping had no evidence to suggest the release of LBPs into the environment. Therefore, no visible evidence to suggest the release of LBPs into the environment was observed. The bridge structures and the yellow striping have not resulted in a REC on the project site as a result of LBPs. An avoidance, minimization, and/or mitigation measure has been included in order to ensure safety concerns during construction with regard the potential hazards if construction activities should result in demolition or renovation.

All of the 29 listed regulatory sites are considered to have a low potential of affecting the project site for one or more of the following reasons: distance from the project site, direction of anticipated groundwater flow, site status, or no contamination has been reported at the site. No further recommendations are necessary.

Based on the field observations and the laboratory results for the Brea Car Wash & Detail Center, no hydrocarbon impacts were observed and therefore no additional investigations are necessary for this location. No further recommendations are necessary.

The former railroad, which is within existing City ROW, is not a REC within the proposed project site. As discussed above, the arsenic contaminated soil will be remediated prior to construction of the SR-57/Lambert Road Interchange Improvement Project. The Project Development Team (PDT) for the proposed project will continue to monitor the progress of the City's soil remediation efforts. If, due to unforeseen events, the soil is not remediated prior to construction of the proposed project, similar mitigation measures would be implemented as was previously executed by the SR-57 Northbound Widening Project.

No evidence of di-electric fluid or staining was noted on-site during the site inspection as related to the pole-mounted transformers; therefore, the pole-mounted transformers have not resulted in an REC. An avoidance, minimization, and/or mitigation measure has been included in order to ensure safety concerns during construction with regard to potential polychlorinated biphenlys (PCBs) in pole-mounted transformers.

No wells associated with the Olinda Oil Field are anticipated to be located on-site. An avoidance, minimization, and/or mitigation measure has been included to ensure safety concerns during construction and confirm well locations.

SR-57 has been utilized by traffic since prior to 1977, and the freeway interchange appears to have been improved between 1995 and 2005. ADL testing within ROW on SR-57 for the SR-57 Northbound Widening Project occurred in 2009. Analytical results for soil samples collected from the 0.5-foot depth along SR-57 (both freeway shoulder and retaining wall locations) indicate soluble lead concentrations above 5 mg/L. Per Caltrans ADL soil management guidelines, soils from the 0.5-foot depth are classified as Type Y-1. Based on the as-built drawings, the northbound and southbound SR-57 off-ramps at Lambert Road were improved in 2001 and 2002, and it is anticipated that fill materials were used; however, as the majority of the surrounding area has not been improved recently, the potential for ADL contamination to exist within exposed soils on-site due to aerially deposited lead from SR-57 is likely. This is considered an REC for the proposed project site. An avoidance, minimization, and/or mitigation measure has been included to ensure that excavated soils from the 0.5-foot depth are handled appropriately.

During proposed project construction, there is a possibility of accidental release of hazardous substances. The level of risk associated with an accidental release of hazardous substances is not considered adverse because the volume of hazardous materials utilized during construction is small and their concentrations are low. The contractor would be required to use standard construction controls and safety procedures, which would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law. An avoidance, minimization, and/or mitigation measure has been included in order to ensure safety concerns during construction with regard to ADL, which include Phase II sampling and site characterization.

Operation (Long-Term) Impacts

Operation and maintenance of both Build Alternatives, Alternatives 7A and 9, would not introduce new sources of hazardous materials or hazardous waste. The Build Alternatives would continue existing exposure to transport of hazardous materials and hazardous waste associated with vehicles use of SR-57 and Lambert Road. No new permanent hazardous materials or hazardous waste impacts (direct or indirect) are anticipated beyond existing conditions.

Build Alternative 7A (Preferred Alternative)

Construction (Short-Term) Impacts

Build Alternative 7A (Preferred Alternative) would result in the partial acquisition of 13 APNs and full acquisition of one APN (320-101-17). Table 2.3.5-1, Summary of Property Acquisition Impacts for Build Alternative 7A (Preferred Alternative), shows that an REC is present at APN 320-101-17 (Brea Car Wash and Detail Center). Avoidance, minimization, and/or mitigation measures have been provided in order to ensure safety concerns during construction under Build Alternative 7A (Preferred Alternative).

Table 2.3.5-1 Summary of Property Acquisition Impacts for Build Alternative 7A (Preferred Alternative)

Finding	Impact	Conclusion
Acquisition of Vacant Land Associated with Institutional Uses (APN 319-041-14)	Build Alternative 7A (Preferred Alternative) would result in partial acquisition of APN 319-041-14. The portion to be acquired has historically, and currently, consisted of vacant land.	NO REC
Acquisition of Vacant Land Associated with Park and Ride Facility (APN 319-041-13)	Build Alternative 7A (Preferred Alternative) would result in partial acquisition of APN 319-041-13. The portion to be acquired has historically, and currently, consisted of vacant land and landscaping.	NO REC
Acquisition of Vacant Land Associated with Parkway Uses (APNs 319-031-47, and 319-021-01, -59, -60, -61, -62, and -63)	Build Alternative 7A (Preferred Alternative) would result in partial acquisition of APNs 319-031-47, and 319-021-01, -59, -60, -61, -62, and -63. The portions to be acquired have historically, and currently, consisted of vacant land and landscaping.	NO REC
Acquisition of Vacant Land Associated with Office Uses (APN 319-022-02, -27, 319-371-18, and 320-101-14)	Build Alternative 7A (Preferred Alternative) would result in partial acquisition of APNs 319-022-02, -27, 319-371-18, and 320-101-14. The portions to be acquired have historically, and currently, consisted of vacant land and landscaping.	NO REC
Partial Acquisition of Multiple Structures Associated with the Country Woods Apartment Homes (APN 320-101-10)	Build Alternative 7A (Preferred Alternative) would result in partial acquisition of APN 320-101-10, including multiple structures. Due to the age of the structures, ACMs and LBPs may be present. The on-site structures appeared to be in fair condition and no visible evidence to suggest the release of ACMs or LBPs into the environment was observed; however, recommendations have been provided to ensure proper handling of potential ACMs and LBPs.	NO REC
Acquisition of Brea Car Wash & Detail Center (APN 320-101-17)	Build Alternative 7A (Preferred Alternative) would result in full acquisition of APN 320-101-17. 21 soil samples at 7 boring locations were collected. 20 of the samples were found to be below the MRLs. One sample at SB-1, 20 feet below ground surface had a TPHd concentration of 5.8 mg/kg, 0.8 meg/kg above the MRL of 5.0 mg/kg.	REC

Source: Phase I Initial Site Assessment, 2013

Brea Car Wash & Detail Center (1700 East Lambert Road)

As summarized in Table 2.3.5-1, Summary of Property Acquisition Impacts for Build Alternative 7A (Preferred Alternative), the nature of the car wash facility suggests that contamination could be present at the on-site address 1700 East Lambert Road (Brea Car Wash & Detail Center). The site contains three 10,000-gallon USTs with gasoline, three 200-gallon oil storage containers, and one 300-gallon waste oil containers. No leaks have been reported to the Brea Fire Department. According to Orange County Health Care Agency, the site, which has a gas station component (76 Gas Station), handles less fuel than a typical gas station. According to the DTSC,

car wash water is contaminated with residue from surface preparation and cleaning, including solvents, soaps, and surfactants. Clarifiers are used at car wash facilities to collect wash water before it is discharged to the sanitary sewer system, and must be inspected and serviced regularly to function properly. Additionally, because of the gas station component, there is the potential for surface releases from spills related to vehicles overfilling their fuel tanks as well as from fuel trucks overfilling the on-site USTs. Thus, although no contamination to soil or groundwater from hazardous materials has been reported, this property has the potential for soil contamination associated with the car wash and associated gas station. The presence of ACMs and LBPs are not anticipated due to the age of the Brea Car Wash and Detail Center structure (constructed between 1990 and 1995). This is considered an REC for the proposed project site.

A Phase II Subsurface Investigation was prepared in August 2013. Of the 21 soil samples collected at seven boring locations with a maximum depth of 25 feet below ground surface, 20 of the soil samples were found to be below the laboratory MRLs. One soil sample at soil boring SB-1, at 20 feet below ground surface had a TPHd concentration of 5.8 mg/kg, which is 0.8 mg/kg above the MRL. The soil sample at SB-1 at a depth of 25 feet below ground surface did not show any hydrocarbon detections. Therefore, based on the field observations and laboratory results, no hydrocarbon impacts were observed and no additional investigations are considered necessary for the site. An avoidance, minimization, and/or mitigation measure has been included in order to ensure safety concerns during construction.

Country Woods Apartment Homes (315 Associated Road)

As shown in Table 2.3.5-1, Summary of Property Acquisition Impacts for Build Alternative 7A (Preferred Alternative), due to the age of the on-site structures (constructed between 1968 and 1977) located at APN 320-101-10 (315 Associated Road) (Country Woods Apartment Homes), ACMs and LBPs may be present. The on-site structures appeared to be in fair condition and no visible evidence to suggest the release of ACMs or LBPs into the environment was observed. Therefore, the on-site structures have not resulted in a REC on the project site as a result of ACMs and LBPs. An avoidance, minimization, and/or mitigation measure has been included in order to ensure safety concerns during construction, which include Phase II sampling and site characterization.

Build Alternative 9

Construction (Short-Term) Impacts

Build Alternative 9 would result in the partial acquisition of 13 APNs. Table 2.3.5-2, Summary of Property Acquisition Impacts for Build Alternative 9, shows that no RECs would result from the ROW acquisitions related to this alternative. Avoidance, minimization, and/or mitigation measures have been provided in order to address safety concerns during construction under Build Alternative 9.

Table 2.3.5-2 Summary of Property Acquisition Impacts for Build Alternative 9

Finding	Impact	Conclusion
Acquisition of Vacant Land Associated with Institutional Uses (APN 319-041-14)	Build Alternative 9 would result in partial acquisition of APN 319-041-14. The portion to be acquired has historically, and currently, consisted of vacant land.	NO REC
Acquisition of Vacant Land Associated with Park and Ride Facility (APN 319-041-13)	Build Alternative 9 would result in partial acquisition of APN 319-041-13. The portion to be acquired has historically, and currently, consisted of vacant land and landscaping.	NO REC
Acquisition of Vacant Land Associated with Parkway Uses (APNs 319-031-47, and 319-021-01, -59, -60, -61, -62, and -63)	Build Alternative 9 would result in partial acquisition of APNs 319-031-47, and 319-021-01, -59, -60, -61, -62, and -63. The portions to be acquired have historically, and currently, consisted of vacant land and landscaping.	NO REC
Acquisition of Vacant Land Associated with Office Uses (APN 319-022-02, -27, 319-371-18, and 320-101-14)	Build Alternative 9 would result in partial acquisition of APNs 319-022-02, -27, 319-371-18, and 320-101-14. The portions to be acquired have historically, and currently, consisted of vacant land and landscaping.	NO REC
Acquisition of Vacant Land Associated with Brea Car Wash & Detail Center (APN 320-101-17)	Build Alternative 9 would result in partial acquisition of APN 320-101-17. The portion to be acquired has historically, and currently, consisted of vacant land, driveway areas, and landscaping.	NO REC

Source: Phase I Initial Site Assessment, 2013

No Build Alternative

Under the No Build Alternative, no construction phase impacts would occur, thus removing the potential of hazardous material release during construction.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

Build Alternatives 7A and 9

Implement Avoidance and Minimization Measure AQ-1, which requires a Dust Control Plan for all construction activities, including those activities.

HAZ-1 A Phase II/Site Characterization Specialist shall conduct sampling, during the Design Phase of the project, along the project site in order to determine whether or not contamination exists in association with aerially deposited lead from SR-57 and Lambert Road. Results of the sampling will indicate the level of remediation efforts required. Any special handling, treatment, or disposal provisions associated with aerially deposited lead will be included in the construction document. If soluble levels are above 5 milligrams per liter (mg/L), then soils are considered hazardous waste and shall be handled according to CCR Title 22, the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC) variance for lead-contaminated soils.

Per the Department aerially deposited lead soil management guidelines, soil from the 0.5-foot depth is classified as Type Y-1. If excavation soil from the 0.5-foot depth is reused at the site, it shall be placed a minimum of five feet above the maximum water table elevation and covered with at least one foot of non-

hazardous material. If there is surplus material, then the soil is classified as Type A-2 and shall be disposed of at a regulated Class I landfill. Soils from the remaining depth layers (1.5, 3, and 4 feet) are considered non-hazardous (Type X) and can be reused at the site without any restrictions.

HAZ-2 Any transformer to be relocated/removed during site construction/demolition shall be conducted under the purview of the local purveyor to identify proper handling procedures regarding PCBs.

HAZ-3 If construction activities result in demolition or renovation of the structures at APN 320-101-10 (Country Woods Apartment Homes located at 315 Associated Road) and the bridge structures (Lambert Road undercrossing and Brea overhead), pursuant to South Coast Air Quality Management District (SCAQMD) regulations, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Occupational Safety and Health Administration (Cal/OSHA) certified building inspector to determine the levels of asbestos in the on-site structure, prior to demolition. Compliance with District Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) shall be required for any demolition or renovation work involving asbestos containing materials (ACMs).

HAZ-4 If construction activities result in demolition or renovation of the structures at APN 320-101-10 (Country Woods Apartment Homes located at 315 Associated Road), the on-site bridge structures (Lambert Road undercrossing and Brea overhead), as well as the on-site roadways containing yellow traffic striping (Lambert Road and SR-57), the generated waste shall be disposed of at an appropriate, permitted disposal facility as determined by a lead specialist.

HAZ-5 The following note shall appear on all final maps and grading plans: “If during grading or construction, any plugged and abandoned unrecorded wells are uncovered or damaged, the Department of Oil, Gas and Geothermal Resources (DOGGR) will be contacted to inspect and approve any remediation required.”

HAZ-6 If during grading or soil excavation, evidence of petroleum products is discovered and appears to continue below the ground surface, construction activities shall stop immediately and sampling shall be performed to characterize the extent of contamination. If applicable, remediation shall include removal of soil and proper disposal at an approved facility.

HAZ-7 If suspect materials or wastes of unknown origin are discovered during construction on the proposed project site, which is thought to include hazardous waste materials the following shall occur:

- All work shall immediately stop in the vicinity of the suspected contaminant;
- Project engineer of the implementing agency shall be notified;
- Area(s) shall be secured as directed by the Project Engineer;
- Notification shall be made to the appropriated agency’s Hazardous Waste/Materials Coordinator.

Build Alternative 7A (Preferred Alternative)

HAZ-8 Prior to any construction activities at APN 320-101-17 (Brea Car Wash & Detail Center, 1700 East Lambert Road), the underground storage tanks (USTs) will be removed and properly disposed of at an approved landfill facility under the purview of the appropriate lead agency (i.e., Orange County Department of Environmental Health, or appointee). Once the USTs are removed, sampling shall be conducted by a Phase II/Site Characterization Specialist. Results of sampling will indicate the level of remediation efforts required. Based on Phase II results at APN 320-101-17, remediation includes, but is not limited to, placing soil a minimum of five feet above the maximum water table elevation and covering with a minimum of one foot of non-hazardous material, or disposing soil at a regulated Class I landfill. Consultation with appropriate regulatory agencies shall be conducted prior to and during UST removal, soil sampling and post-soil sampling.

2.3.6 AIR QUALITY

2.3.6.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality; the California Clean Air Act is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$), and sulfur dioxide (SO_2). In addition, national and state standards exist for lead (PB) and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H_2S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

The conformity requirement is based on Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs or projects that do not conform to State Implementation Plan (SIP) for attainting the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional- or, planning and programming -level and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and in some areas (although not in California) sulfur dioxide (SO_2). California has attainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO_2, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years for the RTP) and 4 years (for the TIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA), make determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA.

Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Conformity analysis at the project-level includes verification that the project is included in the regional conformity analysis and a "hot spot" analysis if an area is "nonattainment" or "maintenance" for carbon monoxide (CO) and/or particulate matter (PM_{10} or $PM_{2.5}$). A region is "nonattainment" if one or more of the monitoring stations in the region measure a violation of the relevant standard and U.S. EPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by U.S. EPA and are then called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a hot-spot analysis. In general, projects must not cause the "hot-spot" related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Table 2.3.6-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 μg/m³)		0.075 ppm (147 μg/m³)		
Respirable Particulate Matter (PM_{10})[8]	24 Hour	50 μg/m³	Gravimetric or Beta Attenuation	150 μg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m³		--		
Fine Particulate Matter ($PM_{2.5}$)[8]	24 Hour	--	--	35 μg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m3	Gravimetric or Beta Attenuation	12.0 μg/m3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m3)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m3)		9 ppm (10 mg/m3)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		--	--	
Nitrogen Dioxide (NO_2)[9]	1 Hour	0.18 ppm (339 μg/m3)	Gas Phase Chemiluminescence	100 ppb (188 μg/m3)	--	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 μg/m3)		53 ppb (100 μg/m3)	Same as Primary Standard	
Sulfur Dioxide (SO2)[10]	1 Hour	0.25 ppm (655 μg/m3)	Ultraviolet Fluorescence	75 ppb (196 μg/m3)	--	Ultraviolet Flourescence; Spectrophotometry (ParaosaniSline Method)
	3 Hour	--		--	0.5 ppm (1300 μg/m3)	
	24 Hour	0.04 ppm (105 μg/m3)		0.14 ppm (for certain areas)[10]	--	
	Annual Arithmetic Mean	--		0.30 ppm (for certain areas)[10]	--	
Lead[11, 12] (Pb)	30 Day Average	1.5 μg/m3	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 μg/m3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average10	--		0.15 μg/m3		

Table 2.3.6-1. National and California Ambient Air Quality Standards (Continued)

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary3,5	Secondary3,6	Method7
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 μg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24 Hour	0.01 ppm (26 μg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All other 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 ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site 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 μg/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 U.S. EPA for further clarification and current national 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 measurement method which 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 U.S. 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 U.S. EPA.
8. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m^3 to 12.0 μg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standard of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over three years.
9. To attain the 1-hour natilan standard, the three-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
10. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the nation standard of 75 ppb is identical to 0.075 ppm.
11. 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.
12. The national standard for lead was revised on October 15, 2008 to a rolling three-month average. The 1978 lead standard (1.5 μg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board, Ambient Air Quality Standards, 2013.

2.3.6.2 Affected Environment

Information in this section is based upon the Air Quality Assessment prepared in January 2013, the Air Quality Conformity Analysis prepared in May 2015, and the Air Quality Conformity Determination from FHWA dated July 2015 (Appendix F) for the proposed project.

The proposed project is located in the City of Brea, which is within the South Coast Air Basin (SCAB). The SCAB is characterized as having a "Mediterranean" climate (a semi-arid environment with mild winters, warm summers, and moderate rainfall). The SCAB is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and

the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, in addition to the San Gorgonio Pass area of Riverside County. Its terrain and geographical location determine the distinctive climate of the SCAB, as it is a coastal plain with connecting broad valleys and low hills.

The general region lies in the semi-permanent, high-pressure zone of the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. The climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the SCAB.

Climate

The average annual temperature varies little throughout the SCAB, and averages about 75 degrees Fahrenheit; however, with a less pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have recorded temperatures over 100 degrees in recent years. January is usually the coldest month at all locations, while July and August are usually the hottest months of the year. Although the SCAB has a semi-arid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SCAB by off-shore winds, the ocean effect is dominant. Periods with heavy fog are frequent; low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the SCAB. Precipitation in the SCAB is typically 9 to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

Within the project vicinity, the City of Brea experiences fairly mild weather, with temperatures typically ranging from 47 degrees Fahrenheit in the winter to 89 degrees Fahrenheit in the summer. On average, the warmest month is August with a mean temperature of approximately 89 degrees Fahrenheit. The coolest month is generally December with a mean average of 47 degrees Fahrenheit. The project vicinity experiences the greatest amount of precipitation in the month of February.

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original, or "primary", pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Due to the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air would be mixed and dispersed into the upper atmosphere; however, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and

accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the southland. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone observed during summer months in the SCAB. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The SCAB has a limited ability to disperse these pollutants due to low wind speeds.

The area in which the proposed SR-57/Lambert Road project is located offers clear skies and sunshine; however, it is still susceptible to air inversions. This traps a layer of stagnant air near the ground where it is further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

Air Quality Monitoring

The South Coast Air Quality Management District (SCAQMD) operates several air quality monitoring stations throughout the SCAB. The project site is located within Source Receptor Area (SRA) 16 (North Orange County). The communities within an SRA are expected to have similar climatology and subsequently, similar ambient air pollutant concentrations. The La Habra Monitoring Station is the closest monitoring station to the site (approximately 3.80 miles east) within SRA 16. This station monitors CO, NO_2, and O_3. The next closest monitoring station is the Anaheim Monitoring Station (approximately 6.7 miles south). This station monitors PM_{10}, and $PM_{2.5}$. The Costa Mesa Monitoring Station (approximately 18 miles southwest) was used to gather data for SO_X.[8] The data collected at these stations is considered to be representative of the air quality experienced on-site. Air quality data from 2009 to 2011 is provided in Table 2.3.6-2, Local Air Quality Levels. Additionally, Table 2.3.6-3, Criteria Air Pollutants, briefly describes the various types of pollutants.

Criteria Pollutant Attainment/Nonattainment Status

Air quality monitoring stations are located throughout the nation 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,” “nonattainment,” or “maintenance,” depending on whether the regions meet the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of nonattainment, 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

[8] Although not located in SRA 16, the Costa Mesa Monitoring Station is the closest station to the project that monitors SO_X.

air quality and comply with the NAAQS. Attainment status for each of the criteria pollutants in the SCAB is listed in Table 2.3.6-4, Attainment Status.

Table 2.3.6-2 Local Air Quality Levels

Pollutant	Primary Standard		Year	Maximum Concentration[1]	Number of Days State/Federal Std. Exceeded
	California	Federal			
Carbon Monoxide (CO) [2] (1-Hour)	20 ppm for 1 hour	35 ppm for 1 hour	2009 2010 2011	4.30 ppm 3.44 7.15	0/0 0/0 0/0
Carbon Monoxide (CO) [2] (8-Hour)	9.0 ppm for 8 hours	9.0 ppm for 8 hours	2009 2010 2011	2.54 ppm 1.83 2.16	0/0 0/0 0/0
Ozone (O_3) [2] (1-Hour)	0.09 ppm for 1 hour	N/A	2009 2010 2011	0.115 ppm 0.118 0.095	4/0 2/0 1/0
Ozone (O_3) [2] (8-Hour)	0.07ppm for 8 hours	0.075 ppm for 8 hours	2009 2010 2011	0.082 ppm 0.096 0.075	9/3 4/1 3/0
Nitrogen Dioxide (NO_x) [2]	0.18 ppm for 1 hour	100 ppb for 1 hour	2009 2010 2011	0.080 ppm 0.083 0.070	0/NA 0/NA 0/NA
Sulfur Dioxide (SO_X) [4]	0.25 ppm for 1 hour	75 ppb for 1 hour	2009 2010 2011	0.004 ppm 0.002 0.002	N/A N/A N/A
Particulate Matter (PM_{10}) [3, 5, 6]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2009 2010 2011	63.0 µg/m^3 43.0 53.0	1/0 0/0 2/0
Fine Particulate Matter ($PM_{2.5}$) [3, 6]	No Separate State Standard	35 µg/m^3 for 24 hours	2009 2010 2011	64.5 µg/m^3 61.7 39.2	NM/5 NM/0 NM/2

Source: Air Quality Assessment, 2013

ppm = parts per million
ppb = parts per billion
µg/m^3 = micrograms per cubic meter
NA = Not Applicable
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
NM = Not Measured

Notes:
1. Maximum concentration is measured over the same period as the California Standard.
2. Measurements taken at the La Habra Monitoring Station located at 621 West Lambert Road, La Habra, California 90631.
3. Measurements taken at the Anaheim Monitoring Station located at 1630 Pampas Lane, Anaheim, California 92802.
4. Measurements taken at the Costa Mesa Monitoring Station located at 2850 Mesa Verde Drive East, Costa Mesa, California 92626.
5. PM_{10} exceedances are based on state thresholds established prior to amendments adopted on June 20, 2002.
6. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Table 2.3.6-3 Criteria Air Pollutants

Pollutant	Health and Atmospheric Effects	Typical Sources
Ozone (O_3)	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and NO_X in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically-produced ROG may also contribute.
Carbon Monoxide (CO)	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM_{10})	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter ($PM_{2.5}$)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the $PM_{2.5}$ size range. Many aerosol and solid compounds are part of $PM_{2.5}$.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO_X, sulfur oxides (SO_X), ammonia, and ROG.
Nitrogen Dioxide (NO_2)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur Dioxide (SO_2)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
Lead (Pb)	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	Primary sources include lead-based industrial process like batter production and smelters. Past sources include lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.

Source: Air Quality Assessment, 2013

Table 2.3.6-4 Attainment Status

Pollutant	Attainment Status	
	Federal:	State:
Ozone (O_3)	Nonattainment (8-hour)[a]	Extreme Nonattainment (1-hour) and Nonattainment (8-hour)[b]
Carbon Monoxide (CO)	Attainment/ Maintenance	Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment[c]	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment[d]	Nonattainment
Nitrogen Dioxide (NO_2)	Unclassified/ Maintenance	Nonattainment
Sulfur Dioxide (SO_2)[5]	Attainment	Attainment

Source: www.arb.ca.gov/research/aaqs/aaqs2.pdf, February 7, 2012; California Air Resources Board, *Area Designations*, accessed May 2012; and Air Quality Assessment, 2013

[a] Federal 1-hour Ozone (O_3) attainment status was revoked in June 2005.
[b] The SCAQMD has requested that the Federal 8-hour ozone attainment status be changed to extreme with an attainment date of 2023.
[c] The US EPA eliminated the annual PM_{10} standard in its final rule revision in October 2006.
[d] The $PM_{2.5}$ nonattainment designation is based on the 1997 standard. In 2006, the US EPA revised the 24-hour standard. The 2006 new $PM_{2.5}$ standard of 35 µg/m^3 applies one year after the effective date of the new designation (April 2010).

Sensitive Receptors

Sensitive populations (sensitive receptors) are more susceptible to the effects of air pollution than the general population. Sensitive receptors that are in proximity to localized sources of toxics and CO are of particular concern. According to the SCAQMD, a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Land uses considered sensitive receptors include residences, motels/hotels, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors located near the proposed project include residential uses, institutional uses, and parks. These sensitive receptors would have short-term impacts during the construction phase of the proposed project, refer to Section 2.3.6.3, Environmental Consequences, for further discussion. Impacts would cease subsequent to construction.

2.3.6.3 Environmental Consequences

Regional Conformity

The proposed project is listed in the 2012 SCAG financially constrained Regional Transportation Plan/Sustainable Communities Strategy (RTP) which was found to conform by the State Implementation Plan (SIP) by FHWA and FTA on June 4, 2012 (RTP IDs 2M0724 and ORA000107).

The project is also included in the SCAG financially constrained 2013 Federal Transportation Improvement Program (FTIP) (RTP ORA120320). The SCAG FTIP was determined to conform by FHWA and FTA on December 13, 2012. The design concept and scope of the proposed project is consistent with the project description in the 2012 RTP and the 2013 FTIP, and the traffic assumptions of the SCAG's regional emissions analysis.

Project Level Conformity

Particulate Matter

Nonattainment/maintenance areas are subject to the Transportation Conformity Rule, which requires local transportation and air quality officials to coordinate planning to ensure that transportation projects such as road construction do not affect an area's ability to reach its clean air goals.

In order to implement the hot-spot analysis requirements of the March 10, 2006 Final Rule, the Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Non-attainment and Maintenance Areas (March 10, 2006 Final Rule) was developed by the U.S. EPA and the FHWA. "Conformity" in an air quality context is the FCAA requirement that all federal actions conform to the letter and spirit of the SIP. The SIP is the state's plan for attaining and maintaining attainment of the NAAQS. Conformity requirements are set forth in Section 176(c) of the Clean Air Act, which is codified in 42 USC 7506(c). Specific criteria and procedures for carrying out the conformity process are in the Code of Federal Regulations (CFR) at 40 CFR 93 Subparts A (Highways and Transit) and B (General Federal Actions). Essentially, all projects that are funded or approved by FHWA or FTA must follow the procedures and criteria specified in Subpart A. Nonattainment areas are subject to this "Transportation Conformity Rule", which requires local transportation and air quality officials to coordinate planning to ensure that transportation projects, such as road construction, do not affect an area's ability to reach its clean

air quality goals. This Transportation Conformity Rule specifies that projects that are not fully exempt from conformity requirements must have a project-level conformity analysis. The conformity analysis must address whether or not the project comes from a conforming regional transportation plan and transportation improvement program, or has an equivalent regional analysis in nonattainment or maintenance areas that do not have an MPO, and includes hot-spot analysis and related commitments where applicable. A hot-spot analysis is required in nonattainment and maintenance areas for CO, PM_{10}, and $PM_{2.5}$. Transportation conformity requirements become effective one year after an area is designated as nonattainment.

The March 10, 2006 Final Rule requires that a qualitative PM_{10} hot-spot analysis be completed for a project of air quality concern (POAQC). The proposed project is within a nonattainment area for federal PM_{10} and $PM_{2.5}$ standards. Therefore, per 40 CFR Part 93, analyses are required for conformity purposes; however, the U.S. EPA does not require hot-spot analyses (either qualitative or quantitative) for those that are not listed in Section 93.123(b)(1) as a POAQC.

A qualitative hot-spot analysis is defined in 40 CFR 93.101 as an estimation of likely future localized pollutant concentrations resulting from a new transportation project and a comparison of those concentrations to the relevant air quality standard. A hot-spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals. Such an analysis is a means of demonstrating that a transportation project meets FCAA conformity requirements to support state and local air quality goals with respect to potential localized air quality impacts.

The proposed project does not qualify as a POAQC pursuant to the March 10, 2006, final rule. The proposed project is not a new highway project that would have a significant number of, or increase in, diesel vehicles. The proposed project would reduce congestion and localized idling levels and thus would not cause or contribute to a violation of NAAQS for PM_{10}.

The proposed project would not result in significant changes in traffic volume, vehicle mix, or other factors that would cause an increase in emissions compared to the No Build condition. Implementation of the proposed project would not change interchange LOS significantly between Build and No Build conditions. Therefore, according to the March 10, 2006 Final Rule, this project would not be considered a POAQC under 40 CFR 93.123(b)(1).

The proposed project was submitted to stakeholders at a Transportation Conformity Working Group (TCWG) meeting on March 27, 2012, pursuant to the interagency consultation requirement of 40 CFR 93.105 (c)(1)(i). The U.S. EPA, CARB, SCAQMD, and other interagency consultation participants that were present at the TCWG meeting concurred that the project is not a POAQC. The project would not add diesel truck capacity, and the project would not be a major truck traffic generator. Additionally, the proposed project would reduce congestion. The proposed project has undergone Interagency Consultation (IAC) regarding air quality conformity. IAC participants concurred that the project conforms with the SIP in accordance with 40 CFR Part 93 (refer to Appendix F for FHWA's conformity determination).

Carbon Monoxide

A qualitative hot-spot analysis is defined in 40 CFR 93.101 as an estimation of likely future localized pollutant concentrations resulting from a new transportation project and a comparison of those concentrations to the relevant air quality standard. A hot-spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals. Such an

analysis is a means of demonstrating that a transportation project meets FCAA conformity requirements to support state and local air quality goals with respect to potential localized air quality impacts.

A CO hot-spot screening analysis was conducted per the 1997 Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) developed by the Institute of Transportation Studies at the University of California, Davis. The analysis concluded that implementation of the proposed project would provide better flow for both truck traffic and general traffic traveling through the project area. Additionally, the proposed project does not involve parking lots, and therefore would not increase the number of vehicles operating in cold start mode. As a result, the proposed project has sufficiently addressed the potential CO impact, project impacts would not be adverse, and no further analysis or mitigation is needed.

Construction (Short-Term) Impacts

The proposed project would provide improvements to the SR-57/Lambert Road interchange to improve traffic operations. Short-term impacts to air quality would occur during grading/trenching, new pavement construction, and the restriping phase. Additional sources of construction-related emissions include:

- Exhaust emissions and potential odors from construction equipment used on the construction site as well as the vehicles used to transport materials to and from the site; and
- Exhaust emissions from the motor vehicles of the construction crew.

Construction of the proposed project is anticipated to commence in 2016 and be completed by 2017. As a result, project construction would not last more than five years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)). Project construction would result in temporary emissions of CO, NO_X, ROG, $PM_{2.5}$, and PM_{10}. The maximum daily earth-moving (excavation and grading) volume for both Build Alternatives 7A and 9 would be 2,400 cubic yards per day. Stationary or mobile powered on-site construction equipment would include trucks, tractors, signal boards, excavators, backhoes, concrete saws, crushing and/or processing equipment, graders, scrapers, trenchers, pavers, and other paving equipment. Based on the small number of daily work trips required for project construction, construction worker trips are not anticipated to significantly contribute to or affect traffic flow on local roadways and are therefore not considered adverse. During the demolition phase, some asphalt concrete (AC) pavement and curbs and gutters would have to be removed.

In order to further minimize construction-related emissions, all construction vehicles and equipment would be required to be equipped with state-mandated emission control devices pursuant to state emission regulations and standard construction practices. After construction of the proposed project is complete, all construction-related impacts would cease. Short-term construction particulate matter emissions would be further reduced through the implementation of dust suppression measures outlined within SCAQMD Rule 403. Caltrans Standard Specifications for Construction (Section 14-9 [Air Quality]) would also be adhered to. The proposed project would comply with any state, federal, and/or local rules and regulations developed as a result of implementing control and mitigation measures proposed as part of their respective SIPs. Therefore, project construction is not anticipated to violate state or federal air quality standards or contribute to the existing air quality violations in the SCAB.

PM_{10} Reduction Practices During Construction

The approved SIP contains provisions for construction PM_{10}. According to the SIP, the project applicant is required to include specifications, estimates, and control measures in its final plans that would limit PM_{10} emissions during construction. Since PM_{10} emissions primarily occur during the grading phase of construction, the SCAQMD has established Rule 402 and Rule 403. During construction, the property owner, developer, and contractors are required to comply with regional rules, which assist in reducing short-term construction-related air pollutant emissions. Rule 402 requires that air pollutant emissions not be a nuisance off-site. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project.

Rule 403 also requires that all active operations shall utilize the applicable best available control measures included in Table 1 of Rule 403. Table 1 of Rule 403 is intended to minimize fugitive dust emissions from each fugitive dust source type within the active operation. The applicable control measures target various construction operations such as backfilling, clearing and grubbing, crushing, cut and fill, demolition, earth-moving activities, bulk material import and export, construction staging, stockpiles/bulk material handling, trenching, and loading. The applicable measures from Table 1 of Rule 403 suggest methods such as covering stockpiles with tarps, and the application of water to stabilize materials.

Large operations are also required to implement additional dust control measures, which are provided in Table 2 of Rule 403 (Dust Control Measures for Large Operations). Rule 403 defines large operations as projects that contain more than 50 acres of disturbed surface area, or exceed a daily earth-moving volume of 3,850 cubic meters (5,000 cubic yards) three times during the most recent 365-day period. Depending on the grading and construction schedule, the proposed project may be considered a large operation under Rule 403. Consequently, the proposed project would be subject to the applicable measures identified in Table 2 of Rule 403, which provides additional control actions that are more detailed than the measures provided in Table 1 of Rule 403.

Rule 403 also prohibits projects from allowing track-outs to extend 25 feet or more in cumulative length from the point of origin from an active operation. All track-outs are required to be removed at the conclusion of each workday or evening shift. Any projects with a disturbed surface area of five or more acres or with a daily import or export of 100 cubic yards or more of bulk materials must utilize at least one of the specified track-out control measures at each vehicle egress from the site to a paved public road. The specified track-out control measures consist of installation of washed gravel pads, paving project ingress/egress, wheel shakers, wheel washing systems, and any other approved control measures.

Compliance with SCAQMD Rules 402 and 403 would ensure impacts are not adverse in regards to PM_{10} emissions during construction of either Build Alternative 7A (Preferred Alternative) or Build Alternative 9.

Diesel Particulate Matter

While there may possibly be diesel toxics emissions from the construction of a transportation project, the current scientific knowledge on diesel toxics is simply inadequate for conducting any meaningful quantitative assessment. FHWA issued an Interim Guidance on Air Toxic Analysis in NEPA Documents. It states that “. . . air toxics analysis is an emerging field, and current scientific techniques, tools, and data are not sufficient to accurately estimate human health impacts that

would result from a transportation project in a way that would be useful to decision-makers."[9] The FHWA interim guidelines are used as a reference tool only.

The FHWA interim guidance suggests a number of mitigation measures for diesel toxics emissions from project construction. These measures can be summarized into three categories: (1) operational agreements, such as changing work shifts and reducing unnecessary engine idling; (2) technological adjustments and retrofits, such as particulate matter traps and oxidation catalysts; and (3) use of clean fuels, such as ultra-low sulfur diesel. It should be noted that with the current absence of any statewide or local regulation, Caltrans does not have the legal authority to require construction contractors to undertake any of these measures. It may only be possible for Caltrans to request that some of these measures be employed, on a case-by-case basis. However, when working with the contractors on this construction project, efforts would be undertaken to minimize diesel toxic emissions to the extent feasible such as the installation of particulate filters or using low emission construction equipment.

Mobile Source Air Toxics

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the FCAA. The MSATs are compounds emitted from highway vehicles and non-road 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 U.S. 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 FCAA. In its rule, the U.S. EPA examined the impacts 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. Even if vehicle miles traveled (VMT) increases by 145 percent as assumed between years 1999 and 2050, FHWA projects would reduce on-highway emissions by an average of 72 percent. Thus, the U.S. EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to control MSATs.

The U.S. EPA is preparing a subsequent rule under the authority of Section 202(l) of the FCAA that would address these issues and make adjustments to the primary and secondary MSATs. Depending on the specific project circumstances, FHWA has identified three tiers of analysis:

- Tier 1: No analysis for projects with no potential for meaningful MSAT effects;
- Tier 2: Qualitative analysis for projects with low potential MSAT effects; or
- Tier 3: Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The proposed project would improve vehicular traffic and circulation and would not create a facility that is likely to meaningfully increase MSATs, as the proposed project would not add substantial

[9] Federal Highways Administration memorandum from Cynthia Burbank to Division Administrators, Feb. 3, 2006, page 4.

new vehicular capacity; however, the proposed project involves traffic volumes where average daily traffic (ADT) is greater than 150,000. As a result, a quantitative analysis for projects with higher potential MSAT effects (Tier 3) is provided below.

Incomplete or Unavailable Information for Project Specific MSAT Health Impacts Analysis

According to FHWA, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The U.S. EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT emissions. The U.S. EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects". Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations or in the future as vehicle emissions substantially decrease.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process builds on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the U.S. EPA's MOBILE6.2 model, the California EPA's EMFAC2007 model, and the EPA's Draft MOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of U.S. EPA's guideline CAL3QHC model was conducted in a National Cooperative Highway Research Board (NCHRB) study, which documents poor model performance at ten sites across the country – three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested

intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with NAAQS for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel particulate matter. The U.S. EPA and the HEI have not established a basis for quantitative risk assessment of diesel particulate matter in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the U.S. EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires U.S. EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld the U.S. EPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Due to the limitations in the methodologies for forecasting health impacts, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

MSAT Emissions in the Project Area

As discussed above, there are several uncertainties that do not allow quantitative estimates of health effects from MSAT emissions in the project area. The concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated; however, one can examine MSAT emissions in the project area and estimate the relative impacts of MSAT emissions under different scenarios. In California, vehicle emissions are estimated using the EMFAC2011 program published by CARB, which recently replaced EMFAC2007. Because EMFAC2007 and EMFAC2011 do not calculate MSAT emissions, Caltrans and UC Davis created CT-EMFAC which is an interpretation of the

EMFAC2007 model to include additional emission factors and emissions of MSATs. CT-EMFAC simplifies the process of getting composite emission factors and extends EMFAC to include the priority mobile source air toxics, which otherwise require off-model speciation of Total Organic Gases (TOG) when the standard EMFAC model is used. Additionally, it should be noted that the project analysis commenced before October 2011. Environmental studies that started before October 2011 are not required to use EMFAC2011.

The emission factors from CT-EMFAC are pollutant emissions in grams per mile of vehicle travel. Multiplying these emission factors by the number of vehicle miles traveled (VMT) in the project area provides an estimate of the total emissions from vehicles traveling through the project area. For the purposes of the following MSAT analysis, VMT for Horizon Year 2040 No Build and Horizon Year 2040 Build Alternatives 7A and 9 scenarios were based on the traffic volumes and VMT data within the *SR-57/Lambert Road Interchange Project Traffic Analysis*. MSAT emissions were modeled based on the freeway mainline and ramp data presented in the Traffic Study.

Table 2.3.6-5, MSAT Emissions, presents the estimated MSAT emissions from traffic within the project study area. The data indicates that MSAT emissions would not vary significantly between future No Build and Build Alternatives. CARB has found that DPM poses the greatest cancer risks among all identified air toxics. Diesel trucks contribute more than half of the total diesel combustion sources; however, CARB has adopted a Diesel Risk Reduction Plan (DRRP) with control measures that would reduce the overall DPM emissions by approximately 85 percent from 2000 to 2020. These reduction measures are not reflected in the CT-EMFAC emission factors used in the analysis above. Therefore, future DPM emissions would be reduced beyond what is indicated in Table 2.3.6-5. In addition, total toxic risk from diesel exhaust may only be exposed for a much shorter duration. Further, DPM is only one of many environmental toxics, and those of other toxics and other pollutants in various environmental media may overshadow its cancer risks. Thus, while diesel exhaust may pose potential cancer risks, most receptors' short-term exposure would cause only minimal harm, and these risks would also greatly diminish in the future operating years of the proposed project due to planned emission control regulations.

Table 2.3.6-5 MSAT Emissions

Mobile Source Air Toxins	Emissions (pounds per day)[1]				
	Existing	Opening Year		Horizon Year	
		No Build	Build Alternative 7A and 9[2]	No Build	Build Alternative 7A and 9[2]
Diesel Particulate Matter	39.08	27.31	27.21	19.79	19.58
Formaldehyde	19.28	13.19	13.14	7.50	7.42
Butadiene	3.09	2.02	2.01	0.86	0.86
Benzene	15.94	10.86	10.82	5.22	5.16
Acrolein	0.68	0.45	0.45	0.19	0.18
Acetaldehyde	7.31	5.06	5.04	3.10	3.06

Source: Air Quality Assessment, 2013

[1] Emissions were calculated using CR-EMFAC, as the project analysis commenced before October 2011. Additionally, the recently released EMFAC2011 does not include MSATs.

[2] No difference is shown in the VMT for both Build alternatives due to the standardized differences for all ramps in the traffic modeling. As a result, the ramp configurations in each build alternative would have the same distance and VMT would be the same.

The purpose of the proposed interchange modification is to provide better traffic flow for both truck traffic and general traffic traveling through the project area. This project would not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the No Build scenario. Moreover, U.S. EPA regulations for vehicle engines and fuels would cause overall MSATs to decline significantly over the next 20 years. FHWA predicts MSATs will decline in the range of 57 percent to 87 percent, from 2000 to 2020, based on regulations now in effect. This would both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project.

Naturally Occurring Asbestos

Chrysotile and amphibole asbestos (such as tremolite) occur naturally in certain geologic settings in California, most commonly in association with ultramafic rocks and along associated faults. Asbestos is a known carcinogen and inhalation of asbestos may result in the development of lung cancer or mesothelioma. The asbestos contents of many manufactured products have been regulated in the U.S. for a number of years. For example, CARB has regulated the amount of asbestos in crushed serpentinite used in surfacing applications, such as for gravel on unpaved roads, since 1990. In 1998, new concerns were raised about possible health hazards from activities that disturb rocks and soil containing asbestos and may result in the generation of asbestos laden dust. These concerns recently lead CARB to revise their asbestos limit for crushed serpentinite and ultramafic rock in surfacing applications from 5 percent to less than 0.25 percent, and to adopt a new rule requiring best practices dust control measures for activities that disturb rock and soil containing naturally occurring asbestos (NOA).

The California Geological Survey Geological Map Index was searched for available geological maps, which cover the project study area and surrounding areas. These geological maps indicate geological formations, which are overlaid on a topographic map. Some maps focus on specific issues (i.e., bedrock, sedimentary rocks, etc.), while others may identify artificial fills (including landfills). Geological maps can be effective in estimating permeability and other factors that influence the spread of contamination. According to the California Geological Survey (formerly the California Division of Mines and Geology [CDMG]) document entitled *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring*

Asbestos Report (August 2000), the proposed project is not located in an area where NOA is likely to be present.

NOA in bedrock is typically associated with serpentine and peridotite deposits. Note that during demolition activities, the likelihood of encountering structural asbestos is low due to the nature of the demolished materials. The material would consist primarily of concrete. Therefore, the potential for NOA to be present within the project limits is considered to be low. Furthermore, prior to the commencement of construction, qualified geologists would further examine the soils and makeup of the existing structure. Should the project geologist encounter asbestos during the analysis, proper steps shall be executed to handle the materials.

2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required for operational air quality impacts, as the proposed project would not produce substantial operational air quality impacts. In addition to implementing all applicable Best Available Control Measures from the SCAQMD Rule 403 and Rule 403.1, the following avoidance and minimization measures shall be utilized to reduce and otherwise address particulate emissions during construction.

AQ-1 A Dust Control Plan shall be prepared prior to the start of construction, which shall cover all construction activities as well as all temporary construction easements. During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the SCAQMD Rule 403, as well as other State and Federal regulations.

- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day.
- All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust.
- These control techniques shall be indicated in project specifications. Compliance with this measure shall be subject to periodic site inspections by the city.
- Visible dust beyond the property line emanating from the project shall be prevented to the maximum extent feasible.

AQ-2 All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

AQ-3 The contractor shall adhere to Caltrans Standard Specifications for Construction (Sections 14-9 [Air Quality]).

2.3.6.5 Climate Change

Climate change is analyzed at the end of this chapter. Neither the United States Environmental Protection Agency (U.S. EPA) nor Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will aid decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and executive orders on climate change, the issue is addressed in a separate California Environmental Quality Act (CEQA) discussion at the end of this chapter and may be used to inform the National Environmental Policy Act (NEPA) decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

2.3.7 NOISE

2.3.7.1 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.

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 an adverse noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The CEQA noise analysis is included at the end of this section.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with the FHWA (and the California Department of Transportation [Caltrans], as assigned) involvement, 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 include 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 2.3.7-1 lists the noise abatement criteria for use in the NEPA 23 CFR 772 analysis.

Figure 2.3.7-1, Noise Levels of Common Activities, 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.

Table 2.3.7-1 Activity Categories and Noise Abatement Criteria

Activity Category	Activity $L_{eq}(h)$ [1]	Evaluation Location	Description of Activities
A	57	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[2]	67	Exterior	Residential
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	—	—	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	—	—	Undeveloped lands that are not permitted.

Source: Noise Study Report, April 2013

1 The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are dBA.

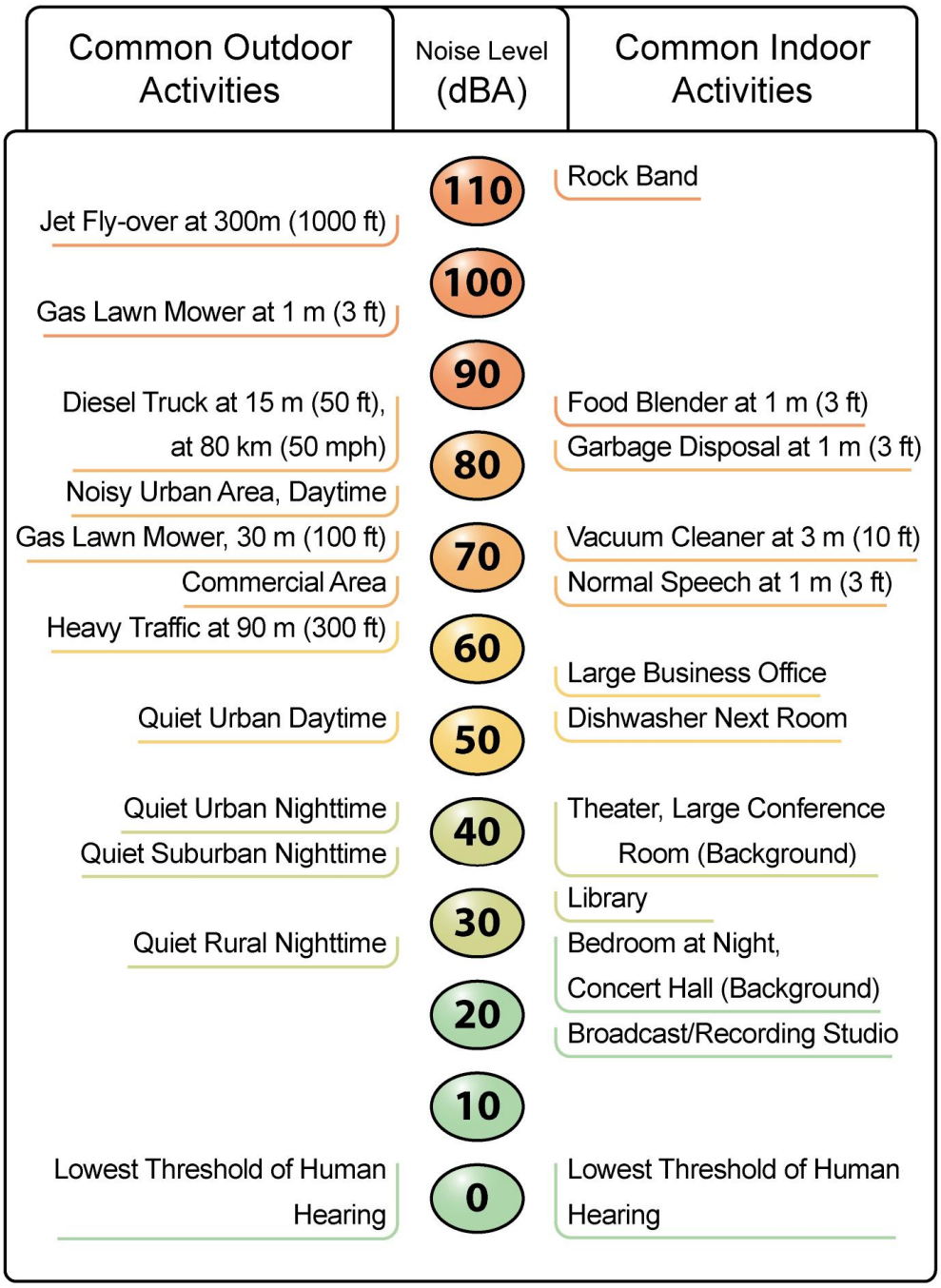
2 Includes undeveloped lands permitted for this activity category.

dBA = A-weighted decibels

FHWA = Federal Highway Administration

$L_{eq}(h)$ = equivalent continuous sound level per hour

Figure 2.3.7-1 Noise Levels of Common Activities



According to Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 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 would be incorporated into the project plans and specifications. If pertinent parameters change substantially during the final design, preliminary noise barrier designs may be modified, or eliminated, from the final project. A final decision on the construction of the noise abatement will be made upon completion of the public involvement process and the final project design process. This document discusses noise abatement measures that would likely be incorporated in the project.

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 7 dBA in the future noise level must be achieved for an abatement measure to be considered reasonable. Other considerations include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance and the cost per benefited residence.

2.3.7.2 Affected Environment

Information in this section is based upon the Noise Study Report dated April 2013 and the Noise Abatement Decision Report (NADR) dated February 2014.

Methodology

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the project. Land uses in the project area were categorized by land use type, activity category (depicted in Table 2.3.7-1), and the frequency of human use. The geographical features of the project area relative to nearby existing land uses were also identified during the field investigation.

Fifteen short-term measurement locations were selected to represent Activity Categories B, C, and E land uses within the project area. One long-term measurement site was selected to capture the diurnal traffic noise level pattern in the project area. Short-term measurement locations were selected to serve as representative modeling locations. Other non-measurement locations were selected as modeling locations. A total of 130 receptor locations were modeled to represent Activity Categories B through F land uses in the project area; refer to Table 2.3.7-1 for category definitions. Figures 2.3.7-2a to 2.3.7-2d, Monitoring and Modeled Receptor Locations, show the short-term and long-term measurement locations for the proposed project. Figures 2.3.7-3a to 2.3.7-3d, Alternative 7A - Modeled Noise Barriers and Receptor Locations, and Figures 2.3.7-4a to 2.3.7-4d, Alternative 9 - Modeled Noise Barriers and Receptors, show the location of the modeled receptors.

Short-term noise measurements were conducted at representative receptor locations to calibrate the noise prediction model and document ambient noise levels. It should be noted that ST-1, ST-3, and ST-4 short-term noise level measurements and their concurrent traffic counts located on the southeast quadrant of the SR-57/Lambert Road interchange were obtained from the July 2007 Traffic Noise Impact Technical Report for the SR-57 Northbound Widening Project in order to reflect the existing conditions. Due to the presence of K-rails and changes already done on the southeast quadrant, the existing conditions could not be obtained.

Measurements were taken in accordance with the procedures cited in the TeNS. All noise measurements were made using the Larson Davis Model 831 Type 1 (Serial No. 2441) and Larson Davis Model 824 Type 1 (Serial No. 1612) sound level meters. The following measurement procedures were utilized:

- Calibrate sound level meter.
- Set up sound level meter at a height of 5 feet.
- Commence noise monitoring.
- Collect site-specific data, such as date, time, direction of traffic, vehicle speed, and the location of the sound level meter relative to any existing feature.
- Count passing vehicles for a period of 15 to 20 minutes during noise level measurement. Vehicles are split into three categories: automobiles, medium trucks, and heavy trucks.
- Stop measurement after 15 to 20 minutes.
- Calibrate sound level meter.
- Proceed to next monitoring site and repeat.

The traffic counts were expanded to hourly volumes (multiplied by three or four to normalize the results to hourly values) and entered into Traffic Noise Model (TNM) 2.5 for each monitoring site. The monitoring results were used to calibrate the model outputs.

Traffic counts, observed vehicle speeds, and measured noise levels were used to calibrate the TNM 2.5 under existing roadway conditions. The observed vehicles speeds were obtained by driving on the roadway. The existing and future traffic noise levels at all 130 receptor locations were modeled using the worst-case traffic operations (prior to speed degradation) for the SR-57 mainline, HOV, and auxiliary lanes. The worst-case traffic condition is assumed to be level of service (LOS) D/E, which corresponds to 1,950 vehicles per lane per hour (vplph) on the SR-57 mainline, 1,500 vplph on SR-57 high occupancy vehicle (HOV) lanes, and 1,000 vplph on SR-57 auxiliary lanes. Traffic noise levels for SR-57 on- and off-ramps and local roadways (i.e., Lambert Road and State College Boulevard) were modeled using either the worst-case traffic volume or the peak-hour traffic volume, whichever was lower.

TNM 2.5 is sensitive to the volume of trucks on the roadway because trucks contribute disproportionally to traffic noise. Vehicle distributions on all roadways within the project area were based on traffic counts collected during ambient noise level measurements. Vehicle distributions on SR-57 were not obtained from Caltrans' *Annual Average Daily Trucks on the California State Highway System* (2010) because vehicle distributions obtained from traffic counts collected during ambient noise level measurements contained higher truck percentages.

Setting

Developed and undeveloped land uses were identified in the proposed project vicinity through land use maps, aerial photography, and a field inspection. Land Uses within each of the four quadrants of the SR-57/Lambert Road Interchange are described in greater detail below:

Southeast quadrant: Land uses within this area include single- and multi-family residences, a car wash facility, and office uses. These uses are approximately 25 to 50 feet lower in elevation than SR-57. An existing 8-foot high wall is located along the edge of shoulder and shields a number of single- and multi-family residences from traffic noise.

Southwest quadrant: Land uses in this area include single-family residences and office uses located approximately 30 to 40 feet lower in elevation than SR-57. An existing 6.3-foot high wall is located along the edge of shoulder and shields a number of the single-family residences from traffic noise.

Northeast quadrant: Land uses in this area include multi-family residences, a school, and commercial and office uses. Land uses nearest to Lambert Road are located approximately 10 feet lower in elevation than SR-57. Further north from Lambert Road, land uses are located approximately 100 feet higher in elevation than SR-57.

Northwest quadrant: Land uses in this area include single-family residences and a church. Land uses nearest to Lambert Road are located approximately 20 feet lower in elevation than SR-57. Land uses further north from Lambert Road are located approximately 135 feet higher in elevation than SR-57. An existing 10-foot high wall located along the right-of-way shields residences along Olive Avenue and Mango Street from traffic noise. An existing 5.5 to 6.5-foot high wall located along the private property line shields residences along Davidson Court, Chisholm Court, Buchanan Court, and Cameron Court from traffic noise. An existing 7.3-foot high wall located along the private property line shields residences along Newhall Terrace from traffic noise.

The generalized land use data and location of particular sensitive receptors were the basis for the selection of the noise monitoring and analysis sites. Land uses in the proposed project area were categorized by land use type, activity category, and the frequency of human use. The closest sensitive receptors are located within 50 feet from proposed project construction areas. Refer to Figures 2.3.7-3a to 2.3.7-3d, Alternative 7A – Modeled Noise Barriers and Receptor Locations, and 2.3.7-4a to 2.3.7-4d, Alternative 9 - Modeled Noise Barriers and Receptors, which show surrounding land uses and existing wall locations.

Existing Noise Levels

The existing conditions for the proposed project are the conditions before the construction of the SR-57 Northbound Widening Project. The existing noise environment in the project area is based on short-term and long-term 24-hour traffic noise level measurements. Table 2.3.7-2, Short-Term Ambient Noise Monitoring Results, contains the result of the short-term noise level measurements. These short-term noise measurements were used to calibrate the noise model and to predict the noise levels at all 130 modeled receptors in the project area.

Table 2.3.7-2 Short-Term Ambient Noise Monitoring Results

Monitor Number	Date	Start Time	Duration	dBA Leq
ST-1[a]	11/30/2005	10:01 AM	20 minutes	63.9
ST-2	1/18/2012	10:53 AM	15 minutes	66.3
ST-3[a]	11/30/2005	10:38 AM	20 minutes	59.3
ST-4[a]	11/30/2005	11:10 AM	20 minutes	62.3
ST-5	1/18/2012	10:53 AM	15 minutes	60.1
ST-6	1/18/2012	10:14 AM	15 minutes	61.4

Table 2.3.7-2 Short-Term Ambient Noise Monitoring Results (Continued)

Monitor Number	Date	Start Time	Duration	dBA Leq
ST-7	1/18/2012	10:14 AM	15 minutes	74.1
ST-8	1/18/2012	3:35 PM	15 minutes	50.5
ST-9	1/18/2012	3:35 PM	15 minutes	55.2
ST-10	1/18/2012	11:33 AM	15 minutes	59.6
ST-11	1/18/2012	11:33 AM	15 minutes	60.3
ST-12	1/18/2012	2:45 PM	15 minutes	45.7
ST-13	1/18/2012	2:45 PM	15 minutes	53.3
ST-14	1/18/2012	1:35 PM	15 minutes	62.2
ST-15	1/18/2012	1:35 PM	15 minutes	63.9

Source: Noise Study Report, 2013
dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels
[a] Noise level measurements and concurrent traffic counts represented by ST-1, ST-3, and ST-4 were obtained from the July 2007 Traffic Noise Impact Technical Report for the State Route (SR) 57 Northbound Widening Project because the existing conditions for the proposed project are the conditions before the construction of the SR-57 Northbound Widening Project. Existing conditions noise level measurements could not be obtained because K-rails were already placed along the edge of shoulder on the northbound side of SR-57 and changes to the site were already made as part of the SR-57 Northbound Widening Project.

The purpose of long-term monitoring is to gather sound level data over a 24-hour period to find the noisiest hour for traffic and describe hourly sound levels throughout the day, rather than absolute levels at a specific receptor location. Table 2.3.7-3, Long-Term Ambient Noise Level Measurement Results, shows that traffic noise peaks during the 6 PM to 7 PM hour.

Table 2.3.7-3 Long-Term Ambient Noise Level Measurement Results

	Date	Start Time	dBA Leq
1	1/18/2012	10:24 AM	58.2
2	1/18/2012	11:00 AM	58.6
3	1/18/2012	12:00 PM	58.5
4	1/18/2012	1:00 PM	58.1
5	1/18/2012	2:00 PM	58.8
6	1/18/2012	3:00 PM	58.6
7	1/18/2012	4:00 PM	58.7
8	1/18/2012	5:00 PM	59.7
9	1/18/2012	6:00 PM	**60.3**
10	1/18/2012	7:00 PM	59.4
11	1/18/2012	8:00 PM	58.5
12	1/18/2012	9:00 PM	57.3
13	1/18/2012	10:00 PM	57.3
14	1/18/2012	11:00 PM	56.6
15	1/19/2012	12:00 AM	54.7
16	1/19/2012	1:00 AM	53.4
17	1/19/2012	2:00 AM	53.1
18	1/19/2012	3:00 AM	53.4
19	1/19/2012	4:00 AM	56.8
20	1/19/2012	5:00 AM	59.8
21	1/19/2012	6:00 AM	59.6
22	1/19/2012	7:00 AM	58.9
23	1/19/2012	8:00 AM	59.5
24	1/19/2012	9:00 AM	59.4
25	1/19/2012	10:00 AM	58.4

Source: Noise Study Report, 2013
dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels
Bold numbers represent peak traffic noise hour

As discussed above, existing noise levels were modeled using the worst-case traffic volumes for the SR-57 mainline, high occupancy vehicle (HOV), and auxiliary lanes. Traffic noise levels for

SR-57 ramps and local roadways (Lambert Road and State College Boulevard) were modeled using either the worst-case traffic volume or the peak-hour traffic volume, whichever was lower. Table 2.3.7-5, Predicted Traffic Noise Levels, dBA L_{eq}, provides the existing noise levels, with the bold numbers representing existing levels that approach or exceed the NAC. Under existing conditions, of the 130 modeled receptor locations, seven receptors approach or exceed the 67 dBA continuous equivalent sound level (L_{eq}) NAC and one receptor approaches or exceeds the 70 dBA L_{eq} NAC.

2.3.7.3 Environmental Consequences

FHWA defines a Type 1 project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, the physical alternation of an existing highway where there is either substantial horizontal or substantial vertical alteration, or other activities that are defined in the Protocol as a Type 1 project. The proposed project is considered a Type 1 project because it would substantially alter the horizontal or vertical alignment of the SR-57/Lambert Road interchange.

Construction (Short-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

Short-term noise impacts would occur during proposed project construction from construction crew commutes and transport of construction equipment and materials to the proposed project site. As a result, noise levels on access roads leading to the site would be incrementally increased. Heavy equipment for grading and construction activities would be moved onto the proposed project site and would remain for the duration of each construction phase. Such project-related construction equipment would therefore not contribute to daily traffic volumes in the proposed project vicinity. A high single-event noise exposure potential at a maximum level of 87 dBA maximum sound level (L_{max}) from trucks passing at 50 feet would exist; however, the projected construction traffic would be minimal when compared to existing traffic volumes on SR-57, Lambert 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 adverse.

Short-term noise impacts would also occur from noise generated during construction of the improvements and activities within the construction staging areas. Each stage of construction has its own mix of equipment and consequently its own noise characteristics. Each sequential phase would change the character of the noise generated and the noise levels along the proposed project alignment as construction occurs. 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 2.3.7-4, Typical Construction Equipment Noise Levels, lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

Table 2.3.7-4 Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels (dBA Lmax at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA Lmax at 50 ft)
Pile drivers	81–96	93
Rock drills	83–99	96
Jackhammers	75–85	82
Pneumatic tools	78–88	85
Pumps	74–84	80
Scrapers	83–91	87
Haul trucks	83–94	88
Cranes	79–86	82
Portable generators	71–87	80
Rollers	75–82	80
Dozers	77–90	85
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 Study Report, 2013
dBA = A-weighted decibels
ft = feet
Lmax = maximum instantaneous sound level

Typical noise levels at 50 feet from an active construction area range up to 90 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 the proposed project 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 feet from the active construction area for the grading phase. As seen in Table 2.3.7-4, the maximum noise level generated by each earthmover is assumed to be approximately 86 dBA L_{max} at 50 feet from the earthmover in operation. Each bulldozer would generate approximately 85 dBA L_{max} at 50 feet. The maximum noise level generated by water trucks and pickup trucks is approximately 86 dBA L_{max} at 50 feet 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 residence during this phase of construction would be 90 dBA L_{max} (at a distance of 50 feet from an active construction area).

The closest sensitive receptor locations are located within 50 feet from the proposed project construction areas. Therefore, these receptor locations may be subject to short-term noise levels

reaching 90 dBA Lmax generated by construction activities within the proposed project area for both Build Alternatives 7A and 9. These impacts are short-term in nature and would cease upon construction completion. Avoidance and Minimization Measures include compliance with the construction hours specified in Caltrans' Standard Special Provisions (SSP) and would be required to minimize construction noise impacts on sensitive land uses adjacent to the project site. Construction noise is regulated by Caltrans' Standard Specifications in Section 14-8.02, "Noise Control". Noise control shall conform to the provisions in Section 14-8.02. The nighttime noise level from the contractor's operations, between the hours of 9:00 PM and 6:00 AM, shall not exceed 86 dBA at a distance of 50 feet. The contractor should use an alternative warning method instead of a sound signal unless required by safety laws. In addition, the contractor shall equip all internal combustion engines with the manufacturer-recommended mufflers and shall not operate any internal combustion engine on the job site without the appropriate muffler.

No Build Alternative

The No Build Alternative assumes that no improvements are made to the SR-57/Lambert Road interchange. Under the No Build Alternative, no construction phase impacts would occur, thus removing the potential of increased noise levels during construction.

Operation (Long-Term) Impacts

Both Build Alternatives (Alternatives 7A and 9)

The primary source of noise in the proposed project area is from traffic on SR-57 and Lambert Road. Long-term (24-hour) noise measurements were taken at one location within the proposed project area to document the peak traffic noise hour, and short-term (15- to 20-minute) noise measurements were conducted at fifteen representative receptor locations within the proposed project area to document the existing noise environment, as identified in the Noise Study Report. The long-term noise measurement was performed at one location at 442 Woodland Avenue, Brea, California. The measurement was taken from 10:24 AM on Wednesday, January 18, 2012, to 11:00 AM on Thursday, January 19, 2012. All noise measurements were made using the Larson Davis Model 831 Type 1 (Serial No. 2441) and Larson Davis Model 824 Type 1 (Serial No. 1612) sound level meters. All fifteen short-term noise level measurements were used to calibrate the noise prediction model with concurrent traffic counts and observed vehicle speeds. After the traffic model was calibrated, a total of 130 representative receptors were modeled and evaluated for potential traffic noise impacts.

As the SR-57 Northbound Widening Project is recently completed, the Noise Study Report utilized short-term noise level measurements and the concurrent traffic counts from the July 2007 Traffic Noise Impact Technical Report for the SR-57 Northbound Widening Project on the southeast corner of the SR-57 and Lambert Road in order to reflect the existing conditions for the proposed project without the SR-57 Northbound Widening Project. Current noise level measurements for model calibration could not be obtained because K-rails were already placed along the edge of shoulder on the northbound side of SR-57, and changes to the site were already made as part of the SR-57 Northbound Widening Project. The existing conditions for the proposed project were considered to be the conditions before the construction of the SR-57 Northbound Widening Project.

As stated previously, existing noise levels were modeled using the worst-case traffic volumes for the SR-57 mainline, HOV, and auxiliary lanes. Traffic noise levels for SR-57 ramps and local

roadways (Lambert Road and State College Boulevard) were modeled using either the worst-case traffic volume or the peak-hour traffic volume, whichever was lower.

If traffic noise impacts at a sensitive receptor location are predicted to "approach or exceed" the NAC, or if the predicted traffic noise level is 12 dBA or more higher than the corresponding existing modeled noise level at the sensitive receptor location analyzed, noise abatement measures must be considered.

Table 2.3.7-5, Predicted Traffic Noise Levels, dBA L_{eq}, shows the results of the modeled traffic noise levels for existing conditions, future No Build conditions, and future conditions under both Build Alternatives 7A and 9. No substantial noise increase of 12 dBA or more over the corresponding modeled existing noise level would occur under either Build Alternative 7A (Preferred Alternative) or Build Alternative 9. Of the 130 modeled receptors, one receptor (outdoor eating area associated with a restaurant) would approach or exceed the 72 dBA equivalent continuous sound level (L_{eq}) NAC for both Build Alternatives 7A and 9. Figures 2.3.7-3a to 2.3.7-3d, Alternative 7A - Modeled Noise Barriers and Receptor Locations, and Figures 2.3.7-4a to 2.3.7-4d, Alternative 9 - Modeled Noise Barriers and Receptors, show the location of the modeled receptors. The following receptor location would be, or would continue to be, exposed to noise levels that approach or exceed the NAC for both Build Alternatives:

- **Receptor R-65**: This receptor location represents an outdoor eating area associated with a restaurant located on the northeastern quadrant of the SR-57/Lambert Road interchange. Currently, there is an existing four-foot-high combination block wall and Plexiglas surrounding the outdoor eating area. One noise barrier (NB No. 1) was modeled along the State right-of-way to shield the outdoor eating area.

Noise abatement measures were evaluated for receptors located within the proposed project area that would be or would continue to be exposed to traffic noise levels approaching or exceeding the NAC. One noise barrier (NB No. 1) was evaluated along the state right-of-way for both Build Alternatives 7A and 9. Tables 2.3.7-6 and 2.3.7-7 show the noise levels and noise barrier modeling results for Build Alternatives 7A and 9, respectively. It was determined that NB No. 1 was capable of reducing noise levels by 5 dBA or more for both Build Alternatives 7A and 9, as required to be feasible, at a length of 207 feet and heights of 8, 10, 12, 14, and 16 feet, as shown in Table 2.3.7-8

Table 2.3.7-9, Total Reasonable Allowance per Noise Barrier, provides the following information regarding the feasible noise barrier: height, approximate length, noise attenuation, number of benefited units/receptor, reasonable allowance per unit/receptor, the total reasonable allowance, and estimated noise barrier construction cost. As identified in the Noise Abatement Decision Report (NADR), prepared in February 2014, and shown in Table 2.3.7-9, the total reasonable allowance for NB No. 1 is $165,000, as there are three receptors benefiting from the barrier for all feasible heights. In addition, in accordance with the Protocol, each sound barrier must provide at least 7 dBA of noise reduction at one or more benefited receivers to be considered reasonable. Therefore, if the estimated noise barrier construction cost exceeds the total reasonable allowance or is not predicted to provide at least dBA of noise reduction at one or more benefited receptors, the noise barrier is determined to be not reasonable. However, if the estimated noise barrier construction cost is within the total reasonable allowance and is predicted to provide at least 7 dBA of noise reduction at one or more benefited receptors, the noise barrier is determined to be reasonable.

NB No. 1 with a height of eight feet under both Build Alternatives 7A and 9, was determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more. NB No. 1 at heights of 10, 12, 14, and 16 feet were determined to be reasonable because they would reduce noise levels by 7 dBA or more and the estimated noise barrier construction cost would not exceed the total reasonable allowance. The implementation of the abatement measure requiring a noise barrier (N-3) would reduce impacts at the R-65 location.[10]

The effects of parallel barriers were evaluated in locations where noise barriers are located on both sides of the roadway, as reflective noise would have the potential to increase noise levels and degrade the performance of the modeled noise barriers (i.e., parallel barrier degradation). Parallel barrier configurations that have a roadway width to noise barrier height ratio of 15:1 (width/height) or less would have perceptible noise increases, due to multiple reflections that would degrade the performance of the modeled noise barriers. Evaluation of barriers (for NB No. 1 and Existing Wall (EW) No. 8) determined that no significant barrier performance degradation would occur due to parallel barriers along SR-57 under both Build Alternative 7A (Preferred Alternative) and Build Alternative 9.

No Build Alternative

Table 2.3.7-5, Predicted Traffic Noise Levels, dBA L_{eq}, shows the results of the modeled traffic noise levels for existing conditions and future conditions under the No Build Alternative. The No Build Alternative assumes that no improvements are made to the SR-57/Lambert Road interchange. The No Build Alternative would include the improvements being provided by the SR-57 Northbound Widening Project, which is recently constructed; however, no change in traffic noise levels would occur under the No Build Alternative.

The No Build Alternative would produce no immediate environmental impacts other than routine roadway maintenance within the proposed project area; however, compared to the Build Alternatives 7A or 9, the No Build Alternative would not provide enhanced circulation or public safety benefits within the area and would not meet the defined purpose and need for the proposed project.

2.3.7.4 Avoidance, Minimization, and/or Abatement Measures

Minimization Measures for Short-Term Impacts

N-1 To minimize the construction noise impacts for sensitive land uses adjacent to the proposed project site, compliance with Caltrans' Standard Specifications Section 14-8.02 "Noise Control" will be required.

N-2 Each internal combustion engine used for any purpose on the construction of the proposed project or related to the proposed project will be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine will be operated on the proposed project site without such a muffler.

[10] As part of the public review period for the proposed project, the property owner(s) and non-owner occupant will be sent a sound wall survey letter to request their opinion on whether or not they would be in favor of a noise barrier and what barrier height they prefer, based on the range of reasonable and feasible heights identified in the Noise Study Report and Nosie Abatement Decision Report.

Abatement Measure for Long-Term Impacts as Required under NEPA

N-3 To minimize operation impacts for both Build Alternatives 7A and 9, noise barrier number 1 (NB No. 1) will be considered in the project design at the designated location. Preliminary noise barrier dimensions on the physical locations, lengths, and range of heights of the noise barrier will be provided in the analysis. Final heights and lengths for NB No. 1 shall be determined during final design and public review. If pertinent parameters change substantially during the final project design, preliminary noise barrier designs may be modified, added, or eliminated from the final project.

2.3.7.5 CEQA Noise Analysis

To determine whether a noise impact is significant under the California Environmental Quality Act (CEQA), the baseline noise level and the build noise level are compared. Under CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected; and, the absolute noise level.

Based on Section 7 of the Protocol, the Noise Study Report prepared for the proposed project contains existing noise levels and future predicted noise levels for the No Build Alternative and the Build Alternatives 7A and 9. The existing noise levels and future predicted noise levels are also provided in Table 2.3.7-5, Predicted Traffic Noise Levels, dBA L_{eq}, below. All data, analysis, and information needed to satisfy the requirements of CEQA have been provided in the Noise Study Report.

Build Alternative 7A (Preferred Alternative)

Of the 130 receptors, one receptor location (R-65) would be, or would continue to be, exposed to noise levels that approach or exceed the NAC for Build Alternative 7A (Preferred Alternative), as shown in Table 2.3.7-5.

- Receptor 65 existing noise level is 76.2 dBA and the predicted noise level is 76.1. A decrease of 0.1 dBA.

The predicted noise level at R-65, under Build Alternative 7A (Preferred Alternative), would decrease by 0.1 dBA. A change of 3 dBA would barely be perceptible to the human ear. Thus, at R-65, the noise level perception would remain the same. The remaining 129 receptors would have noise levels that would be below the NAC criteria. In addition, these 129 receptors would not result in a noise level change of 3 dBA. The largest increase in noise levels would occur at R-36, with an increase of 2.1 dBA, resulting in an overall predicted noise level of 61.0 dBA. The largest decrease in noise levels would occur at R-20, with a decrease of 2.9 dBA for a predicted noise level of 57.8 dBA.

Therefore, under CEQA, no significant noise impacts would occur as a result of Build Alternative 7A (Preferred Alternative), and no mitigation is required. However, under NEPA, 23 CFR 772, because the noise levels at this receptor already approaches or exceeds the noise abatement criteria of 72 dBA, noise abatement would need to be considered, as discussed above.

Build Alternative 9

Of the 130 receptors, one receptor location (R-65) would be, or would continue to be, exposed to noise levels that approach or exceed the NAC for Build Alternative 9, as shown in Table 2.3.7-5.

- Receptor 65 existing noise level is 76.2 dBA and the predicted noise level is 75.9. A decrease of 0.3 dBA.

The predicted noise level at R-65, under Build Alternative 9, would decrease by 0.3 dBA. A change of 3 dBA would barely be perceptible to the human ear. Thus, at R-65, the noise level perception would remain the same. The remaining 129 receptors would have noise levels that would be below the NAC criteria. In addition, these 129 receptors would not result in a noise level change of 3 dBA. The largest increase in noise levels would occur at R-8, R-9, and R-12, with an increase of 1.5 dBA, resulting in an overall predicted noise level of 64.5 dBA at R-8, 61.5 dBA at R-9, and 61.1 dBA at R-12. The largest decrease in noise levels would occur at R-46, with a decrease of 2.2 dBA for a predicted noise level of 63.9 dBA.

Therefore, under CEQA, no significant noise impacts would occur as a result of Build Alternative 9, and no mitigation is required. However, under NEPA, 23 CFR 772, because the noise levels at this receptor already approach or exceed the noise abatement criteria of 72 dBA, noise abatement would need to be considered, as discussed above.

No Build Alternative

Of the 130 receptors, receptor locations R-46, R-53, R-54, R-57, R-58, and R-65 would be, or would continue to be, exposed to noise levels that approach or exceed the NAC for the No Build Alternative, as shown in Table 2.3.7-5.

- Receptor 46 existing noise level is 66.1 dBA and the predicted noise level is 66.1. No change in dBA would occur.
- Receptor 53 existing noise level is 67.9 dBA and the predicted noise level is 67.8. A decrease of 0.1 dBA.
- Receptor 54 existing noise level is 66.0 dBA and the predicted noise level is 66.1. An increase of 0.1 dBA.
- Receptor 57 existing noise level is 66.0 dBA and the predicted noise level is 66.1. An increase of 0.1 dBA.
- Receptor 58 existing noise level is 66.2 dBA and the predicted noise level is 66.3. An increase of 0.1 dBA.
- Receptor 65 existing noise level is 76.2 dBA and the predicted noise level is 76.2. No change in dBA would occur.

The predicted noise level under the No Build Alternative would decrease by 0.1 dBA at R-53, would increase by 0.1 dBA at R-54, R-57, and R-58, and would have no change in dBA at R-46 and R-65; however, an increase or decrease of 3 dBA would barely be perceptible to the human ear. Therefore, under CEQA, no significant noise impacts would occur as a result of the No Build Alternative, and no mitigation is required. However, under NEPA, 23 CFR 772, because the noise levels at this receptor already approach or exceed the noise abatement criteria of 67 dBA and 72 dBA (R-65), noise abatement would need to be considered, as discussed above.

Table 2.3.7-5 Predicted Traffic Noise Levels, dBA Leq

Receptor No.	Location	Noise Abatement Criteria	Modeled Existing[1]	Future No Build	Alternative 7A	Change from Existing Noise Level	Alternative 9	Change from Existing Noise Level
R-1[2]	Birch Street	B (67)	**66.8**[3]	65.6	65.5	-1.3[4]	65.5	-1.3[4]
R-2[2]	Birch Street	B (67)	65.6	65.7	65.4	-0.2[4]	65.4	-0.2[4]
R-3[2]	Birch Street	B (67)	64.5	65.4	65.2	0.7	65.1	0.6
R-4[2]	Birch Street	B (67)	**66.1**	65.4	65.3	-0.8[4]	65.3	-0.8[4]
R-5[2]	Birch Street	B (67)	65.9	65.4	65.4	-0.5[4]	65.4	-0.5[4]
R-6[2]	Birch Street	B (67)	65.7	65.6	65.5	-0.2[4]	65.6	-0.1[4]
R-7[2]	Birch Street	B (67)	63.2	64.0	64.0	0.8	64.0	0.8
R-8[2]	Birch Street	B (67)	63.0	64.5	64.4	1.4	64.5	1.5
R-9[2]	Birch Street	B (67)	60.0	61.6	61.6	1.6	61.5	1.5
R-10[2]	Birch Street	B (67)	62.4	63.6	63.6	1.2	63.6	1.2
R-11[2]	Birch Street	B (67)	58.3	59.7	59.7	1.4	59.7	1.4
R-12[2]	Birch Street	B (67)	59.6	61.1	61.1	1.5	61.1	1.5
R-13[2]	Birch Street	B (67)	59.9	59.8	59.5	-0.4[4]	59.7	-0.2[4]
R-14[2]	State College Boulevard	E (72)	69.1	69.2	69.0	-0.1[4]	69.0	-0.1[4]
R-15[2]	State College Boulevard	E (72)	68.5	68.5	67.6	-0.9[4]	67.6	-0.9[4]
R-16[2]	Harvest Lane	B (67)	63.9	62.7	62.6	-1.3[4]	62.7	-1.2[4]
R-17[2]	Harvest Lane	B (67)	60.8	59.2	58.4	-2.4[4]	59.2	-1.6[4]
R-18[2]	Wisteria Lane	B (67)	62.1	60.4	59.6	-2.5[4]	60.4	-1.7[4]
R-19[2]	Wisteria Lane	B (67)	58.8	58.0	56.8	-2.0[4]	57.9	-0.9[4]
R-20[2]	Summerfield Circle	B (67)	60.7	59.0	57.8	-2.9[4]	58.9	-1.8[4]
R-21[2]	Summerfield Circle	B (67)	58.6	58.4	56.5	-2.1[4]	58.2	-0.4[4]
R-22[2]	Harvest Lane	B (67)	63.7	63.7	63.5	-0.2[4]	63.8	0.1
R-23[2]	Harvest Lane	B (67)	62.1	60.1	59.5	-2.6[4]	60.1	-2.0[4]
R-24[2]	Wisteria Lane	B (67)	62.9	61.3	60.8	-2.1[4]	61.3	-1.6[4]
R-25[2]	Wisteria Lane	B (67)	58.2	57.4	56.5	-1.7[4]	57.4	-0.8[4]
R-26[2]	Summerfield Circle	B (67)	60.7	59.3	58.6	-2.1[4]	59.3	-1.4[4]
R-27[2]	Summerfield Circle	B (67)	58.7	58.4	56.5	-2.2[4]	58.2	-0.5[4]
R-28[2]	Wisteria Lane	B (67)	62.4	61.4	61.0	-1.4[4]	61.3	-1.1[4]
R-29[2]	Summerfield Circle	B (67)	61.2	60.0	59.4	-1.8[4]	59.9	-1.3[4]
R-30[2]	Associated Road	B (67)	63.2	62.8	60.6	-2.6[4]	62.9	-0.3[4]
R-31[2]	Associated Road	B (67)	63.7	63.6	--[5]	--	63.3	-0.4[4]

Table 2.3.7-5 Predicted Traffic Noise Levels, dBA Leq (Continued)

Receptor No.	Location	Noise Abatement Criteria	Modeled Existing[1]	Future No Build	Alternative 7A	Change from Existing Noise Level	Alternative 9	Change from Existing Noise Level
R-32[2]	Associated Road	B (67)	64.0	64.0	--	--	63.7	-0.3[4]
R-33[2]	Associated Road	B (67)	62.1	61.8	59.9	-2.2[4]	61.7	-0.4[4]
R-34[2]	Associated Road	B (67)	59.1	59.3	57.9	-1.2[4]	59.2	0.1
R-35[2]	Associated Road	B (67)	59.4	59.4	60.0	0.6	59.4	0.0
R-36[2]	Associated Road	B (67)	58.9	59.1	61.0	2.1	59.0	0.1
R-37[2]	Associated Road	B (67)	50.2	50.6	49.4	-0.8[4]	50.6	0.4
R-38[2]	Associated Road	B (67)	52.6	52.9	52.7	0.1	53.0	0.4
R-39[2]	Associated Road	B (67)	56.3	56.8	56.9	0.6	56.7	0.4
R-40[2]	Associated Road	B (67)	57.8	57.9	57.7	-0.1[4]	57.9	0.1
R-41[2]	Associated Road	B (67)	61.7	62.0	60.3	-1.4[4]	61.7	0.0
R-42[2]	Associated Road	C (67)	60.3	59.6	59.4	-0.9[4]	59.5	-0.8[4]
R-43[2]	Associated Road	B (67)	59.4	59.5	59.5	0.1	59.5	0.1
R-44[2]	Associated Road	B (67)	59.4	59.6	59.2	-0.2[4]	59.6	0.2
R-45[2]	Lambert Road	E (72)	64.7	65.1	--	--	65.2	0.5
R-46	Woodland Avenue	B (67)	**66.1**	**66.1**	64.0	-2.1[4]	63.9	-2.2[4]
R-47	Woodland Avenue	B (67)	64.3	64.3	62.2	-2.1[4]	62.2	-2.1[4]
R-48	Woodland Avenue	B (67)	63.8	63.8	61.8	-2.0[4]	61.8	-2.0[4]
R-49	Woodland Avenue	B (67)	63.6	63.6	61.7	-1.9[4]	61.6	-2.0[4]
R-50	Woodland Avenue	B (67)	63.2	63.3	61.7	-1.5[4]	61.7	-1.5[4]
R-51	Woodland Avenue	B (67)	60.9	61.0	59.9	-1.0[4]	59.9	-1.0[4]
R-52	Woodland Avenue	B (67)	59.7	60.0	59.4	-0.3[4]	59.5	-0.2[4]
R-53	Avocado Street	B (67)	**67.9**	**67.8**	65.8	-2.1[4]	65.8	-2.1[4]
R-54	Woodland Avenue	B (67)	**66.0**	**66.1**	64.7	-1.3[4]	64.7	-1.3[4]
R-55	Woodland Avenue	B (67)	65.4	65.5	64.0	-1.4[4]	64.0	-1.4[4]
R-56	Woodland Avenue	B (67)	65.4	65.5	64.0	-1.4[4]	64.0	-1.4[4]
R-57	Woodland Avenue	B (67)	**66.0**	**66.1**	64.7	-1.3[4]	64.7	-1.3[4]
R-58	Redbud Street	B (67)	**66.2**	**66.3**	64.8	-1.4[4]	65.0	-1.2[4]
R-59	Papaya Place	B (67)	65.4	65.4	64.9	-0.5[4]	64.9	-0.5[4]
R-60	Guava Place	B (67)	65.6	65.8	64.4	-1.2[4]	64.5	-1.1[4]
R-61	Papaya Place	B (67)	64.0	64.1	64.0	0.0	64.0	0.0
R-62	Pointe Drive	E (72)[6]	72.3	72.3	72.0	-0.3[4]	72.4	0.1
R-63	Pointe Drive	C (67)	54.7	54.9	54.2	-0.5[4]	54.9	0.2

Table 2.3.7-5 Predicted Traffic Noise Levels, dBA Leq (Continued)

Receptor No.	Location	Noise Abatement Criteria	Modeled Existing[1]	Future No Build	Alternative 7A	Change from Existing Noise Level	Alternative 9	Change from Existing Noise Level
R-64	Pointe Drive	C (67)	55.8	56.0	55.4	-0.4[4]	56.0	0.2
R-65	Pointe Drive	E (72)	**76.2**	**76.2**	**76.1**	-0.1[4]	**75.9**	-0.3[4]
R-66	Wildcat Way	C (67)	60.1	60.1	60.0	-0.1[4]	59.9	-0.2[4]
R-67	Wildcat Way	C (67)	51.5	51.6	51.6	0.1	51.7	0.2
R-68	Wildcat Way	D (52)	54.0/34.0[7]	54.2/34.2[7]	54.2/34.2[7]	0.2	54.2/34.2[7]	0.2
R-69	Wildcat Way	D (52)	51.4/31.4[7]	51.5/31.5[7]	51.5/31.2[7]	0.1	51.6/31.6[7]	0.2
R-70	Olive Avenue	B (67)	64.7	64.9	65.2	0.5	65.2	0.5
R-71	Olive Avenue	B (67)	57.3	57.5	57.5	0.2	57.5	0.2
R-72	Olive Avenue	B (67)	59.5	59.6	59.5	0.0	59.5	0.0
R-73	Olive Avenue	B (67)	60.3	60.4	60.5	0.2	60.5	0.2
R-74	Olive Avenue	B (67)	62.9	62.9	62.9	0.0	62.9	0.0
R-75	Olive Avenue	B (67)	61.9	61.9	61.9	0.0	61.9	0.0
R-76	Mango Way	B (67)	63.7	63.8	64.2	0.5	64.2	0.5
R-77	Olive Avenue	B (67)	63.9	64.0	64.3	0.4	64.3	0.4
R-78	State College Boulevard	C (67)	61.0	61.4	61.6	0.6	61.6	0.6
R-79	Buttonwood Drive	B (67)	65.0	65.1	65.5	0.5	65.5	0.5
R-80	Olive Avenue	B (67)	63.2	63.4	63.7	0.5	63.7	0.5
R-81	Olive Avenue	B (67)	64.3	64.4	64.3	0.0	64.3	0.0
R-82	Olive Avenue	B (67)	64.8	64.9	65.1	0.3	65.1	0.3
R-83	Mango Way	B (67)	63.9	64.0	64.0	0.1	64.1	0.2
R-84	Mango Way	B (67)	62.7	62.7	62.9	0.2	63.0	0.3
R-85	State College Boulevard	D (52)	65.9/45.9[7]	66.5/46.5[7]	66.8/46.8[7]	0.9	66.8/46.8[7]	0.9
R-86	Citrus Place	B (67)	62.5	62.6	63.0	0.5	63.0	0.5
R-87	Davidson Court	B (67)	65.5	65.7	65.7	0.2	65.7	0.2
R-88	Davidson Court	B (67)	63.1	63.3	63.2	0.1	63.2	0.1
R-89	Chisholm Court	B (67)	65.1	65.2	65.3	0.2	65.3	0.2
R-90	Chisholm Court	B (67)	60.6	60.7	60.7	0.1	60.6	0.0
R-91	Buchanan Court	B (67)	62.4	62.5	62.7	0.3	62.6	0.2
R-92	Buchanan Court	B (67)	60.8	61.0	61.1	0.3	61.0	0.2
R-93	Cameron Court	B (67)	61.7	61.8	62.0	0.3	62.0	0.3
R-94	Cameron Court	B (67)	58.7	58.8	58.9	0.2	58.9	0.2
R-95	Davidson Court	B (67)	64.3	64.4	64.4	0.1	64.4	0.1

Table 2.3.7-5 Predicted Traffic Noise Levels, dBA Leq (Continued)

Receptor No.	Location	Noise Abatement Criteria	Modeled Existing[1]	Future No Build	Alternative 7A	Change from Existing Noise Level	Alternative 9	Change from Existing Noise Level
R-96	Davidson Court	B (67)	62.5	62.7	62.7	0.2	62.6	0.1
R-97	Chisholm Court	B (67)	62.7	62.8	62.9	0.2	62.9	0.2
R-98	Chisholm Court	B (67)	60.1	60.2	60.1	0.0	60.1	0.0
R-99	Buchanan Court	B (67)	63.2	63.3	63.4	0.2	63.4	0.2
R-100	Buchanan Court	B (67)	60.1	60.1	60.2	0.1	60.2	0.1
R-101	Cameron Court	B (67)	59.4	59.5	59.7	0.3	59.7	0.3
R-102	Cameron Court	B (67)	54.8	54.8	55.1	0.3	55.1	0.3
R-103	Chisholm Court	B (67)	61.4	61.6	61.5	0.1	61.5	0.1
R-104	Newhall Terrace	B (67)	51.2	51.3	51.3	0.1	51.3	0.1
R-105	Newhall Terrace	B (67)	50.0	50.1	50.2	0.2	50.2	0.2
R-106	Newhall Terrace	B (67)	47.0	47.1	47.1	0.1	47.1	0.1
R-107	Palmetto Place	B (67)	56.0	56.5	56.5	0.5	56.4	0.4
R-108	Palmetto Place	B (67)	55.7	56.1	56.0	0.3	56.0	0.3
R-109	Palmetto Place	B (67)	56.0	56.2	56.2	0.2	56.2	0.2
R-110	Palmetto Place	B (67)	55.7	56.0	55.9	0.2	55.9	0.2
R-111	Pomelo Place	B (67)	58.7	59.3	59.3	0.6	59.3	0.6
R-112	Palmetto Place	B (67)	59.0	59.3	59.2	0.2	59.2	0.2
R-113	Palmetto Place	B (67)	59.3	59.5	59.2	-0.1[4]	59.2	-0.1[4]
R-114	Palmetto Place	B (67)	58.0	58.2	58.0	0.0	58.0	0.0
R-115	Pomelo Place	B (67)	57.0	57.6	57.6	0.6	57.5	0.5
R-116	Lambert Road	F[6]	61.3	61.9	61.9	0.6	61.9	0.6
R-117	Candlewood Street	B (67)	64.1	64.8	64.9	0.8	64.9	0.8
R-118	Candlewood Street	B (67)	63.7	64.3	64.3	0.6	64.3	0.6
R-119	Cocca Place	B (67)	63.6	64.2	64.3	0.7	64.3	0.7
R-120	Cocca Place	B (67)	64.4	64.8	64.8	0.4	64.7	0.3
R-121	Balsa Avenue	B (67)	61.5	62.2	62.2	0.7	62.2	0.7
R-122	Cashew Avenue	B (67)	60.4	61.0	61.0	0.6	60.9	0.5
R-123	Wakeforest Street	B (67)	59.9	60.6	60.5	0.6	60.5	0.6
R-124	Candlewood Street	B (67)	61.4	62.2	62.3	0.9	62.4	1.0
R-125	Cocca Place	B (67)	61.6	62.1	62.0	0.4	62.0	0.4
R-126	Cashew Avenue	B (67)	59.4	59.9	59.8	0.4	59.8	0.4
R-127	Cashew Avenue	B (67)	57.4	57.9	58.0	0.6	57.8	0.4

Table 2.3.7-5 Predicted Traffic Noise Levels, dBA Leq (Continued)

Receptor No.	Location	Noise Abatement Criteria	Modeled Existing[1]	Future No Build	Alternative 7A	Change from Existing Noise Level	Alternative 9	Change from Existing Noise Level
R-128	Lambert Road	E (72)[6]	65.0	65.4	65.3	0.3	65.5	0.5
R-129	Lambert Road	E (72)[6]	64.3	64.9	63.8	-0.5[4]	65.1	0.8
R-130	Pointe Drive	E (72)	59.9	60.5	59.0	-0.9[4]	60.4	0.5

Source:Noise Study Report, 2013

dB = decibels; dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels; NAC = Noise Abatement Criteria; SR-57 = State Route 57

1 The existing condition is the condition before the construction of the SR-57 Northbound Widening Project.
2 Receptors R-1 through R-45 were calibrated using noise level measurements and concurrent traffic counts obtained from the July 2007 Traffic Noise Impact Technical Report for the SR-57 Northbound Widening Project because the existing condition for the proposed project is defined as the condition before the construction of the SR-57 Northbound Widening Project. Existing conditions noise level measurements and concurrent traffic counts for model calibration could not be obtained because K-rails were already placed along the edge of shoulder on the northbound side of the SR-57, and changes to the site were already made as part of the SR-57 Northbound Widening Project.
3 Numbers in **bold** represent noise levels that approach or exceed the NAC.
4 Noise levels would be slightly lower for Alternatives 7A and 9 because the proposed improvements would provide shielding to receptors.
5 Shaded areas indicate that this receptor would be acquired by the proposed project.
6 The highest expected noise level is provided for reporting purposes because there are no outdoor frequent human use areas associated with this land use.
7 Exterior/interior noise level. The interior noise level was determined using a standard 20 dB exterior to interior noise level reduction.

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Table 2.3.7-6 Noise Levels and Noise Barrier Modeling for Build Alternative 7A (Preferred Alternative) (dBA L_{eq})

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 7A	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[3]	**66.8**[4]	65.6	65.5	--[5]	--	--	--	--	--	--	--	--	--	--	--
		R-2[3]	65.6	65.7	65.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-3[3]	64.5	65.4	65.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-4[3]	**66.1**	65.4	65.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-5[3]	65.9	65.4	65.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-6[3]	65.7	65.6	65.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-7[3]	63.2	64.0	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-8[3]	63.0	64.5	64.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-9[3]	60.0	61.6	61.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-10[3]	62.4	63.6	63.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-11[3]	58.3	59.7	59.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-12[3]	59.6	61.1	61.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-13[3]	59.9	59.8	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-14[3]	69.1	69.2	69.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-15[3]	68.5	68.5	67.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-16[3]	63.9	62.7	62.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-17[3]	60.8	59.2	58.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-18[3]	62.1	60.4	59.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-19[3]	58.8	58.0	56.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-20[3]	60.7	59.0	57.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-21[3]	58.6	58.4	56.5	--	--	--	--	--	--	--	--	--	--	--	--
	2	R-22[3]	63.7	63.7	63.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-23[3]	62.1	60.1	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-24[3]	62.9	61.3	60.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-25[3]	58.2	57.4	56.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-26[3]	60.7	59.3	58.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-27[3]	58.7	58.4	56.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-28[3]	62.4	61.4	61.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-29[3]	61.2	60.0	59.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-30[3]	63.2	62.8	60.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-31[3]	63.7	63.6	--[6]	--	--	--	--	--	--	--	--	--	--	--	--
		R-32[3]	64.0	64.0	--	--	--	--	--	--	--	--	--	--	--	--	--
		R-33[3]	62.1	61.8	59.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-34[3]	59.1	59.3	57.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-35[3]	59.4	59.4	60.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-36[3]	58.9	59.1	61.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-37[3]	50.2	50.6	49.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-38[3]	52.6	52.9	52.7	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.3.7-6 Noise Levels and Noise Barrier Modeling for Build Alternative 7A (Preferred Alternative) (dBA L_{eq}) (Continued)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 7A	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-39[3]	56.3	56.8	56.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-40[3]	57.8	57.9	57.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-41[3]	61.7	62.0	60.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-42[3]	60.3	59.6	59.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-43[3]	59.4	59.5	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-44[3]	59.4	59.6	59.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-45[3]	64.7	65.1	--	--	--	--	--	--	--	--	--	--	--	--	--
	3	R-46	**66.1**	**66.1**	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-47	64.3	64.3	62.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-48	63.8	63.8	61.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-49	63.6	63.6	61.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-50	63.2	63.3	61.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-51	60.9	61.0	59.9	--	--	--	--	--	--	--	--	--	--	--	--
	3, 4, 5	R-52	59.7	60.0	59.4	--	--	--	--	--	--	--	--	--	--	--	--
	3	R-53	**67.9**	**67.8**	65.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-54	**66.0**	**66.1**	64.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-55	65.4	65.5	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-56	65.4	65.5	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-57	**66.0**	**66.1**	64.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-58	**66.2**	**66.3**	64.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-59	65.4	65.4	64.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-60	65.6	65.8	64.4	--	--	--	--	--	--	--	--	--	--	--	--
	5, 6	R-61	64.0	64.1	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-62	72.3	72.3	72.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-63	54.7	54.9	54.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-64	55.8	56.0	55.4	--	--	--	--	--	--	--	--	--	--	--	--
1		R-65	**76.2**	**76.2**	**76.1**	**73.3**	2.8	70.5	5.6[7]	68.1	8.0	66.0	10.1	64.7	11.4	63.8	12.3
		R-66	60.1	60.1	60.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-67	51.5	51.6	51.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-68	54.0/34.0[8]	54.2/34.2[8]	54.2/34.2[8]	--	--	--	--	--	--	--	--	--	--	--	--
		R-69	51.4/31.4[8]	51.5/31.5[8]	51.5/31.2[8]	--	--	--	--	--	--	--	--	--	--	--	--
	7, 8	R-70	64.7	64.9	65.2	--	--	--	--	--	--	--	--	--	--	--	--
	8	R-71	57.3	57.5	57.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-72	59.5	59.6	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-73	60.3	60.4	60.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-74	62.9	62.9	62.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-75	61.9	61.9	61.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-76	63.7	63.8	64.2	--	--	--	--	--	--	--	--	--	--	--	--
	7	R-77	63.9	64.0	64.3	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.3.7-6 Noise Levels and Noise Barrier Modeling for Build Alternative 7A (Preferred Alternative) (dBA L_{eq}) (Continued)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 7A	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-78	61.0	61.4	61.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-79	65.0	65.1	65.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-80	63.2	63.4	63.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-81	64.3	64.4	64.3	--	--	--	--	--	--	--	--	--	--	--	--
	8	R-82	64.8	64.9	65.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-83	63.9	64.0	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-84	62.7	62.7	62.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-85	65.9/45.9[8]	66.5/46.5[8]	66.8/46.8[8]	--	--	--	--	--	--	--	--	--	--	--	--
	8	R-86	62.5	62.6	63.0	--	--	--	--	--	--	--	--	--	--	--	--
	9	R-87	65.5	65.7	65.7	--	--	--	--	--	--	--	--	--	--	--	--
	10	R-88	63.1	63.3	63.2	--	--	--	--	--	--	--	--	--	--	--	--
	11	R-89	65.1	65.2	65.3	--	--	--	--	--	--	--	--	--	--	--	--
	12	R-90	60.6	60.7	60.7	--	--	--	--	--	--	--	--	--	--	--	--
	13	R-91	62.4	62.5	62.7	--	--	--	--	--	--	--	--	--	--	--	--
	14	R-92	60.8	61.0	61.1	--	--	--	--	--	--	--	--	--	--	--	--
	15	R-93	61.7	61.8	62.0	--	--	--	--	--	--	--	--	--	--	--	--
	16	R-94	58.7	58.8	58.9	--	--	--	--	--	--	--	--	--	--	--	--
	9	R-95	64.3	64.4	64.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-96	62.5	62.7	62.7	--	--	--	--	--	--	--	--	--	--	--	--
	11	R-97	62.7	62.8	62.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-98	60.1	60.2	60.1	--	--	--	--	--	--	--	--	--	--	--	--
	13	R-99	63.2	63.3	63.4	--	--	--	--	--	--	--	--	--	--	--	--
	14	R-100	60.1	60.1	60.2	--	--	--	--	--	--	--	--	--	--	--	--
	15	R-101	59.4	59.5	59.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-102	54.8	54.8	55.1	--	--	--	--	--	--	--	--	--	--	--	--
	11	R-103	61.4	61.6	61.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-104	51.2	51.3	51.3	--	--	--	--	--	--	--	--	--	--	--	--
	17	R-105	50.0	50.1	50.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-106	47.0	47.1	47.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-107	56.0	56.5	56.5	--	--	--	--	--	--	--	--	--	--	--	--
	18	R-108	55.7	56.1	56.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-109	56.0	56.2	56.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-110	55.7	56.0	55.9	--	--	--	--	--	--	--	--	--	--	--	--
	19	R-111	58.7	59.3	59.3	--	--	--	--	--	--	--	--	--	--	--	--
	18	R-112	59.0	59.3	59.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-113	59.3	59.5	59.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-114	58.0	58.2	58.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-115	57.0	57.6	57.6	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.3.7-6 Noise Levels and Noise Barrier Modeling for Build Alternative 7A (Preferred Alternative) (dBA L_{eq}) (Continued)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 7A	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-116	61.3	61.9	61.9	--	--	--	--	--	--	--	--	--	--	--	--
	20	R-117	64.1	64.8	64.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-118	63.7	64.3	64.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-119	63.6	64.2	64.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-120	64.4	64.8	64.8	--	--	--	--	--	--	--	--	--	--	--	--
	21	R-121	61.5	62.2	62.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-122	60.4	61.0	61.0	--	--	--	--	--	--	--	--	--	--	--	--
	22	R-123	59.9	60.6	60.5	--	--	--	--	--	--	--	--	--	--	--	--
	20	R-124	61.4	62.2	62.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-125	61.6	62.1	62.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-126	59.4	59.9	59.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-127	57.4	57.9	58.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-128	65.0	65.4	65.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-129	64.3	64.9	63.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-130	59.9	60.5	59.0	--	--	--	--	--	--	--	--	--	--	--	--

Source: Noise Study Report, 2013

dB = decibels; dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels; ft = feet; H = height; NAC = Noise Abatement Criteria

1 The existing condition is the condition before the construction of the SR-57 Northbound Widening Project.

2 I.L.: Insertion Loss.

3 Receptors R-1 through R-45 were calibrated using noise level measurements and concurrent traffic counts obtained from the July 2007 Traffic Noise Impact Technical Report for the SR-57 Northbound Widening Project because the existing condition for the proposed project is defined as the condition before the construction of the SR-57 Northbound Widening Project. Current noise level measurements and concurrent traffic counts for model calibration could not be obtained because K-rails were already placed along the edge of shoulder on the northbound side of the SR-57 and changes to the site were already made as part of the SR-57 Northbound Widening Project.

4 Numbers in **bold** represent noise levels that approach or exceed the NAC.

5 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

6 Shaded areas indicate that this receptor would be acquired by the proposed project.

7 Underlined noise levels have been attenuated by at least 5 dBA (i.e., feasible barrier height).

8 Exterior/interior noise level. The interior noise level was determined using a standard 20 dB exterior to interior noise level reduction.

Table 2.3.7-7 Noise Levels and Noise Barrier Modeling for Build Alternative 9 (dBA Leq)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 9	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[3]	**66.8**[4]	65.6	65.5	--[5]	--	--	--	--	--	--	--	--	--	--	--
		R-2[3]	65.6	65.7	65.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-3[3]	64.5	65.4	65.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-4[3]	**66.1**	65.4	65.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-5[3]	65.9	65.4	65.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-6[3]	65.7	65.6	65.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-7[3]	63.2	64.0	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-8[3]	63.0	64.5	64.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-9[3]	60.0	61.6	61.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-10[3]	62.4	63.6	63.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-11[3]	58.3	59.7	59.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-12[3]	59.6	61.1	61.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-13[3]	59.9	59.8	59.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-14[3]	69.1	69.2	69.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-15[3]	68.5	68.5	67.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-16[3]	63.9	62.7	62.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-17[3]	60.8	59.2	59.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-18[3]	62.1	60.4	60.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-19[3]	58.8	58.0	57.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-20[3]	60.7	59.0	58.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-21[3]	58.6	58.4	58.2	--	--	--	--	--	--	--	--	--	--	--	--
	2	R-22[3]	63.7	63.7	63.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-23[3]	62.1	60.1	60.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-24[3]	62.9	61.3	61.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-25[3]	58.2	57.4	57.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-26[3]	60.7	59.3	59.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-27[3]	58.7	58.4	58.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-28[3]	62.4	61.4	61.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-29[3]	61.2	60.0	59.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-30[3]	63.2	62.8	62.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-31[3]	63.7	63.6	63.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-32[3]	64.0	64.0	63.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-33[3]	62.1	61.8	61.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-34[3]	59.1	59.3	59.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-35[3]	59.4	59.4	59.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-36[3]	58.9	59.1	59.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-37[3]	50.2	50.6	50.6	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.3.7-7 Noise Levels and Noise Barrier Modeling for Build Alternative 9 (dBA Leq) (Continued)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 9	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-38[3]	52.6	52.9	53.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-39[3]	56.3	56.8	56.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-40[3]	57.8	57.9	57.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-41[3]	61.7	62.0	61.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-42[3]	60.3	59.6	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-43[3]	59.4	59.5	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-44[3]	59.4	59.6	59.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-45[3]	64.7	65.1	65.2	--	--	--	--	--	--	--	--	--	--	--	--
	3	R-46	**66.1**	**66.1**	63.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-47	64.3	64.3	62.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-48	63.8	63.8	61.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-49	63.6	63.6	61.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-50	63.2	63.3	61.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-51	60.9	61.0	59.9	--	--	--	--	--	--	--	--	--	--	--	--
	3, 4, 5	R-52	59.7	60.0	59.5	--	--	--	--	--	--	--	--	--	--	--	--
	3	R-53	**67.9**	**67.8**	65.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-54	**66.0**	**66.1**	64.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-55	65.4	65.5	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-56	65.4	65.5	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-57	**66.0**	**66.1**	64.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-58	**66.2**	**66.3**	65.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-59	65.4	65.4	64.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-60	65.6	65.8	64.5	--	--	--	--	--	--	--	--	--	--	--	--
	5, 6	R-61	64.0	64.1	64.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-62	72.3	72.3	72.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-63	54.7	54.9	54.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-64	55.8	56.0	56.0	--	--	--	--	--	--	--	--	--	--	--	--
1		R-65	**76.2**	**76.2**	**75.9**	**73.2**	2.7	**70.5**	5.4[6]	68.2	7.7	66.0	9.9	64.7	11.2	63.8	12.1
		R-66	60.1	60.1	59.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-67	51.5	51.6	51.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-68	54.0/34.0[7]	54.2/34.2[7]	54.2/34.2[7]	--	--	--	--	--	--	--	--	--	--	--	--
		R-69	51.4/31.4[7]	51.5/31.5[7]	51.6/31.6[7]	--	--	--	--	--	--	--	--	--	--	--	--
	7, 8	R-70	64.7	64.9	65.2	--	--	--	--	--	--	--	--	--	--	--	--
	8	R-71	57.3	57.5	57.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-72	59.5	59.6	59.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-73	60.3	60.4	60.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-74	62.9	62.9	62.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-75	61.9	61.9	61.9	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.3.7-7 Noise Levels and Noise Barrier Modeling for Build Alternative 9 (dBA Leq) (Continued)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 9	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-76	63.7	63.8	64.2	--	--	--	--	--	--	--	--	--	--	--	--
	7	R-77	63.9	64.0	64.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-78	61.0	61.4	61.6	--	--	--	--	--	--	--	--	--	--	--	--
		R-79	65.0	65.1	65.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-80	63.2	63.4	63.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-81	64.3	64.4	64.3	--	--	--	--	--	--	--	--	--	--	--	--
	8	R-82	64.8	64.9	65.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-83	63.9	64.0	64.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-84	62.7	62.7	63.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-85	65.9/45.9[8]	66.5/46.5[8]	66.8/46.8[7]	--	--	--	--	--	--	--	--	--	--	--	--
	8	R-86	62.5	62.6	63.0	--	--	--	--	--	--	--	--	--	--	--	--
	9	R-87	65.5	65.7	65.7	--	--	--	--	--	--	--	--	--	--	--	--
	10	R-88	63.1	63.3	63.2	--	--	--	--	--	--	--	--	--	--	--	--
	11	R-89	65.1	65.2	65.3	--	--	--	--	--	--	--	--	--	--	--	--
	12	R-90	60.6	60.7	60.6	--	--	--	--	--	--	--	--	--	--	--	--
	13	R-91	62.4	62.5	62.6	--	--	--	--	--	--	--	--	--	--	--	--
	14	R-92	60.8	61.0	61.0	--	--	--	--	--	--	--	--	--	--	--	--
	15	R-93	61.7	61.8	62.0	--	--	--	--	--	--	--	--	--	--	--	--
	16	R-94	58.7	58.8	58.9	--	--	--	--	--	--	--	--	--	--	--	--
	9	R-95	64.3	64.4	64.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-96	62.5	62.7	62.6	--	--	--	--	--	--	--	--	--	--	--	--
	11	R-97	62.7	62.8	62.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-98	60.1	60.2	60.1	--	--	--	--	--	--	--	--	--	--	--	--
	13	R-99	63.2	63.3	63.4	--	--	--	--	--	--	--	--	--	--	--	--
	14	R-100	60.1	60.1	60.2	--	--	--	--	--	--	--	--	--	--	--	--
	15	R-101	59.4	59.5	59.7	--	--	--	--	--	--	--	--	--	--	--	--
		R-102	54.8	54.8	55.1	--	--	--	--	--	--	--	--	--	--	--	--
	11	R-103	61.4	61.6	61.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-104	51.2	51.3	51.3	--	--	--	--	--	--	--	--	--	--	--	--
	17	R-105	50.0	50.1	50.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-106	47.0	47.1	47.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-107	56.0	56.5	56.4	--	--	--	--	--	--	--	--	--	--	--	--
	18	R-108	55.7	56.1	56.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-109	56.0	56.2	56.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-110	55.7	56.0	55.9	--	--	--	--	--	--	--	--	--	--	--	--
	19	R-111	58.7	59.3	59.3	--	--	--	--	--	--	--	--	--	--	--	--
	18	R-112	59.0	59.3	59.2	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.3.7-7 Noise Levels and Noise Barrier Modeling for Build Alternative 9 (dBA Leq) (Continued)

Noise Barrier No.	Existing Wall No.	Receptor No.	Modeled Existing[1]	Future No Build	Alternative 9	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-113	59.3	59.5	59.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-114	58.0	58.2	58.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-115	57.0	57.6	57.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-116	61.3	61.9	61.9	--	--	--	--	--	--	--	--	--	--	--	--
		R-117	64.1	64.8	64.9	--	--	--	--	--	--	--	--	--	--	--	--
	20	R-118	63.7	64.3	64.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-119	63.6	64.2	64.3	--	--	--	--	--	--	--	--	--	--	--	--
		R-120	64.4	64.8	64.7	--	--	--	--	--	--	--	--	--	--	--	--
	21	R-121	61.5	62.2	62.2	--	--	--	--	--	--	--	--	--	--	--	--
		R-122	60.4	61.0	60.9	--	--	--	--	--	--	--	--	--	--	--	--
	22	R-123	59.9	60.6	60.5	--	--	--	--	--	--	--	--	--	--	--	--
	20	R-124	61.4	62.2	62.4	--	--	--	--	--	--	--	--	--	--	--	--
		R-125	61.6	62.1	62.0	--	--	--	--	--	--	--	--	--	--	--	--
		R-126	59.4	59.9	59.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-127	57.4	57.9	57.8	--	--	--	--	--	--	--	--	--	--	--	--
		R-128	65.0	65.4	65.5	--	--	--	--	--	--	--	--	--	--	--	--
		R-129	64.3	64.9	65.1	--	--	--	--	--	--	--	--	--	--	--	--
		R-130	59.9	60.5	60.4	--	--	--	--	--	--	--	--	--	--	--	--

Source: Noise Study Report, 2013

dB = decibels; dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels; ft = feet; H = height; NAC = Noise Abatement Criteria

1 The existing condition is the condition before the construction of the SR-57 Northbound Widening Project.

2 I.L.: Insertion Loss.

3 Receptors R-1 through R-45 were calibrated using noise level measurements and concurrent traffic counts obtained from the July 2007 Traffic Noise Impact Technical Report for the SR-57 Northbound Widening Project because the existing condition for the proposed project is defined as the condition before the construction of the SR-57 Northbound Widening Project. Current noise level measurements and concurrent traffic counts for model calibration could not be obtained because K-rails were already placed along the edge of shoulder on the northbound side of the SR-57 and changes to the site were already made as part of the SR-57 Northbound Widening Project.

4 Numbers in **bold** represent noise levels that approach or exceed the NAC.

5 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

6 Underlined noise levels have been attenuated by at least 5 dBA (i.e., feasible barrier height).

7 Exterior/interior noise level. The interior noise level was determined using a standard 20 dB exterior to interior noise level reduction.

Table 2.3.7-8 Feasible Noise Barriers

Alternative	Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receptors Benefited	Number of Benefited Units/Receptors[1]	Noise Barrier Location	Station Number		Top of Wall Elevation	
							Begin	End	Begin	End
7A	1	8	207	R-65	3[3]	ROW	717+48	719+55	490.0	502.0
		10[2]	207	R-65	3[3]				492.0	504.0
		12	207	R-65	3[3]				494.0	506.0
		14	207	R-65	3[3]				496.0	508.0
		16	207	R-65	3[3]				498.0	510.0
9	1	8	207	R-65	3[3]	ROW	717+48	719+55	490.0	502.0
		10[2]	207	R-65	3[3]				492.0	504.0
		12	207	R-65	3[3]				494.0	506.0
		14	207	R-65	3[3]				496.0	508.0
		16	207	R-65	3[3]				498.0	510.0

Source: Noise Study Report, 2013

dBA = A-weighted decibels; EOS = edge of shoulder; ft = feet; ROW = right-of-way

1 Number of units that are attenuated by 5 dBA or more by the modeled barrier.

2 Denotes the minimu wall height required to break the line of sight between the receptor and truck exhaust stack.

3 Frontage units of 100 feet were used to determine the number of benefited units/receptors for nonresidential land uses.

Table 2.3.7-9 Total Reasonable Allowance per Noise Barrier

Alternative	Noise Barrier No.	Height (ft)	Approximate Length (ft)	Noise Attenuation (dBA)	Number of Benefited Units/Receptor1	Reasonable Allowance Per Unit	Total Reasonable Allowance	Estimated Noise Barrier Construction Cost	Reasonable?
7A	1	8	207	5.6	3[3]	$55,000	$165,000	--[4]	No
		10[2]	207	7.9	3[3]	$55,000	$165,000	$101,669	Yes
		12	207	10.1	3[3]	$55,000	$165,000	$111,439	Yes
		14	207	11.4	3[3]	$55,000	$165,000	$121,822	Yes
		16	207	12.3	3[3]	$55,000	$165,000	$131,775	Yes
9	1	8	207	5.6	3[3]	$55,000	$165,000	--[4]	No
		10[2]	207	7.9	3[3]	$55,000	$165,000	$101,669	Yes
		12	207	10.1	3[3]	$55,000	$165,000	$111,439	Yes
		14	207	11.4	3[3]	$55,000	$165,000	$121,822	Yes
		16	207	12.3	3[3]	$55,000	$165,000	$131,775	Yes

Source: Noise Abatement Decision Report, 2014
dBA = A-weighted decibels; ft = feet
[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.
[2] Denotes the minimum wall height required to break the line of sight between the receptor and truck exhaust stack.
[3] Frontage units of 100 ft were used to determine the number of benefited units/receptors for nonresidential land uses.
[4] Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

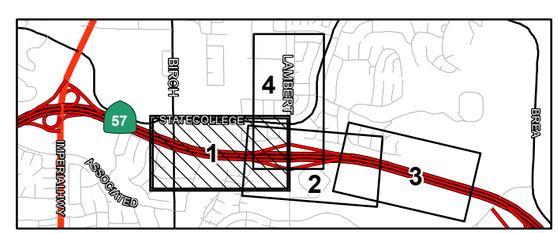
Source: Bing (c. 2009); TBM (2010)

Sheet 1 of 4

LEGEND

- Short-Term Monitoring Locations
- Modeled Receptor Locations
- Long-Term 24-Hour Monitor
- Existing Walls
- Project Limits
- Existing Right-of-Way

0 200'



SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Monitoring and Modeled Receptor Locations

6/19/14 JN 10-107792-18226 MAS

Figure 2.3.7-2a

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Source: Bing (c. 2009); TBM (2010)

Sheet 2 of 4

LEGEND

- Short-Term Monitoring Locations
- Modeled Receptor Locations
- Long-Term 24-Hour Monitor
- Existing Walls
- Project Limits
- Existing Right-of-Way

0 200'

6/19/14 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Monitoring and Modeled Receptor Locations

Figure 2.3.7-2b

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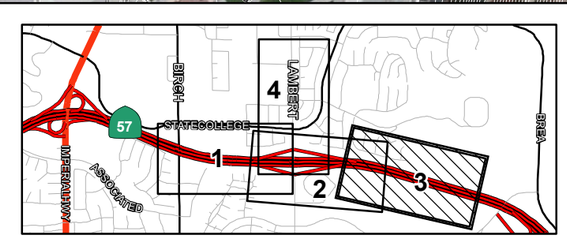
Source: Bing (c. 2009); TBM (2010)

Sheet 3 of 4

LEGEND

- Short-Term Monitoring Locations
- Modeled Receptor Locations
- Long-Term 24-Hour Monitor
- Existing Walls
- Project Limits
- Existing Right-of-Way

0 200'



SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Monitoring and Modeled Receptor Locations

6/19/14 JN 10-107792-18226 MAS

Figure 2.3.7-2c

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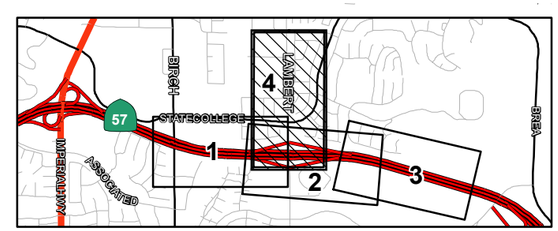
Source: Bing (c. 2009); TBM (2010)

Sheet 4 of 4

LEGEND

- Short-Term Monitoring Locations
- Modeled Receptor Locations
- Long-Term 24-Hour Monitor
- Existing Walls
- Project Limits
- Existing Right-of-Way

0 200'



SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Monitoring and Modeled Receptor Locations

Figure 2.3.7-2d

6/19/14 JN 10-107792-18226 MAS

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Source: Bing (c. 2009); TBM (2010)

Sheet 1 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 7A
- Project Limits
- Existing Right-of-Way
- Proposed Right-of-Way
- Existing Walls
- Existing Wall (Replaced)
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Aquisition

Note: Receptors R-31, R-32, and R-45 are not shown because they would be acquired due to Alternative 7A Improvements.

0 200'

6/19/14 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 7A Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-3a

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Source: Bing (c. 2009); TBM (2010)

Sheet 2 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 7A
- Project Limits
- Existing Right-of-Way
- Proposed Right-of-Way
- Existing Walls
- Existing Wall (Replaced)
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Aquisition

Note: Receptors R-31, R-32, and R-45 are not shown because they would be acquired due to Alternative 7A Improvements.

0 200'

6/19/14 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 7A Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-3b

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Source: Bing (c. 2009); TBM (2010)

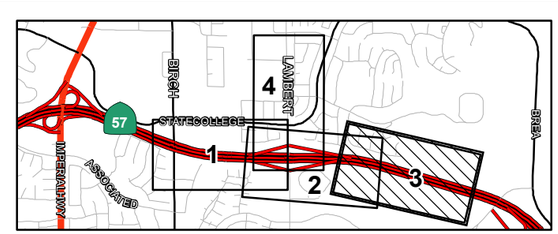
Sheet 3 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 7A
- Project Limits
- Existing Right-of-Way
- Proposed Right-of-Way
- Existing Walls
- Existing Wall (Replaced)
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Aquisition

Note: Receptors R-31, R-32, and R-45 are not shown because they would be acquired due to Alternative 7A Improvements.

0 200'



SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 7A Modeled Noise Barriers and Receptor Locations

6/19/14 JN 10-107792-18226 MAS

Figure 2.3.7-3c

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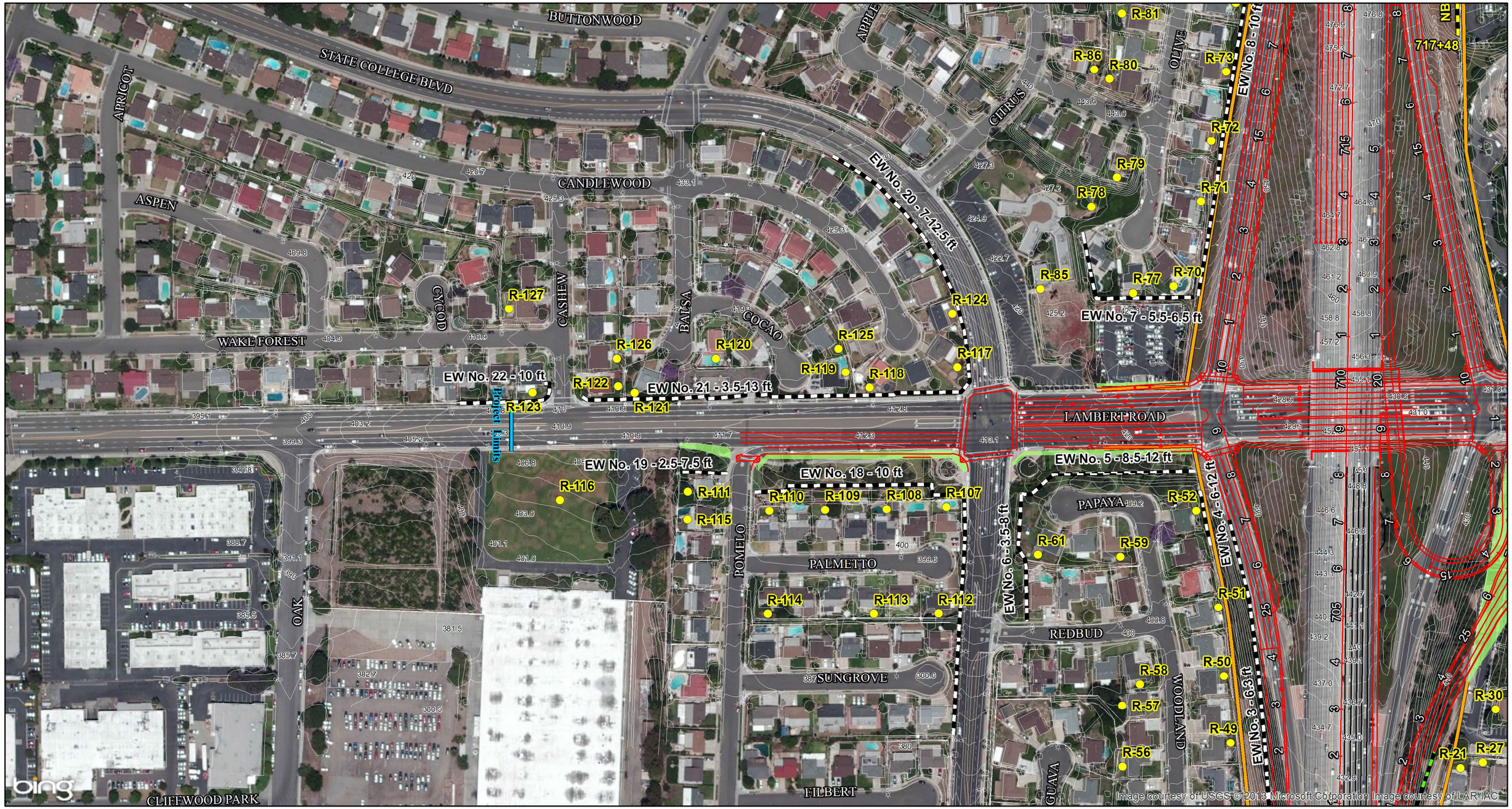


Source: Bing (c. 2009); TBM (2010)

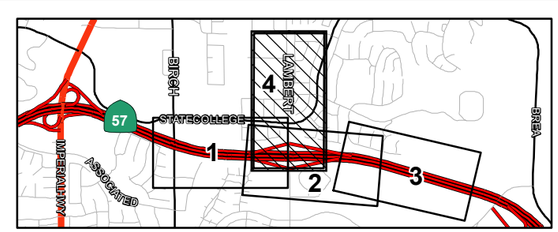
Sheet 4 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 7A
- Project Limits
- Existing Right-of-Way
- Proposed Right-of-Way
- Existing Walls
- Existing Wall (Replaced)
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Aquisition

Note: Receptors R-31, R-32, and R-45 are not shown because they would be acquired due to Alternative 7A Improvements.

0 200'



SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 7A Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-3d

6/19/14 JN 10-107792-18226 MAS

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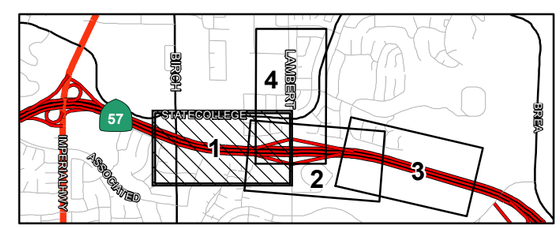
Source: Bing (c. 2009); TBM (2010)

Sheet 1 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 9
- Project Limits
- Existing Right-of-Way
- Existing Walls
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Acquisition



0 200'

6/19/14 JN 10-107792-18226 MAS

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Alternative 9 Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-4a

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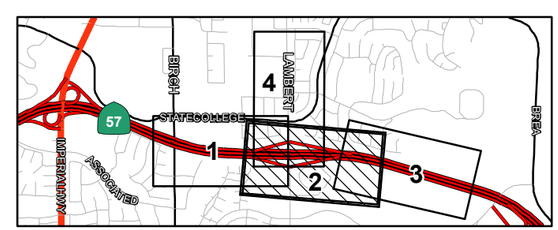
Source: Bing (c. 2009); TBM (2010)

Sheet 2 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 9
- Project Limits
- Existing Right-of-Way
- Existing Walls
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Acquisition

0 200'



SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 9 Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-4b

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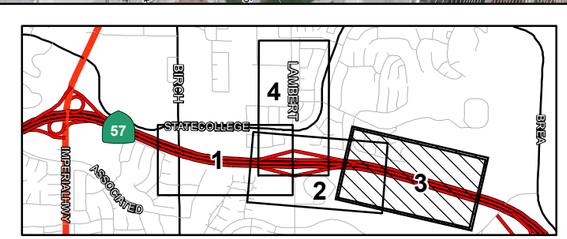
Source: Bing (c. 2009); TBM (2010)

Sheet 3 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 9
- Project Limits
- Existing Right-of-Way
- Existing Walls
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Acquisition



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6/19/14 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 9 Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-4c

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Source: Bing (c. 2009); TBM (2010)

Sheet 4 of 4

LEGEND

- SR-57 Northbound Widening Project
- Alternative 9
- Project Limits
- Existing Right-of-Way
- Existing Walls
- Modeled Noise Barrier
- Modeled Receptor Locations
- Property Acquisition

0 200'

6/19/14 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Alternative 9 Modeled Noise Barriers and Receptor Locations

Figure 2.3.7-4d

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2.3.8 ENERGY

2.3.8.1 Regulatory Setting

This section describes the federal, state, and regional regulations that provide guidance for conducting energy analyses for the State Route 57/Lambert Road Interchange Improvement Project. Related air quality issues are addressed in the Air Quality Assessment for the State Route 57/Lambert Road Interchange Project prepared in January 2013.

Transportation-related activities account for more than 70 percent of the total petroleum consumption in the United States (U.S. Department of Energy [DOE] 2009a) and more than 85 percent of the total petroleum consumption in California (DOE 2009b). While state and federal policies, such as the California Low-Emission Vehicle Program (LEV II), revised Corporate Average Fuel Economy (CAFE) standards, and the Federal Energy Policy Act of 2005 encourage the use of alternative fuel and low-emission vehicles, the consumption of nonrenewable resources, such as fossil fuels, remains high and points to the need to conserve such energy resources. Both the National Environmental Policy Act of 1969, as amended (NEPA) [Section 102(2)] and the California Environmental Quality Act (CEQA) Guidelines require the identification of potentially substantial energy impacts of proposed projects.

Federal

National Environmental Policy Act

In 1969, NEPA was one of the first laws written that establishes a broad national framework for protecting the environment. NEPA's basic policy is to ensure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that could significantly affect the environment.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 authorizes policies to improve energy efficiency and technologies in energy production. Federal policies that promote efficient investment in each sector and end-use are critical to tackling issues such as energy conservation, climate change, economic development, and job creation. In addition, federal agencies, such as the DOE and the United States Environmental Protection Agency (EPA), provide essential nationwide energy-efficiency programs, such as the labeling program Energy Star and the data-gathering work at the Energy Information Administration, which help to achieve these goals.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of natural gas, oil, and electricity. FERC also regulates natural gas and hydropower projects. As part of that responsibility, FERC regulates the transmission and sale of natural gas for resale in interstate commerce, the transmission of oil by pipeline in interstate commerce, and the transmission and wholesale sales of electricity in interstate commerce. FERC also licenses and inspects private, municipal, and state hydroelectric projects; approves the siting and abandonment of interstate natural gas facilities, including pipelines, storage, and liquefied natural gas; oversees environmental matters related to natural gas and hydroelectricity projects and major electricity policy initiatives; and administers accounting and financial reporting regulations and the conduct of regulated companies.

Corporate Average Fuel Economy

CAFE standards are federal regulations that are set to reduce energy consumed by on-road motor vehicles. The National Highway Traffic Safety Administration regulates the standards, and the EPA measures vehicle fuel efficiency. The standards specify minimum fuel consumption efficiency standards for new automobiles sold in the United States.

State

California Environmental Quality Act

In response to the passage of NEPA in 1969, the California State Assembly created the Assembly Select Committee on Environmental Quality to study the possibility of supplementing NEPA through state law. This legislative committee, in 1970, issued a report titled *The Environmental Bill of Rights*, which called for a California counterpart to NEPA. Later that year, acting on the recommendations of the select committee, the legislature passed, and Governor Ronald Reagan signed, the CEQA statute. The law requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

California Energy Commission

The California Energy Commission (CEC) is the state's primary energy policy and planning agency. Created by the legislature in 1974, the CEC has six major responsibilities:

1) Forecasting future energy needs and keeping historical energy data
2) Licensing thermal power plants 50 megawatts (MW) or larger
3) Promoting energy efficiency through appliance and building standards
4) Developing energy technologies and supporting renewable energy
5) Planning for and directing California's response to energy emergencies
6) Implementing California's alternative and renewable fuel and vehicle technology program

The CEC adopted California's *2010 Integrated Energy Policy Report Update* in January 2011 (CEC 2011). This report was prepared in response to Senate Bill 1389, Chapter 568, Statutes of 2002, which require that the CEC prepare a biennial integrated energy policy report.

This report contains an integrated assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance California's economy; and protect public health and safety. The report fulfills the requirement of Senate Bill 1389.

2.3.8.2 Affected Environment

Energy is currently consumed within the Study Area as shown in Figure 2.3.8-1;[11] for the construction of public and private projects; operation of automobiles and trucks; and operation of existing land uses. Automobile and truck fueling stations are located throughout the Study Area.

[11] The Study Area represents these locations that would be affected by the project.

California is rich in conventional and renewable energy resources. It has large crude oil and substantial natural gas deposits in six geological basins located in the Central Valley and along the Pacific coast. Most of those reserves are concentrated in the southern San Joaquin Basin. More than a dozen of the nation's 100 largest oil fields are located in California. In addition, federal assessments indicate that large undiscovered deposits of recoverable oil and gas lie offshore in the federally administered Outer Continental Shelf (OCS), although federal law currently prohibits oil and gas leasing in that area. California's renewable energy potential is extensive. The state's hydroelectric power potential ranks second in the nation (behind Washington State), and substantial geothermal and wind power resources are found along the coastal mountain ranges and the eastern border with Nevada. High solar energy potential is found in southeastern California's sunny deserts.

California is the most populous state in the nation, and its total energy demand is second only to Texas. Although California is a leader in the energy-intensive chemical, forest products, glass, and petroleum industries, the state has one of the lowest per-capita energy consumption rates in the country. The California government's energy-efficiency programs have contributed to low per-capita energy consumption. Driven by high demand from California's many motorists, major airports, and military bases, the transportation sector is the state's largest energy consumer. More motor vehicles are registered in California than any other state, and worker commute times are among the longest in the country.

Petroleum

California is one of the top producers of crude oil in the nation, with output accounting for more than 10 percent of total U.S. production. Drilling operations are concentrated primarily in Kern County and the Los Angeles Basin, although substantial production also takes place offshore in both state and federal waters. Concerns regarding the cumulative impacts of offshore oil and gas development, combined with a number of major marine oil spills throughout the world in recent years, have led to a permanent moratorium on offshore oil and gas leasing in California waters and a deferral of leasing in federal waters. However, development on existing state and federal leases is unaffected and may still occur within offshore areas leased prior to the effective date of the moratorium.

A network of crude oil pipelines connects production areas to refining centers in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California refiners also process large volumes of Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the Bay Area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports. Led by Saudi Arabia and Ecuador, foreign suppliers now provide more than 40 percent of the crude oil refined in California; however, California's dependence on foreign oil remains less than the national average.

California ranks third in the United States in petroleum-refining capacity and accounts for more than 10 percent of total U.S. capacity. California's largest refineries are highly sophisticated; they are capable of processing a wide variety of crude oil types and are designed to yield a high percentage of light products such as motor gasoline. To meet strict federal and state environmental regulations, California refineries are configured to produce cleaner fuels, including reformulated motor gasoline and low-sulfur diesel.

Most California motorists are required to use a special motor gasoline blend called California Clean Burning Gasoline (CA CBG). In the ozone nonattainment areas of Imperial County and the Los Angeles metropolitan area, motorists are required to use California Oxygenated Clean Burning Gasoline, and the Los Angeles area is also required to use oxygenated motor gasoline during the winter months. By 2004, California completed a transition from methyl tertiary butylether (MTBE) to ethanol as a gasoline oxygenate additive, making California the largest ethanol fuel market in the United States. Four ethanol production plants are located in central and southern California, but most of California's ethanol supply is transported by rail from corn-based producers in the Midwest. Some supply is also imported from abroad.

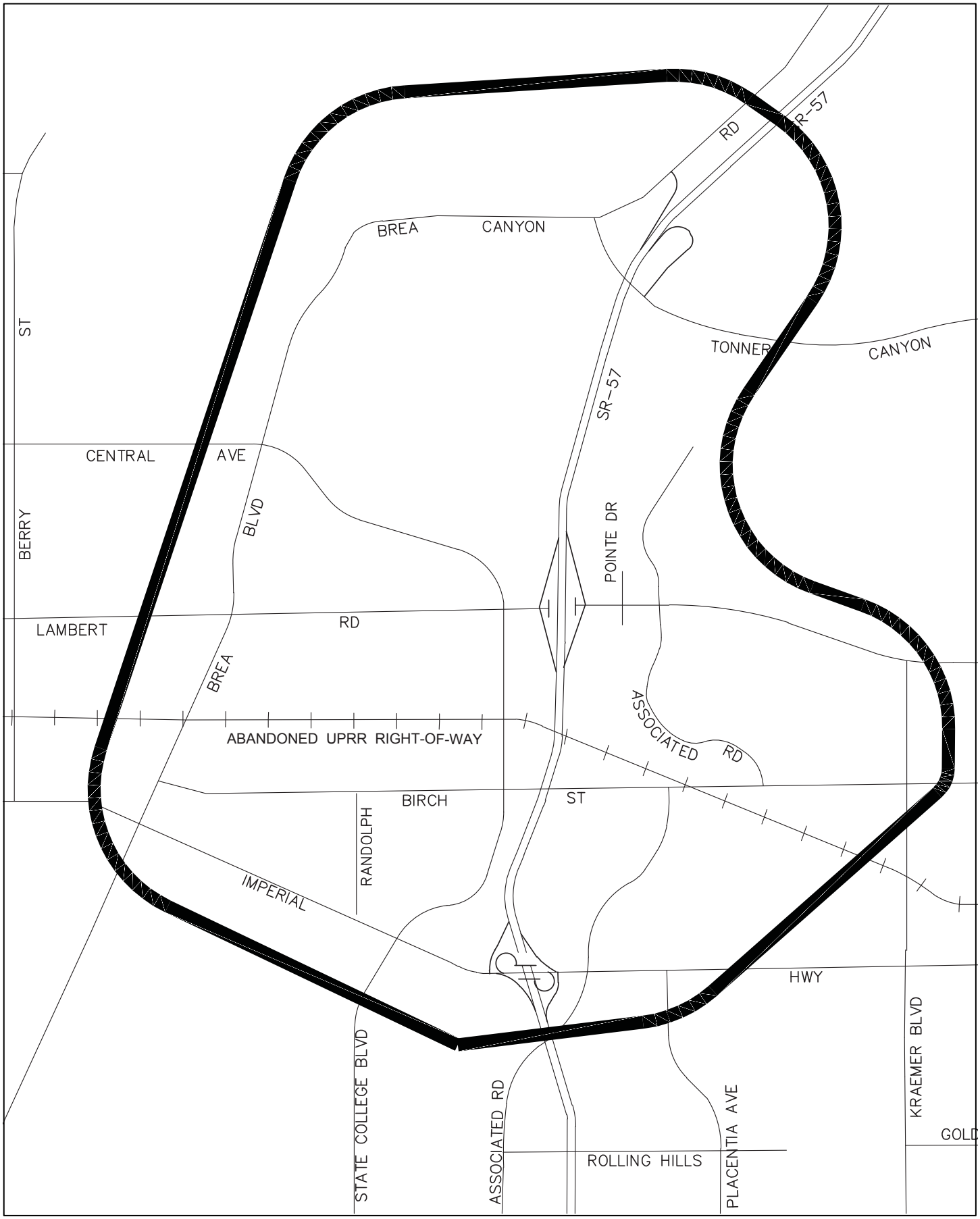
Natural Gas

California natural gas production typically accounts for less than 2 percent of total annual U.S. production and satisfies less than 20 percent of state demand. Production takes place in basins located in northern and southern California, as well as offshore in the Pacific Ocean. California receives most of its natural gas by pipeline from production regions in the Rocky Mountains, the Southwest, and western Canada. As with crude oil production, California natural gas production is in decline. However, state supply has remained relatively stable due to increasing amounts of natural gas shipped from the Rocky Mountains. California markets are served by two key natural gas trading centers, the Golden Gate Center in northern California and the California Energy Hub in southern California, and the state has nearly a dozen natural gas storage facilities that help stabilize supply.

Coal, Electricity, and Renewables

Natural gas-fired power plants typically account for more than 50 percent of state electricity generation. California is one of the largest hydroelectric power producers in the United States, and with adequate rainfall, hydroelectric power typically accounts for close to 20 percent of state electricity generation. California's two nuclear power plants account for almost 20 percent of total generation. Due to strict emission laws, only a few small coal-fired power plants operate in California.

California leads the nation in electricity generation from nonhydroelectric renewable energy sources. California generates electricity using wind, geothermal, solar, fuel wood, and municipal solid waste/landfill gas resources. A facility known as "The Geysers," located in the Mayacamas Mountains north of San Francisco, is the largest complex of geothermal power plants in the world, with more than 750 MW of installed capacity. California has numerous wind farms in five major wind resource areas, and several new projects are currently under construction. The world's largest solar power facility operates in California's Mojave Desert, and numerous other facilities are in the planning and permitting process.



Source: Stantec Traffic Study, March 2012

not to scale

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Energy Analysis Study Area

6/15/12 JN 10-107792-18226 MAS

Figure 2.3.8-1

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Energy Consumption in California/Orange County

The following statistics have been provided by the CEC and are current through 2011.

Electricity

Fueled by population growth, the demand for electricity in California is increasing. California's electricity mix is generated by natural gas (56.7 percent); coal (1.8 percent); large hydroelectric (12.2 percent); nuclear (15.3 percent); and renewable (13.9 percent) sources.

In 2009, California produced 69 percent of the electricity it used; the rest was imported from the Pacific Northwest (7 percent) and the Desert Southwest (24 percent). Natural gas is the main source for electricity, contributing 45.2 percent of the total system power. In 2005, Californians spent $31 billion for their electricity. Table 2.3.8-1 shows the total electricity consumed in Orange County for 2010.

Table 2.3.8-1 Annual Electric Consumption in Orange County (2010)

Type of Consumer	Millions of Kilowatt-Hours[1]
Residential	6,860
Nonresidential	13,840
Total	**20,700**

Source: Energy Consumption Data Management System, California Energy Commission, 2010.
1 A kilowatt-hour is a unit of power equal to 1,000 watts of electricity consumed in one hour.

Natural Gas

Only 13 percent of the natural gas California used in 2009 came from in-state production; the rest was delivered by pipelines from several production areas in the western United States and western Canada. California is at the end of those pipelines, forcing it to compete with other states for supplies. Once the gas arrives in California, it is distributed by the state's three major gas utilities—San Diego Gas and Electric, Southern California Gas Company, and Pacific Gas and Electric—which provide a collective total of 98 percent of the state's natural gas. The Cities of Long Beach and Palo Alto are the only municipalities in California that operate city-owned utility services for natural gas customers.

Electricity generation is the largest user of natural gas, using approximately 50 percent of all natural gas in the state. The residential sector uses 22 percent of the natural gas. Of that amount, 88 percent is used for space and water heating. Table 2.3.8-2 shows the total natural gas consumption in Orange County for 2010.

Table 2.3.8-2 Natural Gas Consumption in Orange County (2010) in Millions of Therms

Land Use	Millions of Therms[1]
Residential	405
Nonresidential	236
Total	**641**

Source: Energy Consumption Data Management System, California Energy Commission, 2010.
1 A therm is a unit of heat containing 100,000 British thermal units (Btu).

Liquid Petroleum Gas (LPG) (Propane)

Liquefied petroleum gas (LPG) is a mixture of gaseous hydrocarbons, mainly propane and butane, that change into liquid form under moderate pressure. LPG (usually called propane) is commonly used as a fuel for rural homes for space and water heating, as a fuel for barbecues and recreational vehicles, and as a transportation fuel. It is normally created as a byproduct of petroleum refining and from natural gas production.

Traditional Transportation Fuels (Fossil Fuels)

Fossil fuels are energy resources that come from the remains of plants and animals that are millions of years old. Fossil fuels, like coal, oil, and natural gas, provide the energy that powers our lifestyles and our economy. Fossil fuels are primarily responsible for fueling our transportation system. Petroleum-based fuels are the standard. Our country's entire transportation infrastructure of pipelines and gas stations is built around fossil fuels. They are the bedrock we base our energy mix on, but they are a limited resource. Once they are gone, they can no longer be part of our energy mix.

A public concern with fossil fuels is that, in addition to their unsustainability as a nonrenewable source of energy, there is a negative environmental impact associated with the use of fossil fuels. The burning of fossil fuels is responsible for emissions that contribute to global climate change, acid rain, and ozone problems. Development of alternatives to traditional transportation fuels is desirable to improve sustainability and reduce impacts of fossil fuel consumption.

<u>Alternatives to Traditional Transportation Fuels</u>

Alternatives to traditional transportation fuels are being developed and introduced into the consumer marketplace. Alternative fuels currently in use in the United States include:

- Compressed natural gas
- Electric (EVC)
- Ethanol, 85 percent (E85)
- Hydrogen (HYD)
- Liquefied natural gas (LNG)
- LPG

The following information was prepared by the Energy Information Administration (EIA), the independent statistical and analytical agency within the United States Department of Energy. Each year, the EIA collects data on the number of alternative fuel vehicles (AFVs) supplied, and for a limited set of fleet user groups, the number of AFVs in use and the amount of alternative transportation fuel consumed. The user groups surveyed are federal and state governments, alternative fuel providers, and transit companies.

Alternative Fuel Vehicles in Use

An estimated 826,318 alternative fuel vehicles were in use in the United States and 136,409 in California in 2009 (Table 2.3.8.3, Alternative Fuel Vehicles in Use by Fuel Type 2009).

Table 2.3.8-3 Alternative Fuel Vehicles in Use by Fuel Type 2009

Fuel Type	United States	California
Compressed Natural Gas (CNG)	114,270	37,517
Electric	57,185	31,545
Ethanol, 85% (E85)	504,297	51,734
Hydrogen	357	0
Liquefied Natural Gas (LNG)	3,176	1,859
Liquefied Petroleum Gas (LPG)	147,030	13,754
Other Fuels1	3	0
Total	**826,318**	**136,409**

Source: Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels and the DOE/GSA Federal Automotive Statistical Tool (FAST).

1 May include P-Series fuel or any other fuel designated by the Secretary of Energy as an alternative fuel in accordance with the Energy Policy Act of 1995.

DOE = United States Department of Energy

GSA = General Services Administration

Alternative Fuel Consumption

The estimated consumption of alternative fuels (in thousand gasoline-equivalent gallons) in California during 2009 is shown in Table 2.3.8-4, Estimated Consumption of Alternative Fuels in California by Fuel Type, 2009 (Thousand Gasoline-Equivalent Gallons).

Table 2.3.8-4 Estimated Consumption of Alternative Fuels in California by Fuel Type, 2009 (Thousand Gasoline-Equivalent Gallons)

CNG	Electric	E85	Hydrogen	LNG	LPG	Other	Total
92,917	2,102	7,858	0	12,513	12,196	0	127,586

Source: Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels.

CNG = Compressed Natural Gas

E85 = Ethanol 85 percent

LNG = Liquefied Natural Gas

LPG = Liquefied Petroleum Gas

2.3.8.3 Environmental Consequences

Permanent Direct Impacts

Both Build Alternatives (Alternatives 7A and 9)

Local energy demand for transportation projects typically is dominated by vehicle fuel usage. Operational energy consumption was estimated for the vehicles traveling within the Study Area. Energy calculations are based on the vehicle miles traveled (VMT) (numbers of vehicles, distance traveled) during a typical weekday (Table 2.3.8-5, Operational Daily VMT) for the 2009 base year and each of the project alternatives, including No Build.

Table 2.3.8-5 Operational Daily VMT

Scenario	Daily Study Area VMT			Daily VHT
	Automobile	Truck	Total	Total
2009 Existing	1,532,265	100,236	1,632,500	34,760
2035 No Build Alternative	1,888,520	123,540	2,012,060	37,660
2035 Build Alternative 7A (Preferred Alternative)	1,868,909	122,258	1,991,167	35,655
2035 Build Alternative 9	1,868,909	122,258	1,991,167	35,655

Source: SR-57/Lambert Road Interchange Project, Project Approval/Environmental Document (PA/ED) Phase Traffic Study, February 2012.
VMT = vehicle miles traveled
VHT = vehicle hours traveled
Automobile/Truck percentage based on Caltrans traffic data for the SR-57 – 6.14 percent truck traffic.

In addition to VMT, travel conditions within the Study Area also influence fuel consumption rates. Without the capacity improvements proposed in the build alternatives, congested traffic conditions are more prevalent throughout the Study Area. These conditions contribute to inefficient energy consumption, as vehicles use extra fuel while idling in stop-and-go traffic or when moving at slow speeds along congested roadways.

For the energy consumption calculations, automobiles are presumed to use gasoline, while heavy-duty trucks would use diesel fuel. Table 2.3.8-6, Study Area Energy Consumption – Annual, reports annual energy use for vehicles in millions of gallons (automobiles, heavy-duty trucks). Both VMT and travel speeds were used to estimate the vehicle fuel consumption for each of the scenarios reported in Table 2.3.8-6.

Table 2.3.8-6 Study Area Energy Consumption – Annual

Scenario	Energy Consumption[1]	
	Gasoline (Millions of gallons)	Diesel (Millions of gallons)
2009 Existing	17.59	5.37
2035 No Build Alternative	21.67	6.61
2035 Build Alternative 7A (Preferred Alternative)	22.68	6.45
2035 Build Alternative 9	22.68	6.45

1 Energy consumption was calculated using consumption factors from the EMFAC 2007 model for Orange County, with an average annual temperature of 70°F and humidity of 50 percent. The automobile fleet is assumed to be 50 percent LDA and 50 percent LDT1. The truck fleet is assumed to comprise HHD.

Table 2.3.8-7, Operational Energy Consumption – Percent Change, converts these various measures of energy consumption for gasoline and diesel shown in Table 2.3.8-6 into British Thermal Units (BTUs) in order to provide a uniform metric to represent energy consumption for the build alternatives, which is then compared against existing year (2009) and 2035 No Build conditions in the Study Area.

Table 2.3.8-7 Operational Energy Consumption – Percent Change

Scenario	Study Area Annual BTUs		
	BTUs[1]	% Change from 2009 Existing	% Change from 2035 No Build
2009 Existing	2.72E+12	--	--
2035 No Build Alternative	3.36E+12	23.3%	
2035 Build Alternative 7A (Preferred Alternative)	3.45E+12	26.7%	2.8%
2035 Build Alternative 9	3.45E+12	26.7%	2.8%

1 Assumes an energy content of 130,500 BTUs per gallon of diesel fuel, 115,000 BTUs per gallon of gasoline, and 3,412 BTUs per kWh of electricity, E+14 = 10 to the 14th power (100 trillion).

BTUs = British thermal units

Compared to 2009 existing conditions:

- 2035 baseline (No Build Alternative) energy consumption increases by 23.3 percent
- 2035 Build Alternative 7A (Preferred Alternative) energy consumption increases by 26.7 percent
- 2035 Build Alternative 9 energy consumption increases by 26.7 percent

Compared to 2035 No Build conditions:

- 2035 Build Alternative 7A (Preferred Alternative) energy consumption decreases by 2.8 percent
- 2035 Build Alternative 9 energy consumption decreases by 2.8 percent

Build alternative improvements would increase average travel speeds during peak hours, remove bottlenecks, and reduce delays. However, as shown in Table 2.3.8-6, the build alternatives would result in a slight increase in gasoline fuel consumption compared to the 2035 No Build condition and decrease in Study Area diesel fuel consumption. This is due to the average fuel mileage decreasing slightly at the higher speeds of the build alternatives compared to the no build alternative.

No Build Alternative

Under the No Build Alternative, the permanent effects on energy consumption discussed above for Build Alternatives 7A and 9 would not occur.

Permanent Indirect Impacts

Build Alternatives

Indirect manufacturing energy effects involve the one-time, nonrecoverable energy costs associated with the manufacture of vehicles. Indirect maintenance energy effects involve the ongoing, nonrecoverable energy costs associated with the maintenance of vehicles. This analysis was conducted using the Input-Output Method. This method converts either VMT or construction costs into energy consumption based on existing data from other road improvement projects in the United States using conversions listed in the California Department of Transportation

(Caltrans) Energy and Transportation Systems handbook (July 1983). It was assumed that the energy requirements for manufacturing and maintaining vehicles have not changed from those listed in the handbook. Thus, the per-vehicle indirect energy impacts for the build alternatives would be the same and would not change from the existing condition.

Using the VMT data shown in Table 2.3.8-5, and considering that the VMT increases in the Study Area would be due to a combination of factors, including increases in population in the region as well as the proposed improvements under the build alternatives, Table 2.3.8-8, SR-57/Lambert Road Study Area Indirect Energy Comparison, shows that both build alternatives would result in small decreases in indirect energy consumption in the Study Area compared to the No Build Alternative, approximately a 1.13 percent reduction.

Table 2.3.8-8 SR-57/Lambert Road Study Area Indirect Energy Comparison

Description	Energy Used (Billion BTU/day)		
	2009 Existing	2035 No Build	2035 Build
Manufacturing			
Auto Manufacture	2.14	2.64	2.61
Truck Manufacture	0.155	0.191	0.189
Subtotal	2.3	2.83	2.8
Maintenance			
Auto Maintenance	1.73	2.13	2.11
Truck Maintenance	0.29	0.357	0.354
Subtotal	2.02	2.49	2.46
TOTAL	4.32	5.32	5.26
Percentage Change from 2035 No Build			-1.13%

BTU = British Thermal Units
SR-57 = State Route 57

Temporary Indirect Impacts

Both Build Alternatives (Alternatives 7A and 9)

Indirect construction energy effects involve the one-time, nonrecoverable energy costs associated with construction of roads, structures, and vehicles. The indirect energy analysis for the project was also conducted using the Input-Output Method.

Based on the estimated costs to construct the build alternatives, it would take approximately 587 billion BTUs to construct Build Alternative 7A (Preferred Alternative) and 277 billion BTUs to construct Build Alternative 9. Table 2.3.8-7 shows that both build alternatives would use 9 billion more BTUs per year than the no build alternative, for a 2.8 percent increase. Table 2.3.8-8 shows that both build alternatives would save 0.03 billion BTUs per day, or about 14.6 billion BTUs per year over the no build alternative. Thus, both build alternatives result in a net 5.6 billion BTU savings per year compared to the no build alternative. At this energy savings rate, the payback period for the energy consumed during construction would be approximately 40 years for Build Alternative 7A (Preferred Alternative) and 19 years for Build Alternative 9.

No Build Alternative

Under the No Build Alternative, the temporary energy consumption discussed above for the build alternatives would not occur. Generally, construction energy can be compared to increased

roadway maintenance energy if a project is not built. However, there is insufficient information to quantify this energy savings.

Consistency with Energy Conservation Plans

The CEC, California Public Utilities Commission (CPUC), and Consumer Power and Conservation Financing Authority (called the CPA, which is now defunct) approved the final State of California Energy Action Plan in 2003, which was proposed by a subcommittee of these three agencies. The Plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. In 2005, an updated Energy Action Plan was adopted by the CEC and CPUC to reflect policy changes and actions after 2003.

The state's energy policies have been substantially influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. The CEC's *2007 Integrated Energy Policy Report* (IEPR) advanced policies that would enable the state to meet its energy needs in a carbon-constrained world. That report also provides a comprehensive set of recommended actions to achieve these policies.

Rather than produce a new Energy Action Plan, the CEC and the CPUC have prepared instead the Energy Action Plan – 2008 Update that examines the state's ongoing actions in the context of global climate change. The update was prepared using the information and analysis prepared for the recent *2007 Integrated Energy Policy Report*, as well as recent CPUC decisions.

As both of the build alternatives would result in a net reduction in energy consumption in the project study area compared to the no build alternative, both are consistent with the goals of these energy conservation plans.

2.3.8.4 Avoidance, Minimization, and/or Abatement Measures

Construction Minimization Measures

Construction of either of the build alternatives, Build Alternative 7A (Preferred Alternative) or Build Alternative 9, would not result in adverse direct or indirect impacts related to energy consumption in the project Study Area nor in the South Coast Air Basin compared to the No Build Alternative. However, in the interest of promoting energy efficiency, the following minimization measures could be implemented as part of the construction of both Build Alternatives 7A and 9.

E-1 Prior to the issuance of a grading permit, a construction efficiency plan will be prepared, which may include the following:

- Select disposal sites in close proximity to the SR-57/Lambert Road Interchange project area to minimize haul distances and excavation-related fuel consumption
- Reuse existing rail, steel, and lumber, such as for falsework, shoring, and other applications during the construction process
- Recycle asphalt taken up from roadways

- Use newer, more energy-efficient equipment and maintain older construction equipment in good working order
- Schedule construction operations to result in the most efficient use of construction equipment possible
- Promote employee carpooling

The construction efficiency plan will incorporate relevant city, county, state, and federal energy requirements and shall be reviewed and approved by the Public Works Departments for each of the local jurisdictions that are within the project area.

Maintenance Minimization Measures

Maintenance of either of the build alternatives would not result in adverse impacts related to energy consumption in the project study area nor in the South Coast Air Basin compared to the no build alternative. Therefore, no avoidance, minimization, or mitigation measures are required. However, in the interest of promoting energy efficiency, the following mitigation measure would be implemented as part of both Build Alternatives 7A and 9.

E-2 Prior to the opening of the project, a maintenance efficiency plan will be prepared, which may include the following:

- Maintain maintenance equipment in good working order
- Schedule maintenance operations to result in the most efficient use of maintenance equipment possible

Operational Minimization Measures

Operation of either of the build alternatives would not result in adverse impacts related to energy consumption in the project study area nor in the South Coast Air Basin compared to the no build alternative. Therefore, no avoidance, minimization, or mitigation measures are required. However, in the interest of promoting energy efficiency, the following mitigation measure would be implemented as part of both Build Alternatives 7A and 9.

E-3 Prior to issuance of a grading permit, an area lighting plan shall be prepared to identify lighting fixtures that are energy efficient and to identify placement of individual lighting fixtures used for roadway lighting that will provide safety lights for pedestrians and motorists. The area lighting plan will incorporate relevant city, county, state, and federal energy code requirements and shall be reviewed and approved by the California Department of Transportation (Caltrans) and the City of Brea Public Works Department.

2.4 BIOLOGICAL ENVIRONMENT

A Natural Environment Study (NES) and Jurisdictional Delineation (JD) were prepared in February 2014. A Biological Assessment (BA) was prepared in May 2015; the United States Fish and Wildlife Service (USFWS) concurred with the findings of the BA in a letter dated October 8, 2015. This Section is based on these studies.

2.4.1 NATURAL COMMUNITIES

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. The emphasis of the section should be on the ecological function of the natural communities within the area. 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 2.4.5. Wetlands and other waters are also discussed below in Section 2.4.2.

2.4.1.1 Affected Environment

The proposed project area historically consisted of rolling hills, but this has been modified by development, mainly freeway and commercial/industrial development. The alignment of SR-57 is relatively flat but is surrounded by relatively steep slopes on both the east and west. Elevations within the biological study area (BSA) range from approximately 365 feet above mean sea level (amsl) to 715 feet amsl. Habitat within the BSA has been modified completely or is highly disturbed, consisting of developed areas associated with existing transportation corridors as well as residential and commercial buildings. Undeveloped areas within the BSA consist of landscaped areas and slopes adjacent to northbound and southbound SR-57. Eight hydrologic features were identified within the BSA. Critical habitat for the coastal California gnatcatcher (CAGN) occurs in the northern portion of the BSA and is further discussed in Section 2.4.5, Threatened and Endangered Species. There are no adopted habitat conservation plans (HCPs) or natural community conservation plans (NCCPs) that cover the proposed project.

Methodology

The original records were searched in the California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) Electronic Inventory, and the Information, Planning and Conservation System (IPAC) databases in December 2011. An updated record search in the IPAC database for federally-listed endangered, threatened, proposed, and candidate species and critical habitat in the vicinity of the proposed project was completed in August 2015 (Appendix G).

Biologists conducted a site reconnaissance-level survey on December 21, 2011. Survey methods included walking the shoulder and median areas on SR-57 within the right-of-way (ROW). Vegetation communities and subcommunities were determined in general based on the Orange County Habitat Classification System Natural Resources Geographic Information System (GIS) Project. Vegetation communities were mapped on a 1 inch = 200 feet aerial photograph. Habitat areas that were considered too small to map separately were included in nearby habitat types

determined to be the most appropriate based on species composition. A follow-up windshield survey was conducted on August 7, 2013.

A habitat assessment for CAGN was conducted for areas within and adjacent to the federally-designated critical habitat for this species. As part of the required informal Section 7 consultation with USFWS, an on-site meeting with the U.S. Fish and Wildlife Service (USFWS) was held on July 25, 2012 to discuss the potential effects to CAGN by the proposed project. A BA was prepared to evaluate the effects of the proposed project and found that the effects are not likely to adversely affect CAGN and its designated critical habitat areas within the BSA. The BA was provided to the USFWS on June 8, 2015 by Caltrans, requesting concurrence with the determination that the proposed project is not likely to adversely affect the federally threatened CAGN and its designated habitat. USFWS concurred that the proposed project is not likely to adversely affect CAGN on October 8, 2015. This is further discussed in Section 2.4.5, Threatened and Endangered Species.

Vegetation Communities

Vegetation communities identified within the BSA include sage scrub-grassland, Ornamental Landscaping, Disturbed or Barren, Ruderal, Urban and Commercial, and Transportation and are shown in Figures 2.4-1a to 2.4-1d, Vegetation Communities.

As described in the NES, the BSA is located within the South Coast subregion of the Southwestern California region of the California Floristic Province. The South Coast subregion is characterized by valleys and small hills extending from the coast inland to the foothills of the Transverse and Peninsular Mountain Ranges. Much of the area is intensively developed for urban, suburban, and agricultural uses. The natural vegetation of the subregion consists primarily of chaparral, coastal sage scrub (CSS), annual grasslands, and some riparian scrub and woodland. Much of the natural vegetation occurs in scattered, often fragmented patches on hills or in other areas not easily developed.

Sage Scrub-Grassland

This habitat type occurs on steep slopes adjacent to SR-57 on the northern end of the BSA. It is largely dominated by nonnative annual grass species, including red brome (*Bromus madritensis* ssp. *rubens*), wild oats (*Avena* sp.), and ripgut brome (*Bromus diandrus*). The western slope also contains poison hemlock (*Conium maculatum*) as a dominant. Within the annual grassland, there is an approximately five percent cover of scattered scrub species, including California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and coyote brush (*Baccharis pilularis*). Less common scrub species identified include California encelia (*Encelia californica*), Mexican elderberry (*Sambucus mexicana*), deer weed (*Lotus scoparius*), and black sage (*Salvia mellifera*). Scrub species are very sparse within this community, and it more closely resembles annual grassland habitat.

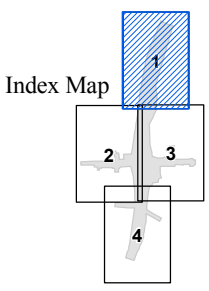
Ornamental Landscaping

The majority of the study area consists of nonnative landscaped vegetation associated with medians and shoulders adjacent to SR-57 and Lambert Road. Species within this habitat type consist of hottentot fig (*Carpobrotus edulis*), Peruvian pepper tree (*Schinus molle*), gum tree (*Eucalyptus* spp.), and acacia (*Acacia redolens*).

Source: Eagle Aerial, 2010.

Sheet 1 of 4

Index Map



LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercourses

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Vegetation Communities

6/1/12 JN 10-107792-18226 MAS

Figure 2.4-1a

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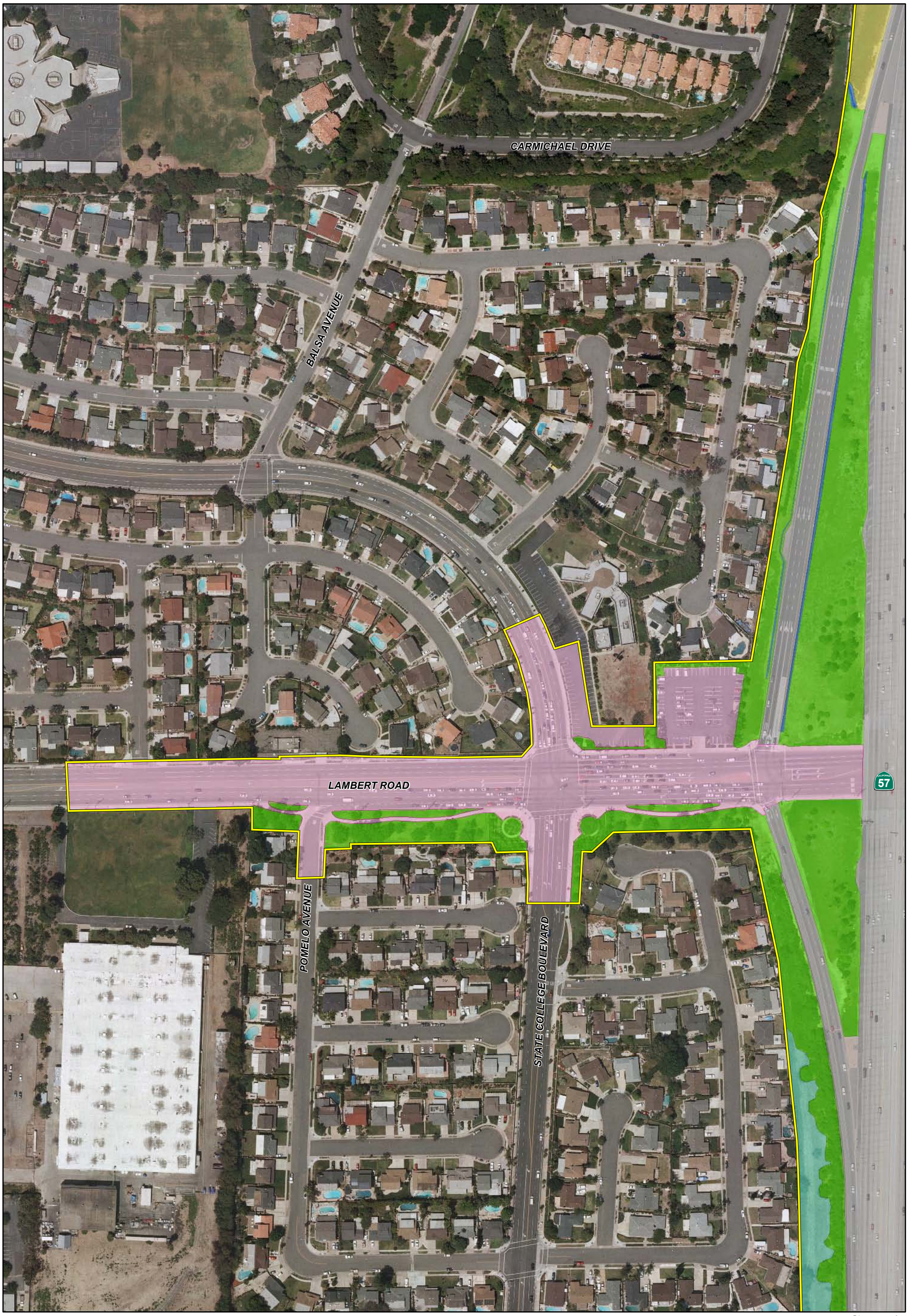
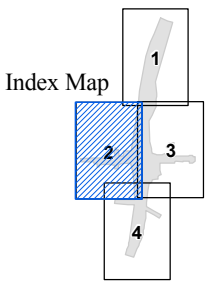


Source: Eagle Aerial, 2010.

Sheet 2 of 4

Index Map



LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercourses

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Vegetation Communities

6/1/12 JN 10-107792-18226 MAS

Figure 2.4-1b

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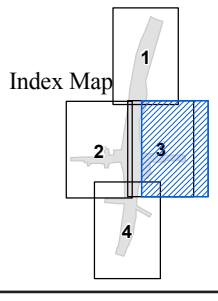
Source: Eagle Aerial, 2010.

Sheet 3 of 4



LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercourses

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Vegetation Communities

3/30/12 JN 10-107792-18226 MAS

Figure 2.4-1c

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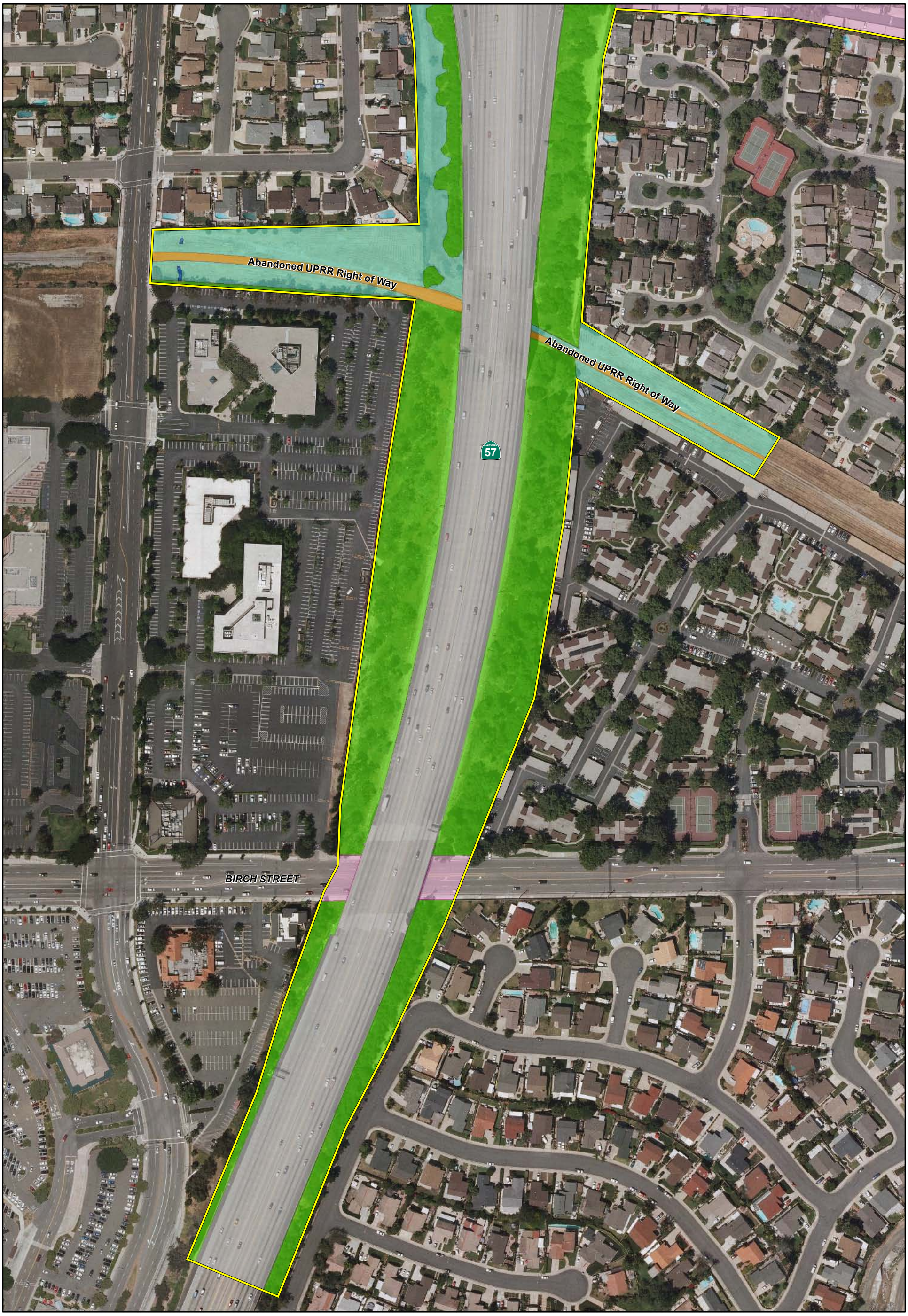
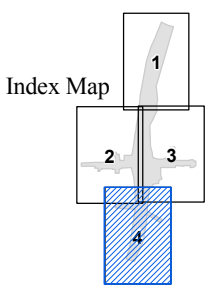


Source: Eagle Aerial, 2010.

Sheet 4 of 4

Index Map



LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercourses

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Vegetation Communities

3/30/12 JN 10-107792-18226 MAS

Figure 2.4-1d

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Disturbed or Barren

Disturbed or Barren habitat occurs in small areas adjacent to SR-57, just south of Lambert Road. These areas are mostly bare but contain scattered ruderal vegetation, including shortpod mustard (*Hirschfeldia incana*) and Russian thistle (*Salsola tragus*). A small portion of the BSA associated with the former Southern Pacific Railroad corridor consists of barren ground. This area is devoid of vegetation and is a compacted dirt/gravel road.

Urban and Commercial

A large portion of the BSA consists of an Urban habitat type. These areas are fully developed residential and commercial areas, local streets and highways, and flood control channels. These areas are primarily unvegetated or support small patches of ruderal or ornamental vegetation. Species within these areas include Peruvian pepper, Mexican fan palm (Washingtonia robusta), English ivy (Hedera helix), and Bermuda grass (Cynodon dactylon).

Transportation

This "habitat" type consists of the SR-57 mainline and on- and off-ramps. These areas are fully developed paved highways with no vegetation.

Wildlife Communities and Movement Corridors

Wildlife species occurring with the BSA are characteristic of those found within a developed urban setting. Common species observed include rock pigeon (*Columba livida*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), black phoebe (*Sayornis nigricans*), and American crow (*Corvus brachyrhynchos*). Due to the high level of disturbance and substantial portion of the BSA that is developed, the site does not appear to function as a wildlife movement corridor.

2.4.1.2 Environmental Consequences

Build Alternatives 7A and 9

Both Build Alternatives would impact areas that are urbanized and generally considered of low biological value to plant and wildlife species. This section focuses on the impacts to those habitats that are outside the California gnatcatcher (CAGN) designated critical habitat, which is located at the northern end of the proposed project, as shown in Figures 2.4-1a to 2.4.1d, Vegetation Communities, and as discussed in Section 2.4.5, Threatened and Endangered Species.

Construction (Short-Term) Impacts

The proposed project would result in 0.89 acre of temporary impacts under Build Alternative 7A (Preferred Alternative) and 0.75 acre of temporary impacts under Build Alternative 9 to the sage scrub-grassland habitat outside the USFWS-designated CAGN critical habitat.

All indirect and temporary impacts as a result of construction activities, including staging and equipment areas, would be contained within the BSA. Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees and shrubs. The respiratory function of the plants in the area would be impaired when dust accumulation is excessive. The indirect effect of construction of the proposed project on any native vegetation (sage scrub-

grassland) would be limited to incidental encroachment and areas where existing topography would be restored. Minimization Measure AN-1 is provided to avoid and minimize construction-related impacts to the surrounding vegetation communities.

Operation (Long-Term) Impacts

Both Build Alternative 7A (Preferred Alternative) and Build Alternative 9 would result in 0.14 acre of permanent impacts to the sage scrub-grassland habitat outside the USFWS-designated CAGN critical habitat. The sage scrub-grassland habitat is largely dominated by nonnative annual grass species (red brome, wild oats, ripgut brome, and poison hemlock). There is approximately five percent cover of scattered scrub species (California buckwheat, California sagebrush, and coyote brush). The area has high disturbance of the habitat and is in close proximity to SR-57. Permanent impacts may include complete removal and heavy encroachment. Because focused CAGN surveys were not conducted for the proposed project, project impacts to all of the sage scrub-grassland, including the areas outside the CAGN-designated critical habitat, presence for CAGN is assumed. Implementation of Mitigation Measure TE-1, discussed in Section 2.4.5, Threatened and Endangered Species, would reduce impacts.

Due to the high level of disturbance and substantial portion of the BSA that is developed, the site does not appear to function as a wildlife movement corridor. Therefore, neither Build Alternative would affect wildlife movement corridors.

No Build Alternative

Under the No Build Alternative, no new construction would occur and there would be no new impacts on natural communities within the BSA.

2.4.1.3 Avoidance and Minimization Measures

In addition to the implementation of TE-1, provided in Section 2.4.5, Threatened and Endangered Species, and INV-1 through INV-2, provided in Section 2.4.6, Invasive Species, the following measures have been identified.

NC-1 During construction, when work is conducted during the fire season (as identified by the Orange County Fire Authority) adjacent to the sage scrub-grassland vegetation, appropriate firefighting equipment (e.g., extinguishers, shovels and water tankers) will be available on site during all phases of proposed project construction. Shields, protective mats, and/or other fire preventive methods will be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventive actions, and responses to fires will advise the construction contractors regarding fire risk from all construction-related activities.

2.4.2 WETLANDS AND OTHER WATERS

2.4.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. 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 CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot 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 (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA and/or Caltrans, as assigned, 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 State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCB), and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California 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 CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW 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 USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCB also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with Section 404 permit request. Please see the Water Quality section for additional details.

2.4.2.2 Affected Environment

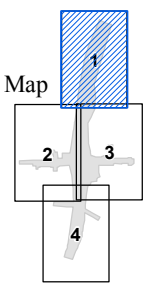
Methodology

On December 21, 2011, the BSA was surveyed by vehicle and on foot from both federal and state jurisdictional areas. The BSA was surveyed for areas supporting species of plant life potentially indicative of wetlands according to routine wetland delineation procedures described in the *Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region*. A Wetland Determination Data Form (Arid West Region) was completed for one area of potential wetland jurisdiction within the BSA. Hydrological conditions, including surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators, were noted.

Areas of potential jurisdiction were evaluated according to USACE and CDFW criteria. The boundaries of the potential jurisdictional areas were observed in the field and mapped on a series of aerial photographs (scale, 1 inch = approximately 200 feet), which together show the entire BSA. Measurements of federal and state jurisdictional areas mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Figures 2.4-2a through 2.4-2d, Potential Jurisdictional Areas, show the locations of the potential jurisdictional areas.

Source: Eagle Aerial, 2010.

Index Map



LEGEND

- Project Boundary
- 1'/2' Drainage Widths (ACOE/CDFG)
- Drainage
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Potential Jurisdictional Areas

3/29/12 JN 10-107792-18226 MAS

Figure 2.4-2a

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CARMICHAEL DRIVE

BALSA AVENUE

C

3'/6'

D

E

1'/2'

1'/2'

Park and Ride

LAMBERT ROAD

57

POMELO AVENUE

STATE COLLEGE BOULEVARD

Source: Eagle Aerial, 2010.

Index Map

1

2

3

4

0 200'

LEGEND

Project Boundary

Drainage

1'/2' Drainage Widths (ACOE/CDFG)

A Drainage ID

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Potential Jurisdictional Areas

3/29/12 JN 10-107792-18226 MAS

Figure 2.4-2b

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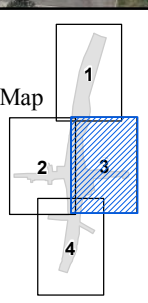
Source: Eagle Aerial, 2010.

Index Map



LEGEND

- Project Boundary
- 1'/2' Drainage Widths (ACOE/CDFG)
- Drainage
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Potential Jurisdictional Areas

3/29/12 JN 10-107792-18226 MAS

Figure 2.4-2c

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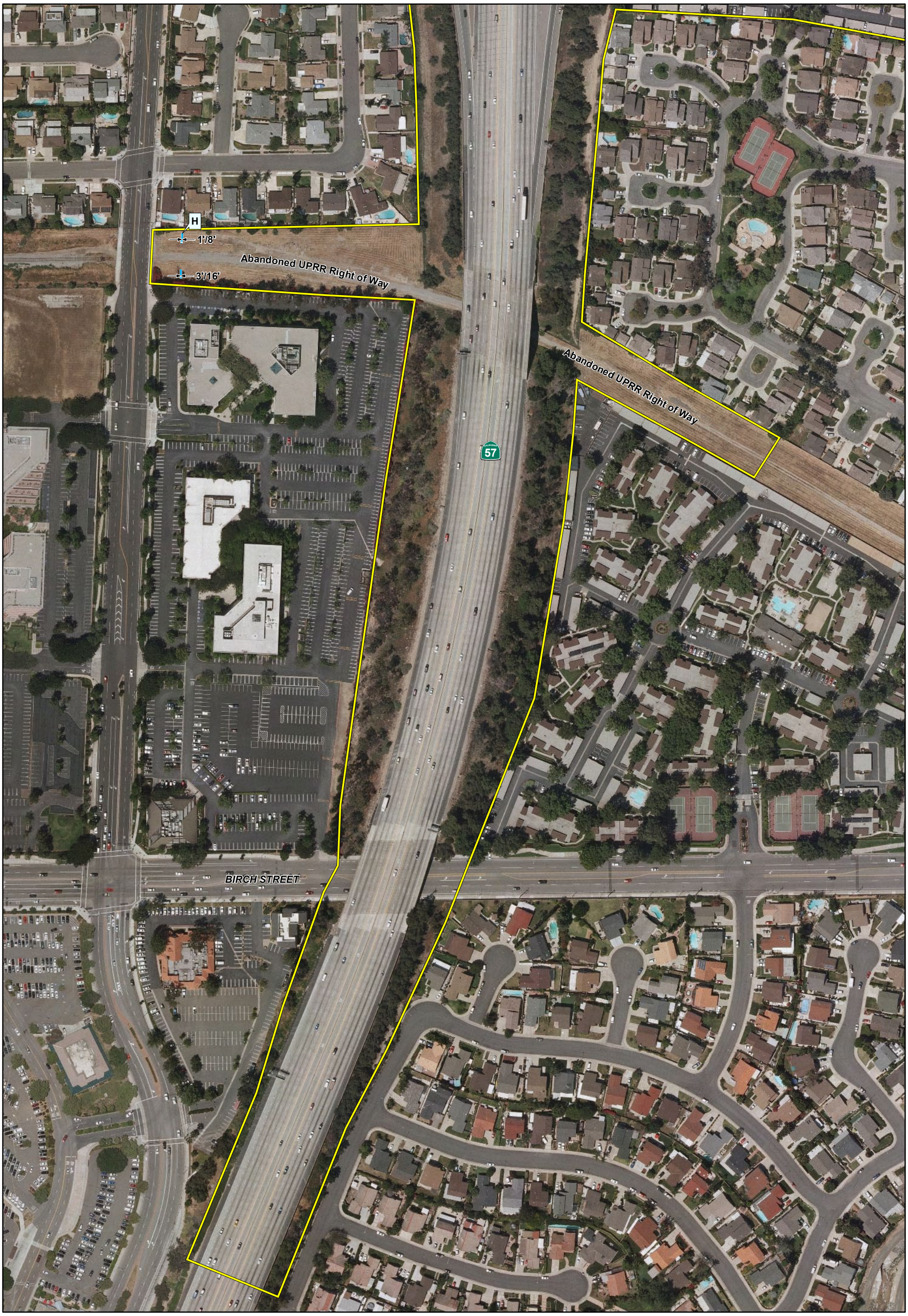
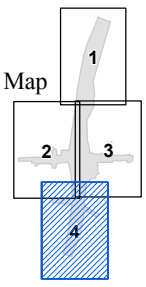


Source: Eagle Aerial, 2010.

Index Map



LEGEND

- Project Boundary
- 1'/2' Drainage Widths (ACOE/CDFG)
- Drainage
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Potential Jurisdictional Areas

3/29/12 JN 10-107792-18226 MAS

Figure 2.4-2d

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Existing Conditions

All channelized storm water and drainage features from the proposed project discharge directly into the storm drain system, which eventually discharges into Coyote Creek via Fullerton Creek. Coyote Creek is tributary to the San Gabriel River, which connects directly to the Pacific Ocean (a navigable water of the U.S.) at Alamitos Bay, between the Cities of Long Beach and Seal Beach; refer to Figure 2.4-3, Surface Waters. This connection to the Pacific Ocean establishes a nexus to navigable waters, as defined by USACE guidance.

Drainage Features

Eight drainage features were identified within the BSA (Drainage Features A–H). Features A, B, D, E, F, and G are entirely surrounded by urban development, lack associated riparian habitat, and are excavated on dry land. These features convey sheet flows from adjacent areas to the storm drain system. Features C and H are human-altered and surrounded by suburban habitat but convey flows from drainage areas that likely contained flows prior to the freeway and other development in the vicinity and contain small amounts of riparian habitat. Nonnative grassland vegetation was present at Drainage Features A and B. Upland ornamental vegetation was present at Drainage Features B, D, E, F, and G.

Drainage Features A, B, and F are humanmade, unvegetated concrete V-ditch connecting to a storm drain facility, with the exception of Drainage Feature A, which does not connect to any other drainage. Drainage Features D, E, and G are humanmade, unvegetated asphalt swales that transport runoff directly into a storm drain. Drainage Feature C is a three-foot-wide concrete channel. Drainage Features A through G are adjacent to SR-57. Drainage Feature H is a graded earthen channel running north-south on the north and south sides of historic Southern Pacific Railroad tracks, east of State College Boulevard and west of the SR-57.

Drainage Feature A had very faint water stains present and an ordinary high watermark (OHWM) was difficult to determine. The OHWM was determined to be less than one foot wide. Drainage Feature C had debris blocking the storm drain; therefore, sediment, measuring two inches deep, had accumulated and the concrete channel supported standing water and a small amount of riparian vegetation at the time of the field visit. This channel is intended to be maintained for flood control purposes and the OHWM was determined to be three feet wide. Drainage Feature F had a substantial amount of leaf debris accumulation at the time of the field visit, and an OHWM was difficult to determine; however, very faint stains were present and the OHWM was determined to be two feet wide.

Drainage Features A, B, D, E, F, and G do not satisfy the criteria for relatively permanent water (RPW). Drainage Feature A does not convey flows into any drainage potentially considered a traditional navigable water (TNW). Due to the lack of riparian vegetation and the presence of an asphalt lining, Drainage Features A, B, D, E, F, G were not classified as wetland. Although standing water was present at the time of the delineation, Drainage Feature C is not anticipated to satisfy the criteria of an RPW.

Drainage Feature H appears to be the remnants of a channel that now forms two basins, one on each side of the historic Southern Pacific Railroad tracks, which are abandoned and currently used as a Department access road. A reinforced concrete box culvert conveys flows from the northern basin into the southern basin. Flows from the southern basin enter a corrugated metal pipe culvert and are conveyed off-site into the storm drain system. The northern basin is approximately eight feet wide and contains upland vegetation dominated by castor bean (*Ricinus*

communis). The average OHWM in the northern basin is approximately one foot wide. The southern basin is approximately 16 feet wide and contains standing water and a mix of upland and riparian vegetation. The banks of the southern basin appear to have recently caved in, resulting in a larger basin. The average OHWM in the southern basin is three feet wide. Dominant hydrophytic plant species identified in the southern basin include rabbitfoot grass (*Polypogon monspieliensis*) and tall flatsedge (*Cyperus eragrostis*). An Arid West Region Wetland Determination Data Form has been completed and the drainage feature did not qualify as wetlands based on the lack of sufficient hydrophytic vegetation. Topographic maps and historic aerial images indicate that prior to development of a housing tract south of the railroad corridor (sometime between 1980 and 1994), the channel connected directly to Fullerton Creek. Due to the historic connection to a TNW (the Pacific Ocean via Fullerton Creek and the San Gabriel River), it is the opinion of the consulting biologists that the USACE would assert jurisdiction over this drainage as nonwetland waters of the U.S.

Jurisdiction

As described above, the drainage features on site connect to Fullerton Creek, either directly or indirectly (through the storm drain system). Fullerton Creek is a tributary to Coyote Creek, which is a tributary to the San Gabriel River. The San Gabriel River flows directly into the Pacific Ocean at Alamitos Bay, thereby establishing a nexus to navigable waters. All but one of the features are asphalt or concrete-lined and clearly excavated on dry land to control local runoff. Human-altered drainages, where topography supports the possibility that some form of "natural" drainage was present in the past or would be present if SR-57 and the existing drainages were not constructed, are believed to be potentially jurisdictional (i.e., Drainage Feature H). Because Drainage Feature H does not have a relatively permanent flow, a significant nexus determination by the USACE would be required. As shown in Table 2.4.2-1, the total acreage of potential USACE jurisdiction within the BSA is less than 0.01 acre (ac).

Table 2.4.2-1 Potentially Jurisdictional Drainage Feature Length and Area Measurements

Drainage Feature	Average USACE Width (feet)	Average CDFW Width (feet)	Potential Jurisdictional USACE Area (acres)	Potential Jurisdictional CDFW Area (acres)
H	2	12	<0.01	0.01
Total Potential Jurisdictional Area			<0.01	0.01

Source: Jurisdictional Delineation, 2014b
USACE = United States Army Corps of Engineers
CDFW = California Department of Fish and Wildlife

The remaining drainages (i.e., Drainage Features A–G) are believed to be humanmade drainage ditches constructed on dry land for the sole purpose of collecting sheet flow from the freeway, local streets, and urban properties. These roadside drainage ditches function solely to convey storm water sheet flow into the storm drain system. The USACE typically does not assert jurisdiction over these humanmade roadside drainage ditches; however, the USACE does reserve the right to regulate these waters on a case-by-case basis. As shown in Table 2.4.2-2, the total acreage of potentially nonjurisdictional waters within the BSA is 0.15 ac.

Source: AirPhotoUSA, 2008; National Hydrography Dataset, 1999.

LEGEND

- Biological Study Area
- Surface Waters

0 3500'

3/30/12 JN 10-107792-18226 MAS

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Surface Waters

Figure 2.4-3

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Table 2.4.2-2 Potentially Non-Jurisdictional Drainage Feature Length and Area Measurements

Drainage Feature	Average USACE Width (feet)	Average CDFW Width (feet)	Potential Non-Jurisdictional USACE Area (acres)	Potential Non-Jurisdictional CDFW Area (acres)
A	1	3	0.02	0.05
B	1	4	0.01	0.05
C	3	6	<0.01	<0.01
D	1	2	0.03	0.06
E	1	2	0.03	0.06
F	2	10	0.04	0.17
G	1	2	<0.01	0.01
Total Potential Jurisdictional Area			0.15	0.41

Source: Jurisdictional Delineation, 2014b
USACE = United States Army Corps of Engineers
CDFW = California Department of Fish and Wildlife

The drainage feature satisfying the USACE jurisdictional criteria for waters of the U.S., Drainage Feature H, is also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Streambed banks extending beyond the limits of USACE jurisdiction are considered subject to CDFW jurisdiction; however, there were no areas within the BSA where riparian vegetation, potentially considered subject to CDFW jurisdiction, extended beyond the streambed banks. Drainages believed to be not jurisdictional by the USACE and that lack riparian vegetation, are concrete-lined, show an absence of any aquatic or terrestrial wildlife, and do not function as a river, lake, or stream are also not likely to be considered jurisdictional by the CDFW. Therefore, as shown in Table 2.4.2-1, the total acreage of potential CDFW jurisdiction within the BSA is 0.01 ac.

Since there is no approved public guidance on determining Regional Water Quality Control Board (RWQCB) jurisdictional areas, jurisdiction was determined based on the federal definition of wetlands (three-parameter) and other waters of the U.S. Since there are areas within the BSA subject to USACE and CDFW jurisdiction, RWQCB jurisdiction in this case is coincident with USACE jurisdiction for purposes of Section 401 certification.

2.4.2.3 Environmental Consequences

Build Alternatives 7A and 9

Figures 2.4-4a to 2.4-4d, Impacted Waters – Alternative 7A, show the impacted drainage features under Build Alternative 7A (Preferred Alternative), while Figures 2.4-5a to 2.4-5d, Impacted Waters – Alternative 9, show the impacted drainage features under Build Alternative 9.

Construction (Short-Term) Impacts

No temporary impacts would occur under either Build Alternative.

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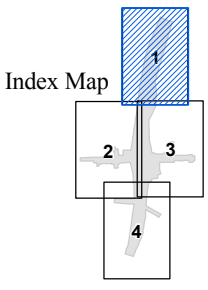
Source: Eagle Aerial, 2010.

Sheet 1 of 4

Index Map



LEGEND • ALT 7A Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 7A

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-4a

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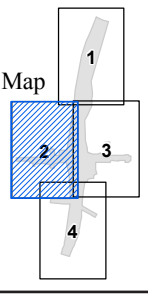
Source: Eagle Aerial, 2010.

Sheet 2 of 4

Index Map



LEGEND • ALT 7A Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 7A

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-4b

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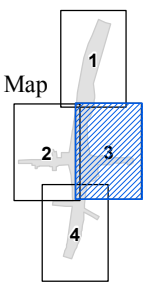
Source: Eagle Aerial, 2010.

Sheet 3 of 4

Index Map



LEGEND • ALT 7A Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 7A

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-4c

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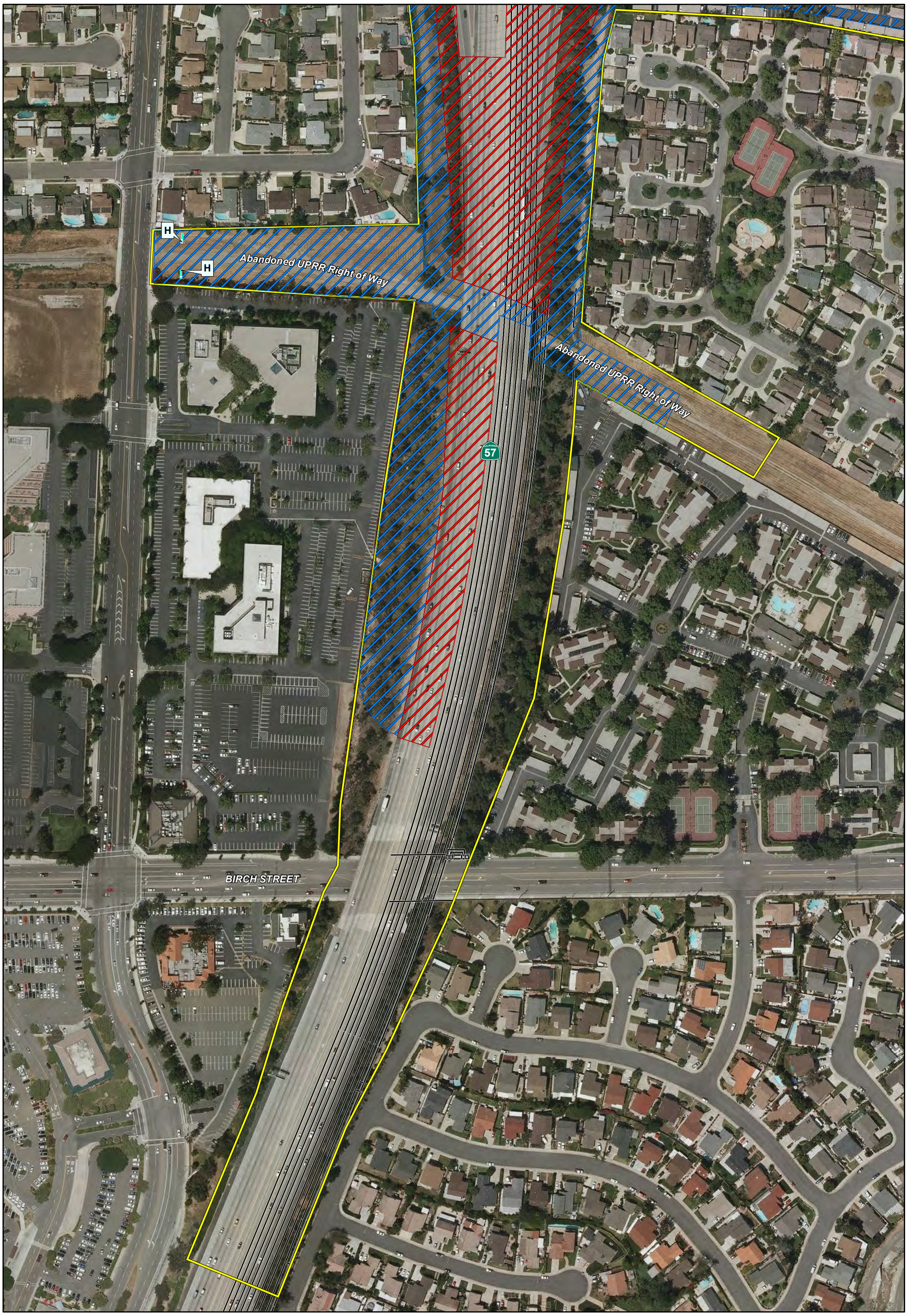
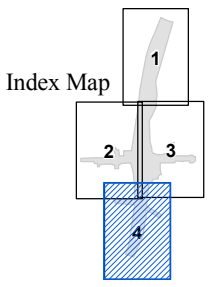


Source: Eagle Aerial, 2010.

Sheet 4 of 4

Index Map



LEGEND • ALT 7A Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 7A

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-4d

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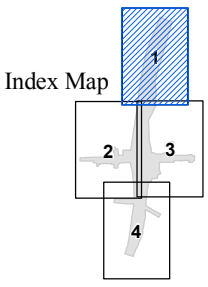
Source: Eagle Aerial, 2010.

Sheet 1 of 4

Index Map



LEGEND • ALT 9 Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 9

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 9

8/6/13 JN 10-107792-18226 MAS

Figure 2.4-5a

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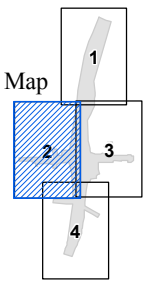
Source: Eagle Aerial, 2010.

Sheet 2 of 4

Index Map



LEGEND • ALT 9 Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 9

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 9

8/6/13 JN 10-107792-18226 MAS

Figure 2.4-5b

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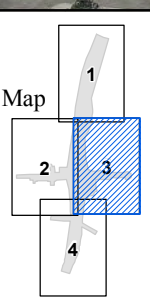
Source: Eagle Aerial, 2010.

Sheet 3 of 4

Index Map



LEGEND • ALT 9 Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 9

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 9

8/6/13 JN 10-107792-18226 MAS

Figure 2.4-5c

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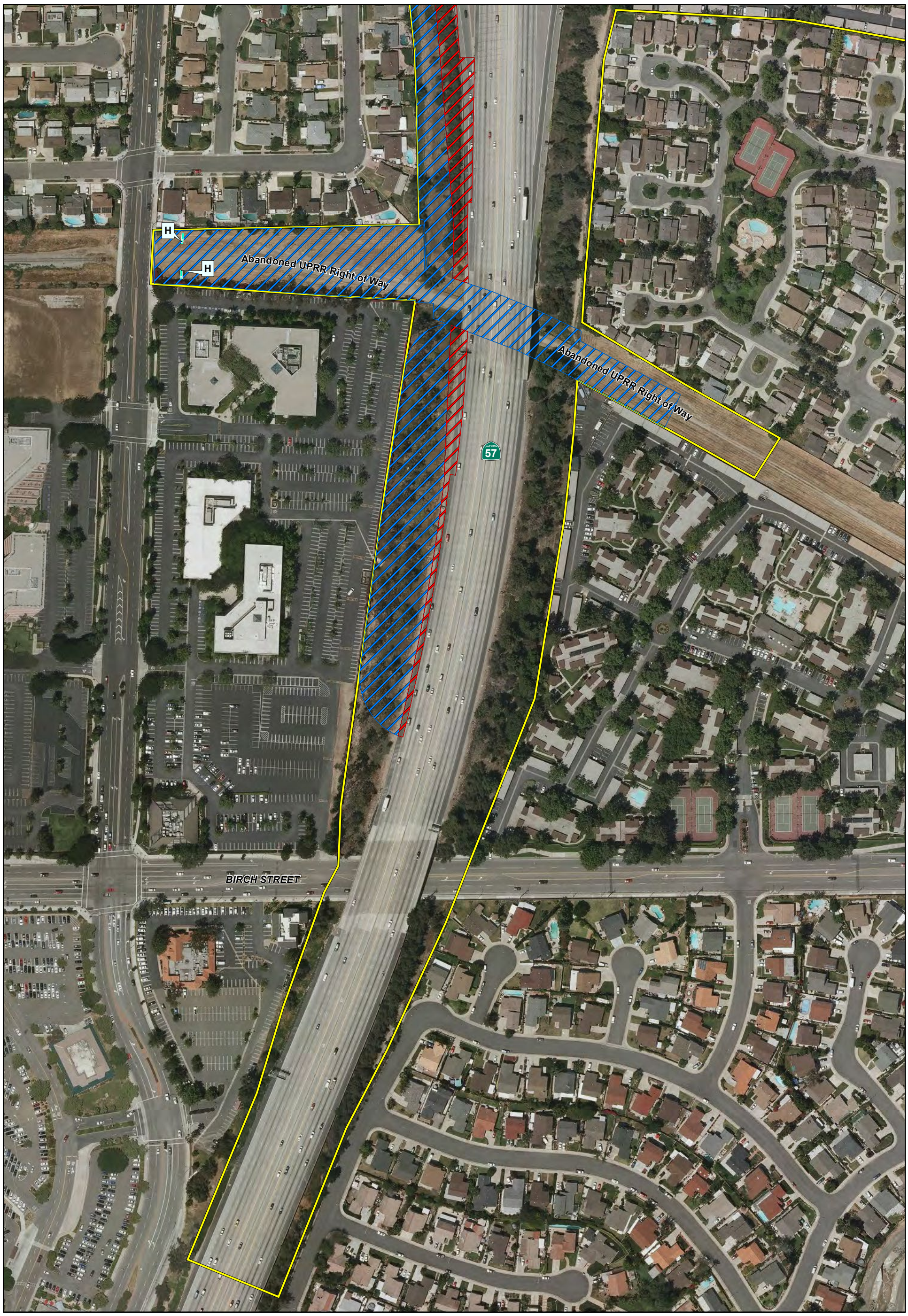

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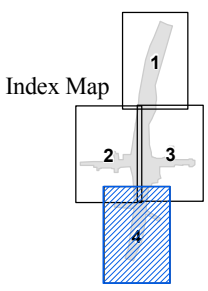

LEGEND • ALT 9 Impacts

- Project Boundary
- Permanent Impact
- Temporary Impact
- Alternative 9

DRAINAGES

- Drainages
- A Drainage ID

0 200'

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacted Waters Alternative 9

8/6/13 JN 10-107792-18226 MAS

Figure 2.4-5d

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Operation (Long-Term) Impacts

Both Build Alternatives 7A and 9 would permanently affect Drainage Feature E and portions of Drainage Features B, D, and G. All impacted drainages are artificial and drain only upland areas. The drainage features are either concrete-lined ditches or asphalt swale that do not support vegetation and do not provide wildlife habitat. Since the impacted drainage features are artificial drainages that drain only upland areas, they are not likely to be considered jurisdictional by the USACE. Therefore, no impacts to USACE jurisdictional areas are expected.

Drainages believed to be not jurisdictional by the USACE and that lack riparian vegetation are concrete-lined, show an absence of any aquatic or terrestrial wildlife, and do not function as a river, lake, or stream; they are also not likely to be considered jurisdictional by the CDFW. Therefore, no impacts to CDFW jurisdictional areas are expected.

Drainage Feature H is located in an area identified as a temporary staging area and construction vehicle access. Drainage Feature H is considered an environmentally sensitive area (ESA). Construction activities would avoid the drainage feature, thus no impacts are anticipated; however, avoidance and minimization measures are required, as discussed in Section 2.4.2.4, to ensure that no impacts would occur.

Since the proposed project would not result in impacts to potentially jurisdictional areas, a Section 404 Permit from the USACE, a Streambed Alteration Notification to the CDFW, and a Section 401 Water Quality Certification from the RWQCB are not expected to be required for this proposed project.

No Build Alternative

Under the No Build Alternative, no new construction would occur and there would be no new impacts to drainage features.

2.4.2.4 Avoidance and/or Minimization Measures

WET-1 Prior to the start of any construction activities, temporary construction fencing will be erected outside the jurisdictional limits of Drainage Feature H and no vehicles or construction materials will be permitted inside the environmentally sensitive area (ESA) fencing.

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2.4.3 PLANT SPECIES

2.4.3.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have 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 provided 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 refer to Section 2.4.5, Threatened and Endangered Species in this document for detailed information about these species.

This section of the document discusses all the other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), CA Public Resources Code, Sections 2100-21177.

2.4.3.2 Affected Environment

A Jurisdictional Delineation was prepared in February 2012 and a Natural Environment Study (NES) was prepared in February 2014. A Biological Assessment (BA) was prepared in May 2015 and the USFWS provided a letter of concurrence on October 8, 2015.

Methodology

The original records were searched in the CNDDB, CNPS Electronic Inventory, and the IPAC databases in December 2011. An updated record search in the IPAC database for federally-listed endangered, threatened, proposed, and candidate species and critical habitat in the vicinity of the proposed project was completed in August 2015 (Appendix G).

Biologists conducted a site reconnaissance-level survey on December 21, 2011 to generally characterize the biological resources of the site and to ascertain the presence or absence of sensitive plants or the likelihood of their occurrence in the BSA. The purpose of the survey was to evaluate the site based on existing conditions, with particular focus on the native vegetation and sensitive species within the BSA. The BSA includes the entire proposed ground disturbance area associated with the interchange improvements, including the grading limits and staging areas. During the course of the survey described above, the biological condition of the BSA was assessed for the presence of various sensitive species, including vegetation, wildlife, and suitability of habitat. Survey methods included walking the shoulder and median areas on SR-57 within the ROW. Vegetation communities and subcommunities were determined in general based on the Orange County Habitat Classification System Natural Resources GIS Project. Vegetation communities were mapped on a 1-inch = 200 feet aerial photograph. Habitat areas that were considered too small to map separately were included in nearby habitat types determined to be

the most appropriate based on species composition. A follow-up windshield survey was conducted on August 7, 2013.

Existing Conditions

The BSA is mainly comprised of nonnative landscaped, ruderal, ornamental vegetation, or bare ground. Species observed included hottentot fig (*Carpobrotus edulis*), Peruvian pepper tree (*Schinus molle*), gum tree (Eucalyptus spp.), acacia (*Acacia redolens*), Mexican fan palm (*Washingtonia robusta*), English ivy (*Hedera helix*), Bermuda grass (*Cynodon dactylon*), shortpod mustard (*Hirschfeldia incana*) and Russian thistle (*Salsola tragus*). A small portion of the BSA associated with the former Southern Pacific Railroad corridor consists of cleared or barren ground. This area is devoid of vegetation and is a compacted dirt/gravel road.

Sage scrub-grassland occurs on steep slopes adjacent to SR-57 on the northern end of the BSA. It is largely dominated by nonnative annual grass species, including red brome (*Bromus madritensis* ssp. *rubens*), wild oats (*Avena* sp.), and ripgut brome (*Bromus diandrus*). The western slope also contains poison hemlock (*Conium maculatum*) as a dominant. Within the annual grassland, there is an approximately five percent cover of scattered scrub species, including California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and coyote brush (*Baccharis pilularis*). Less common scrub species identified include California encelia (*Encelia californica*), Mexican elderberry (*Sambucus mexicana*), deer weed (*Lotus scoparius*), and black sage (*Salvia mellifera*). Scrub species are very sparse within this community, and it more closely resembles annual grassland habitat.

The surrounding area west and south of the BSA is highly developed. The surrounding area east and north of the BSA is connected to a large, undeveloped area associated with the Puente/Chino Hills. This area provides habitat to support several special-interest plant species. The results of the literature review indicated the potential for 34 special-interest plant species to occur in the region, including six federally and/or state listed special status species. No suitable habitat to support any of these 34 identified regional special-status plant species occurs within the BSA; Refer to Table 2.4.3-1, below.

2.4.3.3 Environmental Consequences

Build Alternatives 7A and 9

Construction (Short-Term) Impacts

Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs. The respiratory function of the plants in the area would be impaired when dust accumulation is excessive. The indirect effect of the proposed project construction on the vegetation in the immediate vicinity of the construction area would not reduce the plant population below self-sustaining levels. No sensitive plants have the potential to occur within the proposed project limits; therefore, no such impacts are anticipated. No impacts would occur to plant species.

Operation (Long-Term) Impacts

Operation and maintenance of both Build Alternatives, Alternatives 7A and 9, would not impact plants beyond the impacts during construction. No sensitive plants have the potential to occur

within the proposed project limits; therefore, no such impacts are anticipated. No impacts would occur to plant species.

No Build Alternative

Under the No Build Alternative, no new construction would occur and there would be no new impacts to sensitive plant species.

2.4.3.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

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Table 2.4.3-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat	Rationale
Chaparral sand-verbena	*Abronia villosa* var. *aurita*	CSP, CNPS List 1B	Annual herb. Occurs in coastal scrub and chaparral in sandy soils. From 260 to 5,250 feet (ft) in elevation.	January–August	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Western spleenwort	*Asplenium vespertinum*	CNPS List 4	Rocky sites in chaparral, cismontane woodland, and coastal scrub at 180 to 1,000 meters (600 to 3,300 feet) elevation.	February–June (perennial rhizomatous herb)	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Parish's brittlescale	*Atriplex parishii*	CSP, CNPS List 1B	Annual herb that occurs in chenopod scrub, vernal pools, and playas, usually on drying alkali flat with fine soils. From 10 to 6,230 ft in elevation.	June–October	Absent	No suitable habitat occurs in BSA.
Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	CSP, CNPS List 1B	Annual herb. Occurs in coastal bluff scrub and coastal scrub, usually in alkaline soil. From 35 to 660 ft in elevation.	April–October	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Nevin's barberry	*Berberis nevinii*	FE, SE, CNPS List 1B	Gravelly wash margins in alluvial scrub, or coarse soils and rocky slopes in chaparral; typically 275 to 825 meters (900 to 2,700 feet) elevation; Los Angeles, San Bernardino, Riverside, and San Diego Counties.		Absent	No suitable habitat occurs in BSA.
Round-leaved filaree	*California (formerly Erodium) macrophyllum*	CSP, CNPS List 1B	Annual herb. Occurs in cismontane woodland and valley and foothill grassland, usually in clay soils. From 45 to 3,600 ft in elevation.	March–May	Absent	No suitable habitat occurs in BSA.
Plummer's mariposa lily	*Calochortus plummerae*	CSP, CNPS List 1B	Perennial bulbiferous herb. Occurs in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and lower montane coniferous forest, usually on rocky and sandy sites; can be very common after fire. From 300 to 5,100 ft in elevation.	May–July	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Intermediate mariposa lily	*Calochortus weedii* var. *intermedius*	CSP, CNPS List 1B	Perennial bulbiferous herb. Occurs in chaparral, coastal scrub, and valley and foothill grassland. Often in dry, rocky soils. From 395 to 2,805 ft in elevation.	May–July	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Southern tarplant	*Centromadia parryi* ssp. *australis*	CSP, CNPS List 1B	Annual herb. Occurs in vernal pools, margins of marshes and swamps, and vernally mesic valley and foothill grasslands, sometimes with saltgrass on alkaline soils. Up to 1,400 ft in elevation.	May–November	Absent	No suitable habitat in BSA.

Table 2.4.3-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat	Rationale
Salt marsh bird's beak	*Chloropyron (Cordylanthus) maritimus spp. Maritimus*	FE, SE, CNPS List 1B	Coastal dunes and salt marshes below 30 meters (100 feet) elevation. In California, known from Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura Counties. Historical collections referred to this taxon from alkaline meadow in vicinity of San Bernardino Valley are intermediate to C. maritimus ssp. canescens. Also occurs in Mexico.	May–October	Absent	No suitable habitat in BSA.
San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	FC, CE, CNPS List 1B	Annual herb. Occurs in coastal scrub in sandy soils. From 450 to 3,660 ft in elevation.	April–July	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Parry's spineflower	*Chorizanthe parryi* var. *parryi*	CSP, CNPS List 3	Annual herb. Occurs in coastal scrub and chaparral on sandy or rocky soils. From 120 to 5,115 ft in elevation.	April–June	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Peruvian dodder	*Cuscuta obtusifolia var. glandulosa*	CNPS List 2	May be extirpated in California. Formerly found sporadically in freshwater marsh on herbs including Alternanthera, Dalea, Lythrum, Polygonum, and Xanthium below about 500 meters (1,600 feet). Reported in California from Los Angeles, San Bernardino, Sonoma, Sutter, Butte, Sacramento, and Merced Counties. Also known from eastern and southern US, West Indies, and Mexico.	July–October (annual parasitic vine)	Absent	No suitable habitat in BSA.
Many-stemmed dudleya	*Dudleya multicaulis*	CSP, CNPS List 1B	Perennial herb. Occurs in chaparral, coastal scrub, valley and foothill grassland usually in heavy, often clayey soils. From 45 to 2,370 ft in elevation.	April–July	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Slender-horned spineflower	*Dodecahema leptoceras*	FE, CE, CNPS: List 1B	Annual herb. Occurs in chaparral, cismontane woodland and coastal scrub in sandy soils. From 600 to 2,280 ft in elevation.	April–June	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Santa Ana River woollystar	*Eriastrum densifolium* ssp. *sanctorum*	FE, CE, CNPS List 1B	Perennial herb. Occurs in chaparral and costal scrub in sandy or gravelly soils on river floodplains or terraced fluvial deposits. From 273 to 1,830 ft in elevation.	May–September	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Vernal barley	*Hordeum intercedens*	CSP, CNPS: List 3	Annual herb. Occurs in coastal dunes, coastal scrub, valley and foothill grassland, and vernal pools, usually in saline flats and depressions. From 15 to 3000 ft in elevation.	March–June	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.

Table 2.4.3-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat	Rationale
Mesa horkelia	*Horkelia cuneata* ssp. *puberula*	CNPS List 1B	Sandy or gravelly soils in chaparral, or rarely in cismontane woodland or coastal scrub at 70 to 825 meters (200 to 2,700 feet) elevation. Known only from San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Bernardino Counties, California. Believed extirpated from Riverside and San Diego Counties.	February–July (sometimes to September)	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
California black walnut	*Juglans californica*	CSP, CNPS List 4	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.	March–August	Absent	No suitable habitat in BSA. Not observed during biological surveys.
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	CSP, CNPS List 1B	Annual herb occurring in coastal salt marshes and swamps, playas, valley and foothill grasslands, sinks, and vernal pools up to 4,000 ft in elevation.	February–June	Absent	No suitable habitat in BSA.
Prostrate vernal pool navarretia	*Navarretia prostrate*	CNPS List 1B	Vernal pools, usually alkaline, from 15 to 1,210 meters (50 to 4,000 feet) elevation. Known only from Alameda, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, San Benito, San Diego San Luis Obispo, San Bernardino (presumed extirpated) Counties, California.	April–July	Absent	No suitable habitat in BSA.
Coast wooly-heads	*Nemacaulis denudata var. denudate*	CNPS List 1B	Sandy places such as coastal dunes below 100 meters (300 feet) elevation. Known in California from Orange, Los Angeles, and San Diego Counties. Believed extirpated from Santa Catalina Island. Also occurs in Mexico.	April–September	Absent	No suitable habitat in BSA.
California Orcutt grass	*Orcuttia californica*	FE, SE, CNPS List 1B	Vernal pools from 15 to 660 meters (50 to 2,200 feet) elevation. In California, known from Los Angeles, Ventura, Riverside, and San Diego Counties. Also occurs in Mexico.	April–August	Absent	No suitable habitat in BSA.
Hubby's phacelia	*Phacelia hubbyi*	CNPS List 4	Chaparral, coastal scrub and Valley and Foothill Grassland below 1000 meters (3,000 feet). Known from Kern, Los Angeles, Santa Barbara, and Ventura Counties.	April–June	Absent	Outside of species known range. Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
South Coast branching phacelia	*Phacelia ramosissima* var. *austrolitoralis*	CNPS List 3	Chaparral, Coastal Dunes, Coastal Scrub and Marshes and Swamps in sandy, sometimes rocky soils from 5 to 300 meters (15 to 1000 feet). Known from several counties throughout California.	March–August	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Brand's phacelia	*Phacelia stellaris*	FC, CSP, CNPS List 1B	Annual herb that occurs in coastal dunes and coastal scrub. From 15 to 4,970 ft in elevation.	March–June	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.

Table 2.4.3-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat	Rationale
Engelmann oak	*Quercus engelmannii*	CNPS List 4	Chaparral, woodland, and grassland, from 120 to 1,300 meters (400 to 4,300 feet) elevation. Known from Los Angeles, Orange, Riverside, and San Diego Counties and from northern Baja California.	Year-round	Absent	No suitable habitat in BSA.
Parish's gooseberry	*Ribes divericatum var. parishii*	CNPS List 1A	Deciduous shrub of willow swales in riparian habitats at 60 to 300 meters (200 to 1,000 feet) elevation. Believed to be extinct. Historical collections from Los Angeles and San Bernardino Counties.	February–April	Absent	No suitable habitat in BSA.
Southern skullcap	*Scutellaria bolanderi* ssp. *austromontana*	CNPS List 1B	Mesic areas in gravelly soils of streambanks or in oak or pine woodland (rarely chaparral) at 425 to 2,000 meters (1,400 to 6,600 feet) elevation. Known from Riverside and San Diego Counties. Believed extirpated from San Bernardino County and perhaps Los Angeles County.	June–August	Absent	No suitable habitat in BSA.
Rayless ragwort	*Senecio aphanactis*	CSP, CNPS: List 2	Annual herb. Occurs in chaparral, cismontane woodland, and coastal scrub on drying alkaline flats. Elevations from 45 to 2,400 ft.	January–April	Absent	No suitable habitat in BSA.
Salt spring checkerbloom	*Sidalcea neomexicana*	CSP, CNPS: List 2	Perennial herb. Occurs in coastal scrub, chaparral, lower montane coniferous forest, brackish marshes, Mohavean desert scrub, and playas on alkaline, mesic soils. From 30 to 5,020 ft in elevation.	March–June	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.
Estuary seablite	*Suaeda esteroa*	CNPS List 1B	Coastal salt marshes below 5 meters (15 feet) elevation. Occurs along immediate coast from Santa Barbara County to Baja California.	May–October	Absent	No suitable habitat in BSA.
San Bernardino aster	*Symphyotrichum defoliatum*	CSP, CNPS: List 1B	Perennial rhizomatous herb. Occurs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland, usually near ditches, streams, and springs. From 6 to 6,120 ft in elevation	July–November	Absent	Sage scrub-grassland in the habitat is highly disturbed and represents nonnative annual grassland more than CSS.

Table 2.4.3-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat	Rationale
Greata's aster	*Symphyotrichum greatae*	CNPS List 1B	Chaparral and woodland habitats in mesic canyons from 300 to 2,010 meters (1,000 to 6,600 feet) elevation. Known only from Los Angeles, San Bernardino, and Ventura Counties.	June–October	Absent	No suitable habitat in BSA.

Source: Natural Environment Study, February 2014.

[1] Months in parentheses are uncommon.
BSA = biological study area
Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC); California Endangered (CE); California Threatened (CT); California Fully Protected Species (CFP); California Special Plant (CSP), California Native Plant Society (CNPS); etc.

California Native Plant Society (CNPS) designations:

List 1A: Plants presumed extinct in California
List 1B: Plants rare and endangered in California and throughout their range
List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3: Plants needing more information (a review list).
List 4: Plants of limited distribution (a watch list).

Habitat Present/Absent: Absent (A) – No habitat present and no further work needed; Habitat present (HP) – Habitat is or may be present; Species present (O) – The species was observed within the BSA at the time of the survey; Critical Habitat (CH) – Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

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2.4.4 ANIMAL SPECIES

2.4.4.1 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's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.4.5, Threatened and Endangered Species, below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Section 4150 and 4152 of the California Fish and Game Code

2.4.4.2 Affected Environment

A Jurisdictional Delineation was prepared in February 2012 and a Natural Environment Study (NES) was prepared in February 2014. A Biological Assessment (BA) was prepared in May 2015 and the USFWS provided a letter of concurrence on October 8, 2015.

Methodology

The original records were searched in the CNDDB and the IPAC databases in December 2011. An updated record search in the IPAC database for federally-listed endangered, threatened, proposed, and candidate species and critical habitat in the vicinity of the proposed project was completed in August 2015 (Appendix G).

Biologists conducted a site reconnaissance-level survey on December 21, 2011 to generally characterize the biological resources of the site and to ascertain the presence or absence of sensitive animals or the likelihood of their occurrence in the BSA. The purpose of the survey was to evaluate the site based on existing conditions, with particular focus on the native habitat and sensitive species within the BSA. The BSA includes the entire proposed ground disturbance area associated with the interchange improvements, including the grading limits and staging areas. During the course of the survey described above, the biological condition of the BSA was assessed for the presence of various sensitive species, including wildlife and suitability of habitat.

Bridges within the BSA were evaluated for the presence of suitable crevices and roosting habitat for bats as well as presence of bat sign (e.g., guano, staining, or vocalizations).

Survey methods included walking the shoulder and median areas on SR-57 within the ROW. Vegetation communities and subcommunities were determined in general based on the Orange County Habitat Classification System Natural Resources Geographic Information System (GIS) Project. Vegetation communities were mapped on a 1-inch = 200 feet aerial photograph. Habitat areas that were considered too small to map separately were included in nearby habitat types determined to be the most appropriate based on species composition. A follow-up windshield survey was conducted on August 7, 2013.

A habitat assessment for CAGN was conducted for areas within and adjacent to the USFWS-designated critical habitat. As part of the required informal Section 7 consultation with USFWS, an on-site meeting was conducted on July 25, 2012 with USFWS to discuss potential effects to CAGN. A BA was prepared to evaluate the effects of the proposed project and found that the effects are not likely to adversely affect CAGN and its designated critical habitat areas within the BSA. The USFWS provided a letter of concurrence that the proposed project is not likely to adversely affect CAGN on October 8, 2015. This is further discussed in Section 2.4.5, Threatened and Endangered Species.

Existing Conditions

The BSA is located in an urbanized area; the surrounding area west and south of the BSA is highly developed while the surrounding area east and north of the BSA is connected to a large undeveloped area associated with the Puente/Chino Hills. Wildlife species occurring within the BSA are characteristic of those found within a developed urban setting. Common species observed include rock pigeon (*Columba livida*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), black phoebe (*Sayornis nigricans*), and American crow (*Corvus brachyrhynchos*). The site does not appear to function as a wildlife movement corridor.

The BSA supports suitable habitat for a variety of special-status wildlife species. After a thorough literature review, it was determined that 72 special-status wildlife species occur or have the potential to occur within the vicinity of the BSA. A total of 12 of these species are federally and/or state-listed endangered or threatened, or proposed endangered or threatened, or are considered Fully Protected species by the State of California; refer to Table 2.4.4-1, below. No sensitive or special-interest animal species were observed or otherwise detected in the BSA at the time of the field visit. Suitable habitat for these species is not present within the BSA. Critical habitat for CAGN occurs in the northern portions of the BSA and is discussed below and in further detail in Section 2.4.5, Threatened and Endangered Species.

Other Special-Status Species

In addition to CAGN, special-status CSS species with the potential to occur in the BSA include San Diego horned lizard, orange-throated whiptail, coastal western whiptail, coast patch-nosed snake, Southern California rufous-crowned sparrow, and black-tailed jackrabbit. None of these species were observed during the December 2011 surveys; however, surveys were not directed toward these species. Much of the habitat on-site is disturbed, developed, or degraded by infestations of nonnative species. Low-quality habitat for these species exists within the BSA. No cholla cactus (*Opuntia* sp. or *Cylindropuntia* sp.) occurs within the BSA to support San Diego cactus wren.

Table 2.4.4-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat	Rationale
FISH					
Santa Ana sucker	*Catostomus santaanae*	FT, SSC	Endemic to the Los Angeles Basin south coastal streams. It is usually found in fresh water with sand-rubble or boulder bottoms.	A	No suitable habitat in BSA.
AMPHIBIANS					
Western spadefoot	*Spea hammondii*	SSC	Occurs primarily in grassland and other relatively open habitats. Found in elevations ranging from sea level to 4,500 ft. Requires temporary pools for breeding.	A	No suitable habitat in BSA. No pools for breeding.
REPTILES					
Southwestern pond turtle	*Actinemys marmorata pallida*	SSC	Occurs in a variety of habitats, including woodland, grassland, and open forest. Thoroughly aquatic, existing in good-quality ponds, marshes, rivers, streams, and irrigation ditches that have rocky or muddy bottoms. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	A	No permanent water source in BSA.
San Diego horned lizard	*Phrynosoma coronatum blainvillii*	SSC	Occurs in CSS, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.	HP	Not expected in highly disturbed habitat of BSA.
Orange-throated whiptail	*Aspidoscelis hyperythra*	SSC	Inhabits low-elevation coastal scrub, chaparral, and valley hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food, termites.	HP	Not expected in highly disturbed habitat of BSA.
Coastal western whiptail	*Aspidoscelis tigris stejnegeri*	CSA	Occurs in deserts and semiarid areas with sparse vegetation. Often found in woodland and riparian areas.	HP	Not expected in highly disturbed habitat of BSA.
Rosy boa	*Charina trivirgata*	CSA	Inhabits rock outcrops and rocky shrublands in the southwestern U.S. and western Mexico.	A	No suitable habitat in BSA.
Northern red-diamond rattlesnake	*Crotalus ruber ruber*	SSC	Associated with chaparral, woodland, grassland and desert communities from Los Angeles County to Baja California Sur. Prefers rocky areas with dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects for shelter.	HP	Not expected in highly disturbed habitat of BSA
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC	Occupies desert scrub, coastal chaparral, washes, sandy flats, and rocky areas.	HP	Not expected in highly disturbed habitat of BSA.
BIRDS					
Cooper's hawk (nesting)	*Accipiter cooperii*	CSA	Nests in a wide variety of woodland and forest habitats.	A	No suitable nesting habitat in BSA.
Tricolored blackbird (nesting colony)	*Agelaius tricolor*	SSC	Highly colonial. Most numerous in the Central Valley, largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	A	No suitable habitat in BSA.

Table 2.4.4-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat	Rationale
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	CSA	Resident in southern California CSS and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	HP	May occur in sage scrub-grassland, although this habitat is highly disturbed and represents nonnative annual grassland more than CSS. No rocky hillsides. Impacts to this species will not be substantial; see text for acreage of impacts to sage scrub-grassland.
Great blue heron (nesting)	*Ardea herodias*	CSA	Nests in tall trees in close proximity to foraging areas; marshes, lake margins, tide flats, rivers and streams, and wet meadows. Colonial nester.	A	No suitable habitat in BSA.
Long-eared owl (nesting)	*Asio otus*	SSC	Nests in riparian areas with tall willows and cottonwoods as well as belts of live oak woodlands occurring adjacent to streams. Requires adjacent open land for foraging and utilizes old nests of crows, hawks, or magpies for breeding.	A	No suitable habitat in BSA.
Burrowing owl (burrow sites)	*Athene cunicularia*	SSC	Burrows in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	A	Not expected in highly disturbed habitat of BSA. No suitable burrows observed in potentially suitable habitat areas.
Ferruginous hawk	*Buteo regalis*	CSA	Open country in western North America, north to Canada in summer and south to Mexico in winter.	A	No suitable habitat in BSA.
San Diego cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	SSC	Occurs in CSS habitats. Requires tall opuntia cactus for nesting and roosting.	A	No suitable habitat in BSA. sage scrub-grassland does not contain opuntia cactus.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FC, SE	Nests in riparian forests, along the broad, lower flood-bottoms of large river systems. Nests are found in jungles of willow often mixed with cottonwoods with understory of blackberry, nettles, or wild grape.	A	No suitable habitat in BSA.
White-tailed kite	*Elanus leucurus*	CSA, CFP	Breeds in riparian trees such as oaks, willows, and cottonwoods in lower-elevation areas, particularly coastal valleys and plains.	A	No suitable habitat in BSA.
Southwestern willow flycatcher (nesting)	*Empidonax traillii extimus*	FE, CE	Rare and local breeder in riparian habitat usually with standing water, in the southwestern U.S. and (formerly?) northwestern Mexico. Winters in Central and South America.	A	No suitable habitat in BSA.
Merlin	*Falco columbarius*	CSA	Open country; breeds in the Holarctic Region and winters south to the tropics. Rare fall migrant and winter visitor to southwestern California.	A	No suitable habitat in BSA.
Yellow-breasted chat (nesting)	*Icteria virens*	SSC	Summer resident of California. Inhabits riparian thickets of willow and other brushy tangles near water. Nests in low, dense vegetation consisting of willow, blackberry, and wild grape.	A	No suitable habitat in BSA.
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	SE	Resident in salt marshes, with rare exception (e.g., Islas Todos Santos, Baja California), of Pacific Coast from Santa Barbara County to Baja California.	A	No suitable habitat in BSA.

Table 2.4.4-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat	Rationale
Coastal California gnatcatcher	*Polioptila californica californica*	FT, CSA	Obligate, permanent resident of CSS below 2,500 feet in southern California.	CH	Sage scrub-grassland in the BSA is highly disturbed and represents nonnative annual grassland more than CSS. No primary constituent elements present; see text for further discussion.
California least tern	*Sternula antillarum browni* (nesting colony)	FE, SE, CFP	Nests along the coast from San Francisco Bay south to northern Baja California. Forages in shallow water. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	A	No suitable habitat in BSA.
Least Bell's vireo (nesting)	*Vireo bellii pusillus*	FE, CE	Occurs in moist thickets and riparian areas that are predominantly composed of willow and mulefat.	A	No suitable habitat in BSA.
MAMMALS					
Pallid bat	*Antrozous pallidus*	SSC	Occurs in grassland, shrublands, woodlands, and forests; requires rocky outcrops, cliffs, and crevices with access to open habitats for foraging.	A	No suitable habitat in BSA.
Mexican long-tongued bat	*Choeronycteris mexicana*	SSC	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.	A	No suitable habitat in BSA.
Western mastiff bat	*Eumops perotis californicus*	SSC	Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands and chaparral communities. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	HP	Moderately suitable habitat for roosting provided by trees adjacent to SR-57, but not expected due to proximity to high level of noise and disturbance.
Silver-haired bat	*Lasionycteris noctivagans*	SSC	Inhabits forested areas, where it forages in small clearings, along roadways and water-courses, and among trees. Generally roosts in trees but occasionally enters buildings or caves. Prefers old growth areas with snag densities of at least 21 per hectare. Range extends from extreme northeastern Mexico north to Alaska and east to the Atlantic Coast.	A	No suitable habitat in BSA.
Hoary bat	*Lasiurus cinereus*	CSA	Forages over a wide range of habitats, but prefers open habitats with access to trees for roosting, and water. Ranges throughout most of California.	A	No suitable habitat in BSA.
Southwestern yellow bat	*Lasiurus xanthinus*	CSA	Occurs in southern California in palm oases and in residential areas with untrimmed palm trees. Roosts primarily in trees, especially the dead fronds of palm trees. Forages over water and among trees.	A	No suitable habitat in BSA.
Black-tailed jackrabbit	*Lepus californicus bennettii*	SSC	Found in a variety of habitats, including herbaceous and desert scrub areas, early stages of open forest, and chaparral. Most common in relatively open habitats. In southern California generally restricted to the cismontane areas, extending from the coast to the Santa Monica, San Gabriel, San Bernardino, and Santa Rosa Mountain ranges.	HP	Suitable habitat is present within the BSA, although high level of disturbance and small amount of open space may prevent this species from occupying BSA.

Table 2.4.4-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat	Rationale
Yuma myotis	*Myotis yumanensis*	CSA	Common and widespread in California. Found in a wide variety of habitats ranging from sea level to 3,300 m (11,000 ft). Optimal habitats are open forests and woodlands with sources of water over which to feed.	HP	Suitable habitat is present within BSA, however, no optimal habitat available and no water sources within BSA.
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	SSC	Primarily occupies desert scrub and arid lowlands near riparian habitats in the southwestern U.S. and western Mexico. Roost sites include caves, cliffs, and buildings.	A	No suitable habitat in BSA.
Big free-tailed bat	*Nyctinomops macrotis*	SSC	Primarily arid habitats from the southwestern U.S. to South America, but has been recorded far "out of range" during migration. Roost sites include cliffs, buildings, and hollow trees.	HP	Suitable habitat is present within BSA, however high level of noise and disturbance may prevent this species from occupying BSA.
American badger	*Taxidea taxus*	CSA	Occurs throughout much of North America. Primary habitat requirements seem to be sufficient food and friable soils in relatively open uncultivated ground in grasslands, woodlands, and deserts.	A	No suitable habitat in BSA. Level of disturbance is too high to support this species.

Source: Natural Environment Study, February 2014.

BSA = biological study area
CSS = coastal sage scrub
ft = feet
m = meters
U.S. = United States
USFWS = United States Fish and Wildlife Service

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC); Federal Delisted (FD); California Endangered (CE); California Threatened (CT); California Fully Protected Species (CFP); California Special Animal (CSA), California Native Plant Society (CNPS), Sepcies of Special Concern (SSC); etc.

Habitat Present/Absent: Absent (A) – No habitat present and no further work needed; Habitat present (HP) – Habitat is or may be present; Species present (O) – The species was observed within the Biological Study Area (BSA) during surveys; Critical Habitat (CH) – Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Special-Status Bridge and Crevice Dwelling Animal Species

Special-status bridge and crevice dwelling wildlife species potentially within the BSA include western mastiff bat, Yuma myotis, and big free-tailed bat. During the general biological survey, bridges within the BSA were evaluated for the presence of suitable crevices and rooting habitat for bats as well as presence of bat signs. While bridges in the BSA contain crevices that could potentially support roosting bats, no bat signs (e.g., guano, staining, or vocalizations) were observed in the BSA. In addition, the location of these structures over traffic and away from foraging areas decreases the likelihood that they would be used for night roosting. The proposed project area lacks suitable nesting, roosting or foraging habitat within the project limits for special-status species.

Migratory Birds and Raptors

The pepper, gum, and palm trees in the BSA have a limited potential to support nesting migratory birds/raptors. Activities having the potential to disturb active nests are prohibited by CDFW regulations. In addition, native species and their nests are also protected under the Migratory Bird Treaty Act (MBTA) (16 USC 703-712) and Executive Order 13186. This protection generally ceases once nesting activity is completed, typically by July.

2.4.4.3 Environmental Consequences

Build Alternatives 7A and 9

Several special-status species have been documented within the vicinity of the BSA, associated with coastal scrub habitat in nearby Carbon Canyon and Tonner Canyon and riparian habitat associated with nearby Brea Creek.

Direct and indirect effects on CAGN designated critical habitat are expected to occur as a result of both Build Alternatives 7A (Preferred Alternative) and 9. Impacts to critical habitat are discussed further in Section 2.4.5, Threatened and Endangered Species.

Construction (Short-Term) Impacts

No direct effect is anticipated of CAGN due to the low quality of habitat within the BSA; however, 0.51 acre of temporary impacts to critical habitat would occur under Build Alternative 7A (Preferred Alternative). Therefore, a BA was prepared for informal Section 7 consultation with the USFWS to confirm that the effects from Build Alternative 7A (Preferred Alternative) are not likely to adversely affect critical habitat areas within the BSA. The USFWS concurred with these findings on October 8, 2015, due to the small amount of impact, 0.51 acre, within the critical habitat identified within the BSA. With the incorporation of avoidance and/or minimization measures, which are provided to address effects during construction of the proposed project, impacts would not be adverse. Refer to Section 2.4.5, Threatened and Endangered Species, for further detail on impacts to CAGN.

The proposed project would result in a total temporary loss of 1.40 acres of disturbed sage scrub-grassland under Build Alternatives 7A (Preferred Alternative), with 0.89 acre of temporary loss being outside the USFWS designated critical habitat for CAGN. With the incorporation of avoidance and/or minimization measures, impacts are not considered adverse under Build Alternatives 7A (Preferred Alternative).

While bridges in the BSA contain crevices that could potentially support roosting bats, no bat signs (e.g., guano, staining, or vocalizations) were observed during the field survey. There is the potential for bridge and crevice nesting birds (i.e., swifts and swallows) to be present within the project area. Potential impacts on nesting birds as a result of the either Build Alternative 7A (Preferred Alternative) or 9 would be minimized with implementation of avoidance measures.

Impacts to any active migratory bird nest (common or special-status species) would be considered a violation of the California Fish and Game Code Section 3503.5. In addition, the MBTA states that all migratory birds and their parts (including eggs, nests and feathers) are fully protected. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, any migratory bird, its eggs, parts, and nests except as authorized under a valid permit. In addition, Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs Federal agencies "…taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement an MOU with the USFWS that promotes the conservation of migratory bird populations". Therefore, any impact on the nest of any migratory bird species would not be considered adverse. Potential impacts on nesting birds would be minimized with implementation of avoidance measures AN-1 and AN-2.

Operation (Long-Term) Impacts

No direct effect of CAGN would occur due to the low quality of habitat within the BSA; however, 0.01 acre of permanent impacts to critical habitat would occur under Build Alternative 7A (Preferred Alternative). With the incorporation of avoidance and/or minimization measures, impacts are not considered adverse. Refer to Section 2.4.5, Threatened and Endangered Species, for further detail. The USFWS concurred with the findings that Build Alternative 7A (Preferred Alternative) is not likely to adversely affect the CAGN on October 8, 2015 (Appendix H).

The proposed project would result in a total permanent loss of 0.15 acre of highly disturbed sage scrub-grassland under Build Alternatives 7A (Preferred Alternative), with 0.14 acre of permanent loss being outside the USFWS designated critical habitat for CAGN. With incorporation of avoidance and/or minimization measures, impacts are not considered adverse under Build Alternatives 7A (Preferred Alternative).

While bridges in the BSA contain crevices that could potentially support roosting bats, no bat signs (e.g., guano, staining, or vocalizations) were observed during the field survey. There is the potential for bridge and crevice nesting birds (i.e., swifts and swallows) to be present within the project area. Potential impacts on nesting birds as a result of the either Build Alternative 7A (Preferred Alternative) or 9 would be minimized with implementation of avoidance measures.

Impacts to any active migratory bird nest (common or special-status species) would be considered a violation of the California Fish and Game Code Section 3503.5. In addition, the MBTA states that all migratory birds and their parts (including eggs, nests and feathers) are fully protected. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, any migratory bird, its eggs, parts, and nests except as authorized under a valid permit. In addition, Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs Federal agencies "…taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement an MOU with the USFWS that promotes the conservation of migratory bird populations". Therefore, any impact on the nest of any migratory bird species would not be

considered adverse. Potential impacts on nesting birds would be minimized with implementation of avoidance measures.

No Build Alternative

Under the No Build Alternative, no new construction would occur and there would be no new impacts to animal species.

2.4.4.4 Avoidance, Minimization, and/or Mitigation Measures

AN-1 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. In the event that vegetation clearing is necessary during the nesting season (i.e., February 15 to August 31), a qualified biologist shall conduct a pre-construction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.

AN-2 To prevent proposed project effects to bridge and crevice-nesting birds (i.e., swifts and swallows), all work on existing bridges with potential habitat conducted between February 15 and October 31 will include inspection for, and removal of, all bird nests prior to construction under the guidance and observation of a qualified biologist prior to February 1 of that year, before the nesting colony returns to the nesting site. Removal of nests that are under construction must be repeated as frequently as necessary to prevent nest completion or until a nest exclusion device is installed (such as netting or a similar mechanism that keeps birds from building nests). Nest removal and exclusion device installation will be monitored by a qualified biologist. Such exclusion efforts must be continued to keep the structures free of swallows until September or completion of construction. All nest exclusion techniques will be coordinated among the Department's District Biologist and the resource agencies.

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2.4.5 THREATENED AND ENDANGERED SPECIES

2.4.5.1 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 Code of Federal Regulations (CFR) Part 402. This act and later 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 (FHWA), are required to consult with the U.S. Fish wan Wildlife Services (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) 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 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. 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 Wildlife (CDFW) 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 incidental take to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

2.4.5.2 Affected Environment

A Jurisdictional Delineation was prepared in February 2012 and a Natural Environment Study (NES) was prepared in February 2014. A Biological Assessment (BA) was prepared in May 2015 and the USFWS provided a letter of concurrence on October 8, 2015.

Methodology

The original records were searched in the CNDDB, the CNPS Electronic Inventory, and the IPAC databases in December 2011. An updated record search in the IPAC database for federally-listed endangered, threatened, proposed, and candidate species and critical habitat in the vicinity of the proposed project was completed in August 2015 (Appendix G).

Biologists conducted a site reconnaissance-level survey on December 21, 2011 to generally characterize the biological resources of the site and to ascertain the presence or absence of sensitive animals or the likelihood of their occurrence in the BSA. The purpose of the survey was to evaluate the site based on existing conditions, with particular focus on the native habitat and sensitive species within the BSA. The BSA includes the entire proposed ground disturbance area associated with the interchange improvements, including the grading limits and staging areas. During the course of the survey described above, the biological condition of the BSA was assessed for the presence of various sensitive species, including wildlife and suitability of habitat. Bridges within the BSA were evaluated for the presence of suitable crevices and roosting habitat for bats as well as presence of bat sign (e.g., guano, staining, or vocalizations). Survey methods included walking the shoulder and median areas on SR-57 within the ROW. Vegetation communities and subcommunities were determined in general based on the Orange County Habitat Classification System Natural Resources GIS Project. Vegetation communities were mapped on a 1-inch = 200 feet aerial photograph. Habitat areas that were considered too small to map separately were included in nearby habitat types determined to be the most appropriate based on species composition. A follow-up windshield survey was conducted on August 7, 2013.

As part of the required informal Section 7 consultation with USFWS, an on-site meeting was conducted on July 25, 2012 with USFWS to discuss the potential effects to CAGN by Build Alternative 7A (Preferred Alternative). During the meeting, USFWS recommended measures to incorporate into Build Alternative 7A (Preferred Alternative)to avoid or minimize any CAGN effects. A BA was prepared to evaluate the effects of Build Alternative 7A (Preferred Alternative) and found that the effects are not likely to adversely affect CAGN and its designated critical habitat areas within the BSA. The USFWS concurred that Build Alternative 7A (Preferred Alternative) is not likely to adversely affect CAGN and its designated critical habitat areas within the BSA on October 8, 2015 (Appendix H).

Existing Conditions

As described in the NES, as well as Section 2.4.1, above, the BSA is located within the South Coast subregion of the Southwestern California region of the California Floristic Province. The South Coast subregion is characterized by valleys and small hills extending from the coast inland to the foothills of the Transverse and Peninsular Mountain Ranges. Much of the area is intensively developed for urban, suburban, and agricultural uses. The natural vegetation of the subregion consists primarily of chaparral, CSS, annual grasslands, and some riparian scrub and woodland. Much of the natural vegetation occurs in scattered, often fragmented patches on hills or in other areas not easily developed.

The BSA is in an urbanized area that no longer contains substantial wildlife habitat. The surrounding area west and south of the BSA is highly developed; however, the surrounding area east and north of the BSA is connected to a large, undeveloped area associated with the Puente/Chino Hills. This area serves as a significant wildlife corridor within the region and provides habitat to support several special-status plant and wildlife species.

The results of the literature review, provided in Tables 2.4.3-1 and 2.4.4-1, indicated the regional occurrence of 34 special-interest plant species and 36 special-interest animal species, including listed species and other species identified by resource agencies as special-interest.

The BSA does not contain suitable habitat to support any of the special-interest plant species. Sage scrub-grassland habitat occurs on steep slopes adjacent to SR-57 in the northern end of the BSA. It is largely dominated by nonnative annual grass species, including red brome, wild oats, and ripgut brome. The western slope also contains poison hemlock as a dominant species. Within the annual grassland matrix, there is approximately five percent cover of scattered scrub species. CSS species are very sparse within this community and it more closely resembles annual nonnative grassland habitat. Critical habitat for the CAGN is located within the BSA.

The BSA supports suitable habitat for a variety of special-status wildlife species. After a thorough literature review, it was determined that 72 special-status wildlife species occur or have the potential to occur within the vicinity of the BSA. A total of 12 of these species are federally and/or state-listed endangered or threatened, or proposed endangered or threatened, or are considered Fully Protected species by the State of California. No sensitive or special-interest animal species were observed or otherwise detected in the BSA at the time of the field visit. The BSA does not contain suitable habitat to support the Santa Ana sucker, Least Bell's vireo, or the southwestern willow flycatcher.

California Gnatcatcher and USFWS-Designated Critical Habitat

The CAGN was listed as threatened by the USFWS in March 1993. On February 7, 2000, approximately 513,650 acres in Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties were designated as critical habitat for the CAGN. New boundaries of critical habitat totaling 495,795 acres were proposed in April 2003. On December 19, 2007, the USFWS designated 197,303 acres as revised final critical habitat. Figures 2.4-1a through 2.4-1d, Vegetation Communities, depict the location of designated CAGN critical habitat, which is located in the northern portion of the proposed project site. With the exception of the USFWS-designated critical habitat for CAGN, sage scrub-grassland within the proposed project boundaries is not protected by any federal, state, or local regulations.

The CAGN is a non-migratory songbird that typically nests and forages in moderately dense stands of CSS below an elevation of 2,500 feet in southern California. CAGN usually defend breeding territories ranging in size from 2 to 14 acres and occupy home ranges that vary in size from 13 to 39 acres. The breeding season of the CAGN generally extends from February 15 through August 31. After the chicks have fledged, juveniles remain closely associated with their parents for up to several months and may disperse up to nine miles from their natal territory.

Based on a habitat assessment and a review of existing information on the distribution of CAGN in the vicinity of the BSA, focused surveys for CAGN were not deemed necessary. The highly disturbed nature of sage scrub-grassland habitat within the BSA, low percentage of CSS shrub plant species within this habitat, and close proximity of this habitat to SR-57 do not provide suitable CAGN nesting habitat on the steep cut slopes immediately adjacent to SR-57 and only marginally suitable habitat in other portions of the BSA. It is suitable CAGN habitat for dispersing and foraging. Because focused surveys were not conducted due to personnel safety, timing, and costs, all sage scrub-grassland vegetation is assumed occupied by CAGN. In addition, the sage scrub-grassland vegetation within the CAGN-designated critical habitat does contain primary constituent elements (PCEs) for dispersing and foraging CAGN, as defined by USFWS. The PCEs for CAGN, as defined by USFWS, are:

1. Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and

2. Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting.

The sage scrub-grassland within the USFWS-designated critical habitat does contain PCEs for dispersing and foraging CAGN, as defined by USFWS. Based on a habitat assessment and a review of existing information on the distribution of CAGN in the vicinity of the BSA, focused surveys for CAGN were not deemed necessary. However, because focused surveys were not conducted due to personnel safety, timing, and costs, all sage scrub-grassland vegetation is assumed occupied by CAGN.

Several occurrences of CAGN in the vicinity of the proposed project site are noted on the CNDDB, especially in nearby Carbon and Tonner Canyons. The nearest occurrence is located 0.5 mile northwest of the BSA in coastal sage scrub (CSS) immediately surrounding Humble Reservoir. The original surveys for this occurrence were conducted between 1999 and 2005. In 2005, three breeding pairs were observed in an area covered with CSS, mixed sage scrub, and coyote brush scrub. At the time of the surveys and recording of data into CNDDB, there was a direct habitat connection between the occurrence and the proposed project BSA; however, based on a review of historic aerials and observations made during the site visit, a large portion of the land around Carmichael Drive and Newhall Terrace has been graded and developed. This development isolates the proposed work areas from the known CNDDB occurrence.

There is one other occurrence within one mile of the BSA, located east of the BSA associated with CSS in an oil field. There has not been any further development in the vicinity of this occurrence since data were recorded, and CAGN are presumed to remain in this area; however, there is no suitable CAGN nesting on the steep cut slopes immediately adjacent to SR-57 and only marginally suitable habitat in other portions of the BSA. It is suitable CAGN habitat for dispersing and foraging.

While the sage scrub-grassland within the BSA contains essentially grassland in proximity to sage scrub habitats north and east of the BSA, the close proximity of this habitat to SR-57, a noisy, heavily-traveled transportation corridor, is expected to preclude CAGN from successfully using this habitat for dispersal, foraging, or nesting. However, because focused CAGN surveys were not conducted, the sage scrub-grassland vegetation in the project boundaries is assumed occupied by CAGN and addressed accordingly.

2.4.5.3 Environmental Consequences

Build Alternatives 7A and 9

No Threatened or Endangered species would occur within the BSA, refer to Table 2.4.5-1. However, USFWS-designated critical habitat for CAGN is located within the northern portion of the proposed project site. Direct and indirect impacts on CAGN designated critical habitat are expected to occur as a result of the proposed project. Figures 2.4-6a through 2.4-6d, Impacts to

Habitat Communities – Alternative 7A, and Figures 2.4-7a to 2.4-7d, Impacts to Habitat Communities – Alternative 9, depict temporary and permanent impacts resulting from Build Alternatives 7A and 9, respectively.

Table 2.4.5-1. Federal Special-Status Wildlife Species Potentially Occurring or Known to Occur within and in the Vicinity of the BSA

Common Name (*Scientific Name*)	Status Listing	Habitat and Comments	Habitat	Rationale	Effect Determination
FISH					
Santa Ana sucker (*Catostomus santaanae*)	FT, SSC	Endemic to the Los Angeles Basin south coastal streams. It is usually found in fresh water with sand-rubble or boulder bottoms.	A	No suitable habitat in BSA.	The proposed project would have no effect on this species.
BIRDS					
Southwestern willow flycatcher (nesting) (*Empidonax traillii extimus*)	FE, CE	Rare and local breeder in riparian habitat usually with standing water, in the southwestern U.S. and (formerly?) northwestern Mexico. Winters in Central and South America.	A	No suitable habitat in BSA.	The proposed project would have no effect on this species.
Least Bell's vireo (nesting) (*Vireo bellii pusillus*)	FE, CE	Occurs in moist thickets and riparian areas that are predominantly composed of willow and mulefat.	A	No suitable habitat in BSA.	The proposed project would have no effect on this species.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT, CSA	Obligate, permanent resident of CSS below 2,500 feet in southern California.	CH	Sage scrub-grassland in the BSA is highly disturbed and represents nonnative annual grassland more than CSS. No primary constituent elements present; see text for further discussion.	Not Likely to Adversely Affect.

Source: Natural Environment Study, February 2014; Biological Assessment, May 2015; IPAC List August 2015.

BSA = biological study area; CSS = coastal sage scrub; ft = feet; m = meters; U.S. = United States; USFWS = United States Fish and Wildlife Service

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC); Federal Delisted (FD); California Endangered (CE); California Threatened (CT); California Fully Protected Species (CFP); California Special Animal (CSA), California Native Plant Society (CNPS), Sepcies of Special Concern (SSC); etc.

Habitat Present/Absent: Absent (A) – No habitat present and no further work needed; Habitat present (HP) – Habitat is or may be present; Species present (O) – The species was observed within the Biological Study Area (BSA) during surveys; Critical Habitat (CH) – Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Construction (Short-Term) Impacts

Although no direct effect of CAGN is expected due to the low quality of habitat within the BSA, effects of designated critical habitat would occur as a result of both Build Alternatives. Temporary impacts to USFWS designated critical habitat for CAGN would be 0.51 acre for Build Alternative 7 (Preferred Alternative). Areas of temporary effects would only be affected during construction to allow for construction and equipment staging. Build Alternatives 7A (Preferred Alternative) would result in a total temporary loss of 1.40 acres of disturbed sage scrub-grassland, of which 0.51 acre is USFWS designated critical habitat for CAGN. Mitigation measures would be incorporated into the proposed project to ensure impacts there are not adverse.

The USFWS determined that designated critical habitat within the BSA was subject to informal consultation under the Federal Endangered Species Act. A BA regarding Build Alternative 7A

(Preferred Alternative) was prepared and the USFWS reviewed the BA in June 2015. The USFWS concurred with the findings of the BA regarding Build Alternative 7A (Preferred Alternative) effects to CAGN and its designated critical habitat for CAGN in a letter dated October 8, 2015 (Appendix H). Compensatory mitigation to offset impacts to designated critical habitat for CAGN is required. For these areas, the mitigation ratios of 1:1 for temporary effects to sage scrub-grassland are consistent with USFWS standards, which are incorporated in the avoidance, minimization, and/or mitigation measures detailed below.

Operation (Long-Term) Impacts

Although no direct effects of CAGN is expected due to the low quality of habitat within the BSA, effects of designated critical habitat would occur as a result of both Build Alternatives. Permanent impacts to USFWS-designated critical habitat for CAGN would result in 0.01 acre under Build Alternative 7A (Preferred Alternative). Because of the low quality and the small amount of impacts to USFWS-designated CAGN critical habitat, less than 0.5 acre, proposed project impacts are not considered adverse. Build Alternative 7A (Preferred Alternative) would result in a total permanent loss of 0.15 acre of highly disturbed potential habitat, of which 0.01 acre is USFWS designated critical habitat for CAGN. Mitigation measures would be incorporated into the proposed project to ensure impacts are not adverse.

The USFWS determined that designated critical habitat within the BSA was subject to informal consultation under the Federal Endangered Species Act. A BA was regarding Build Alternative 7A (Preferred Alternative) prepared and the USFWS reviewed the BA in June 2015. The USFWS concurred with the findings of the BA regarding Build Alternative 7A (Preferred Alternative) effects to CAGN and its designated critical habitat in a letter dated October 8. 2015 (Appendix H). Compensatory mitigation to offset impacts to designated critical habitat for CAGN would be required. For these areas, the mitigation for Build Alternative 7A (Preferred Alternative) is 1.5 acres for permanent effects to sage scrub-grassland are consistent with USFWS standards, which are incorporated in the avoidance, minimization, and/or mitigation measures detailed below.

No Build Alternative

Under the No Build Alternative, no new construction would occur and there would be no new impacts to Threatened or Endangered species.

2.4.5.4 Avoidance, Minimization, and/or Mitigation Measures

In addition to implementation of Measures WQ-5, GEO-1, GEO-3, AQ-1, AN-1, AN-2, INV-1, and INV-2 the following measures have been identified.

TE-1 The following habitat replacement and maintenance shall be provided consistent with USFWS standards.

a. The City, with Caltrans Approval, will fund the enhancement of coastal CAGN habitat through off-site restoration and/or preservation of conservation lands. Permanent impacts to 0.15 acre of habitat suitable for the CAGN will be offset through the restoration and permanent conservation of 1.5 acres of coastal sage scrub habitat within designated CAGN critical habitat at Puente Hills Habitat Preservation Authority (Authority), or another location approved by the Carlsbad USFWS Office. Documentation that the habitat has been conserved

will be provided to the Carlsbad USFWS Office prior to the commencement of vegetation removal and project construction.

b. The City will submit final upland restoration plans to the Carlsbad USFWS Office for review and approval at least 30 days prior to initiating project impacts. The final plan will include the following information and conditions:

1. All habitat restoration/enhancement sites will be prepared for planting in a way that mimics natural habitat to the maximum extent practicable. All plantings will be installed in a way that mimics natural plant distribution and not in rows;

2. Planting palettes (plant species, size, and number/acre) and seed mix (plant species and pounds/acre). The plant palettes proposed in the draft plan will include native species specifically associated with the habitat type(s). Unless otherwise approved by the Carlsbad USFWS Office, only locally native species (no cultivars) obtained from the Chino/Puente Hills or other source within 15 miles of the Chino/Puente Hills will be used, unless otherwise approved by the Carlsbad USFWS Office. Native grass seed, which is wind pollinated, may be collected from anywhere in Southern California. The specific source location of all plant material and seed will be provided to the Carlsbad USFWS Office prior to use in restoration activities.

3. Container plant survival will be 60 percent of the initial plantings for the first five (5) years. At the first and second anniversary of plant installation, all dead plants will be replaced unless their function has been replaced by plants from seed or natural recruitment.

4. A final implementation schedule will indicate when all impacts, as well as restoration plating and irrigation will begin and end. Offsite restoration planting and irrigation will be completed during the concurrent or next planting season (i.e., late fall to early spring) after initiating project impacts.

5. The final restoration plan will include five (5) years of success criteria for restoration areas including: percent cover, evidence of natural recruitment of multiple species for all habitat types, zero (0) percent coverage will be maintained for woody California Invasive Plant Council's (Cal-IPAC's) "Invasive Plant Inventory" species, and no more than 15 percent coverage for other exotic/weed species.

6. A minimum of five (5) years of maintenance and monitoring of restoration areas, unless success criteria are met earlier and all artificial water supplies have been off for at least two (2) years.

7. A qualitative and quantitative vegetation monitoring plan with a map of proposed sampling locations. Photo points will be used for qualitative monitoring and stratified-random sampling will be used for all quantitative monitoring.

8. Contingency measures in the event of creation/restoration/enhancement failure.

9. Annual mitigation maintenance and monitoring reports will be submitted to the Carlsbad USFWS Office no later than December 1 of each year.

10. If maintenance of a coastal sage scrub restoration area is necessary between February 15 and August 31, a biologist with knowledge of the biology and ecology of CAGN and approved by the Carlsbad USFWS Office will survey for CAGN within the restoration area, access paths to it, and other areas susceptible to disturbances by site maintenance. Surveys will consist of three visits separated by two (2) weeks, starting March 1 of each maintenance/monitoring year. Work will be allowed to continue on the site during the survey period. However, if CAGN are found during any of the visits, the City and Caltrans will notify and coordinate with the Carlsbad USFWS Office to identify measures to avoid and/or minimize effects to the CAGN (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work).

c. The City will prepare and implement perpetual management, maintenance, and monitoring plans for the 1.5 acre conservation area, with consideration of the fact that the Puente Hills Habitat Preservation Authority (Authority) property is already managed pursuant to the Authority's conservation mission. The City will also establish a non-wasting endowment for an amount approved by the Puente Hills Habitat Preservation Authority (Authority) based on Property Analysis Records (PAR) or similar cost estimation methods, to ensure that there is sufficient funding for perpetual management, maintenance and monitoring of the property. The City will submit draft long-term management plans for the property to the Carlsbad USFWS Office for review and approval. The long-term management plans will include, but not be limited to, the following: 1) the PAR or other cost estimation results for the non-wasting endowment; 2) the proposed land manger's name, qualifications, business address, and contact information; and 3) the method of protecting the resources in perpetuity (e.g., conservation easement), monitoring schedule, measures to prevent human and exotic species encroachment, funding mechanism, and contingency measures should problems occur. The long-term management plan will be provided and the endowment will be established prior to initiation of vegetation removal and construction activities for the project.

d. A perpetual biological conservation easement or other conservation mechanism acceptable to the Carlsbad USFWS Office will be recorded over the 1.5-acre conservation area. The conservation mechanisms will specify that no easements or activities (e.g., fuel modification zones, public trails, drainage facilitates, walls, maintenance access roads, utility easements) that will result in soil disturbance and/or native vegetation removal will be allowed within the biological conservation easement areas. The draft conservation mechanism will be provided to the Carlsbad USFWS Office for review and approval prior to initiation of vegetation removal and construction activities for the project. The City will also submit the final conservation mechanism to the Carlsbad USFWS Office.

e. All areas of temporary impact, totaling 1.4 acres, will be revegetated and restored with native species. These areas will be returned to original grade, as feasible. Prior to initiating project impacts, a restoration plan will be

developed for the temporary impact areas. The plan will be submitted to the Carlsbad USFWS Office for review and approval. This plan will include a detailed description of restoration methods, slope stabilization, and erosion control, criteria for restoration to be considered successful, and monitoring protocol(s). Following the completion of construction activities within each area of impact, the restoration plan will be implemented for a minimum of five (5) years, unless success criteria are met earlier and all artificial water has been off for at least two (2) years. Temporary impact areas will be planted as soon as possible following re-grading after completion of construction to prevent encroachment by nonnative plants.

TE-2 All lighting used during any nighttime construction (e.g., staging areas, equipment storage sites, roadway) adjacent to the sage scrub-grassland within California gnatcatcher-designated critical habitat will be directed toward the construction site and away from gnatcatcher-designated critical habitat to avoid and minimize artificial night lighting effects. Construction lighting will be the lowest illumination necessary for safety, and light glare shields will be used to reduce the extent of illumination into gnatcatcher-designated critical habitat.

Permanent lighting will be of the lowest illumination necessary for safety and will be directed toward the road and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. The City and Caltrans will review the permanent lighting plants for the project and then submit them to the Carlsbad USFWS Office for review and approval.

TE-3 Prior to any construction related activities, and under the supervision of the Project Biologist, the limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment) will be installed around designated critical habitat (with constituent elements) adjacent to the proposed project footprint; these areas will be designated as Environmentally Sensitive Areas (ESAs) to be preserved. No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of cut or fill material in areas where vegetation is adjacent to planned grading activities.

TE-4 During construction, a qualified biologist (for this measure the Project Biologist shall be experienced in CAGN biology and ecology) approved by the Carlsbad USFWS Office will be onsite during: 1) initial clearing and grubbing; and 2) weekly during project construction within 200 feet of CAGN habitat to ensure compliance with all conservation measures. The Project Biologist will be familiar with the habitats, plants, and wildlife in the project area to ensure that issues relating to biological resources are appropriately and lawfully managed. The City and/or Caltrans will submit the biologists' name, address, telephone number, and work schedule on the project to the Carlsbad USFWS Office prior to initiating project impacts. The biologist will be provided with a copy of this consultation.

a. Under the supervision of the Project Biologist, the limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment. If work occurs beyond the fenced or demarcated limits of impact, all work will cease until the problem has been remedied to the satisfaction of the Carlsbad USFWS Office. Temporary construction fencing and markers will be maintained in good repair until the completion of project construction and removed upon project completion.

b. The Project Biologist will submit a final report to the Carlsbad USFWS Office within 120 days of project completion including photographs of impact areas and adjacent habitat, documentation that authorized impacts were not exceeded, and documentation that general compliance with all conservation measures was achieved. The report will specify numbers, locations, and sex of CAGN (if observed), observed CAGN behavior (especially in relation to project activities), and remedial measures employed to avoid and minimize impacts to CAGN and their critical habitat. Raw field notes should be available upon request by the Carlsbad USFWS Office.

c. During construction the employee education program (training/awareness program) will be developed and implemented by the Project Biologist. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program prior to working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. The training/awareness program will include, at minimum, the following: occurrence of the listed and sensitive species in the area (including photographs), their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area.

d. To avoid attracting predators of the CAGN the project site will be kept as clean of debris as possible. Food-related trash items will be kept in enclosed containers and regularly removed from the site.

e. Project personnel will be prohibited from bringing domestic pets to the construction site to ensure that domestic pets do not disturb or depredate wildlife in the adjacent native habitat.

TE-5 Implement Measures WQ-5, GEO-1, GEO-3, AQ-1, AN-1, AN-2, INV-1, and INV-2 as follows:

a. Implement Measure WQ-5. All equipment maintenance staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated disturbed/developed areas. They will be located such that runoff from the designated areas will not enter gnatcatcher-designated critical habitat.

b. Implement Measure GEO-1. If fills must be borrowed from, or disposed of offsite, the construction contractor will identify any necessary borrow and disposal sites and provide this information to the City and Caltrans for review. Caltrans will review borrow and disposal site information and submit the information to the Carlsbad USFWS Office. If borrow or disposal activities may affect a listed species or critical habitat, Caltrans will reinitiate Section 7 consultation.

c. Implement Measure GEO-3. Appropriate erosion and siltation controls will be installed prior to the onset of vegetation clearing and be maintained in good repair until the completion of project construction. Erosion and sediment control devices used for the project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.

d. Implement Measure AQ-1. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures.

e. Implement Measures AN-1 and AN-2. The clearing and grubbing of native habitats for the project will be conducted between September 1 and February 14 to avoid the CAGN breeding season (or sooner than September 1 if the Project Biologist demonstrates to the satisfaction of the Carlsbad USFWS Office that all nesting is complete). If vegetation clearing must be conducted during breeding season, Caltrans will re-initiate consultation with the Carlsbad USFWS Office to address unanticipated effects to this species.

f. Implement Measure INV-1. If invasive weed species are already growing within the project area, special care will be taken during transport, use, and disposal of soils containing invasive weed seeds to ensure that invasive weeds are not spread into new areas by the project. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds. Eradication strategies will be implemented should an invasion of nonnative plant species be observed in the project work area by the Project Biologist.

g. Implement Measure INV-2. No invasive species listed in the National Invasive Species Management Plan, State of California Noxious Weed List, or Cal-IPC Invasive Plant Inventory list will be included in the landscaping plans for the proposed project. Landscaping will not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas, and water runoff from landscaped areas will be directed away from adjacent native habitats and contained and/or treated within the development footprint. Caltrans will review the landscaping plans for the project and then submit them to the Carlsbad USFWS Office for review and approval.

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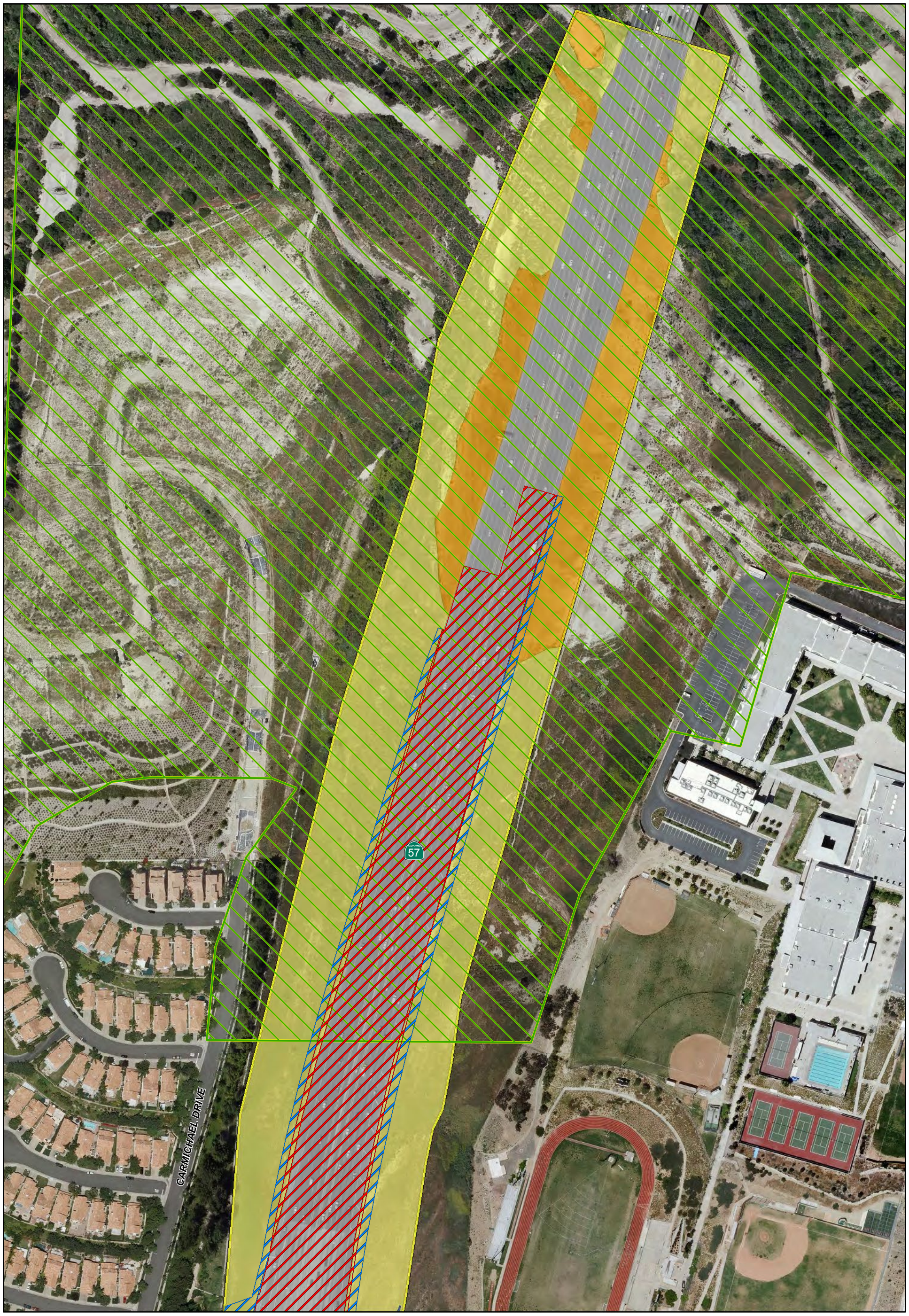

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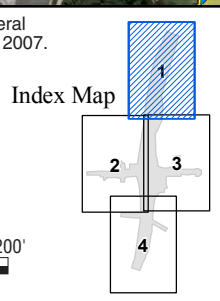

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 7A

- Permanent Impact
- Temporary Impact

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercources

Sheet 1 of 4

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-6a

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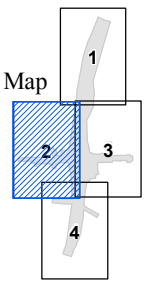
Source: Eagle Aerial, 2010; Federal Registry Critical Habitat, 2007.

Index Map



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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 7A

- Permanent Impact
- Temporary Impact

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercources

Sheet 2 of 4

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-6b

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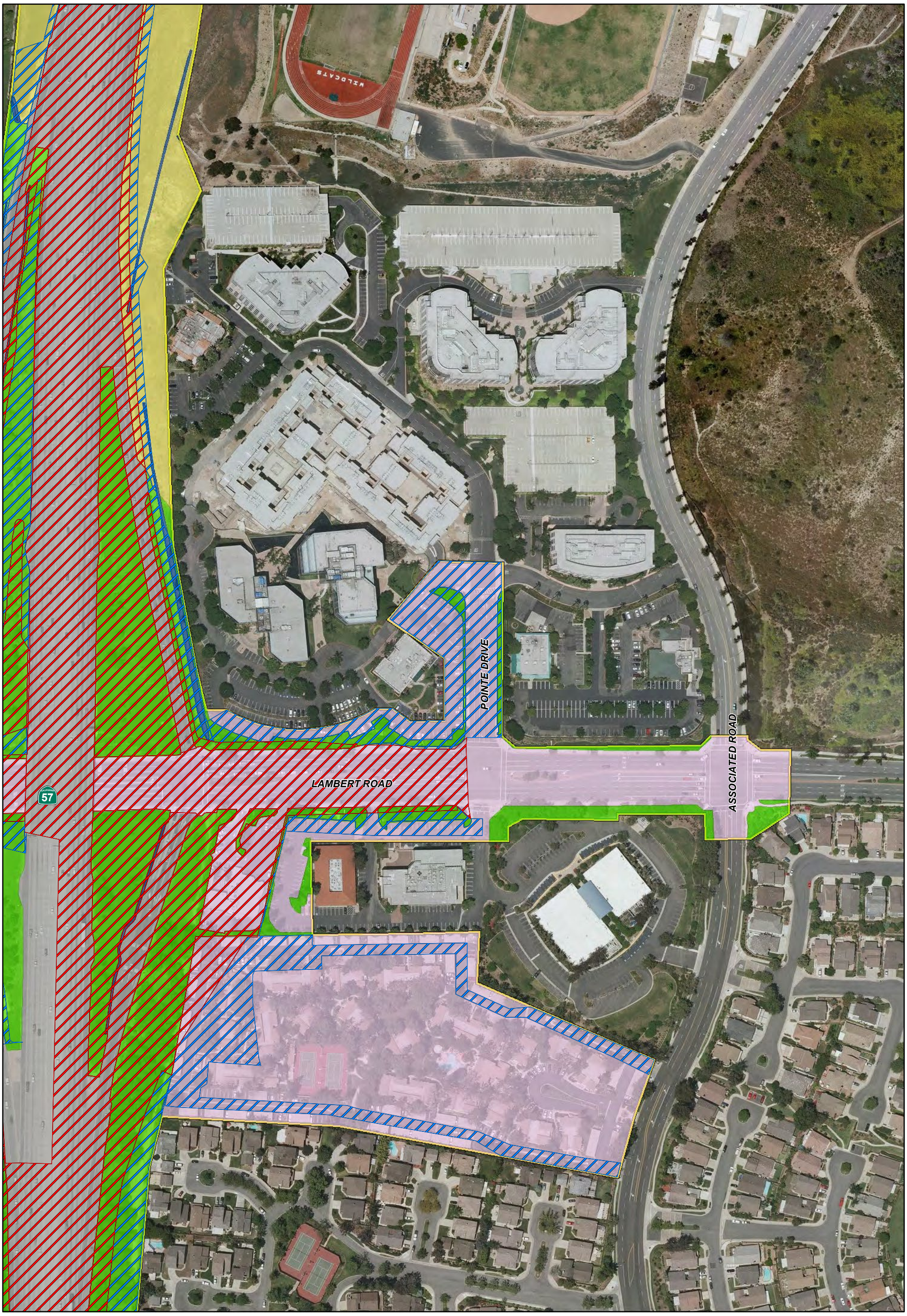

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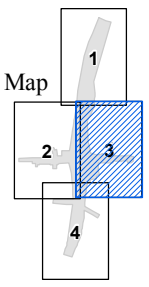

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 7A

- Permanent Impact
- Temporary Impact

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercources

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-6c

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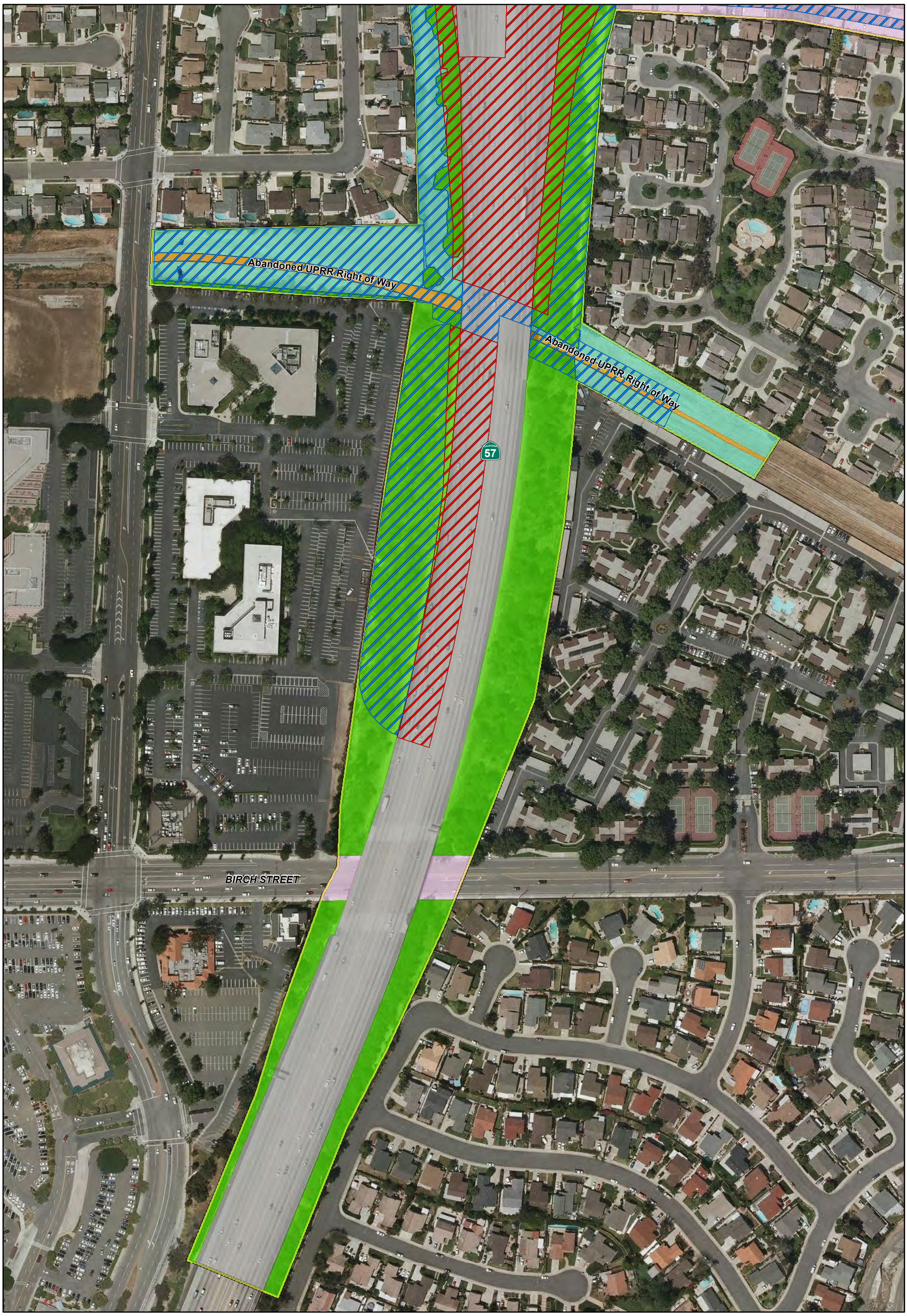

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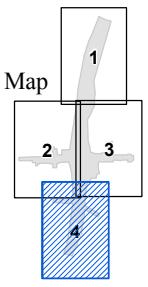

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 7A

- Permanent Impact
- Temporary Impact

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercources

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 7A

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-6d

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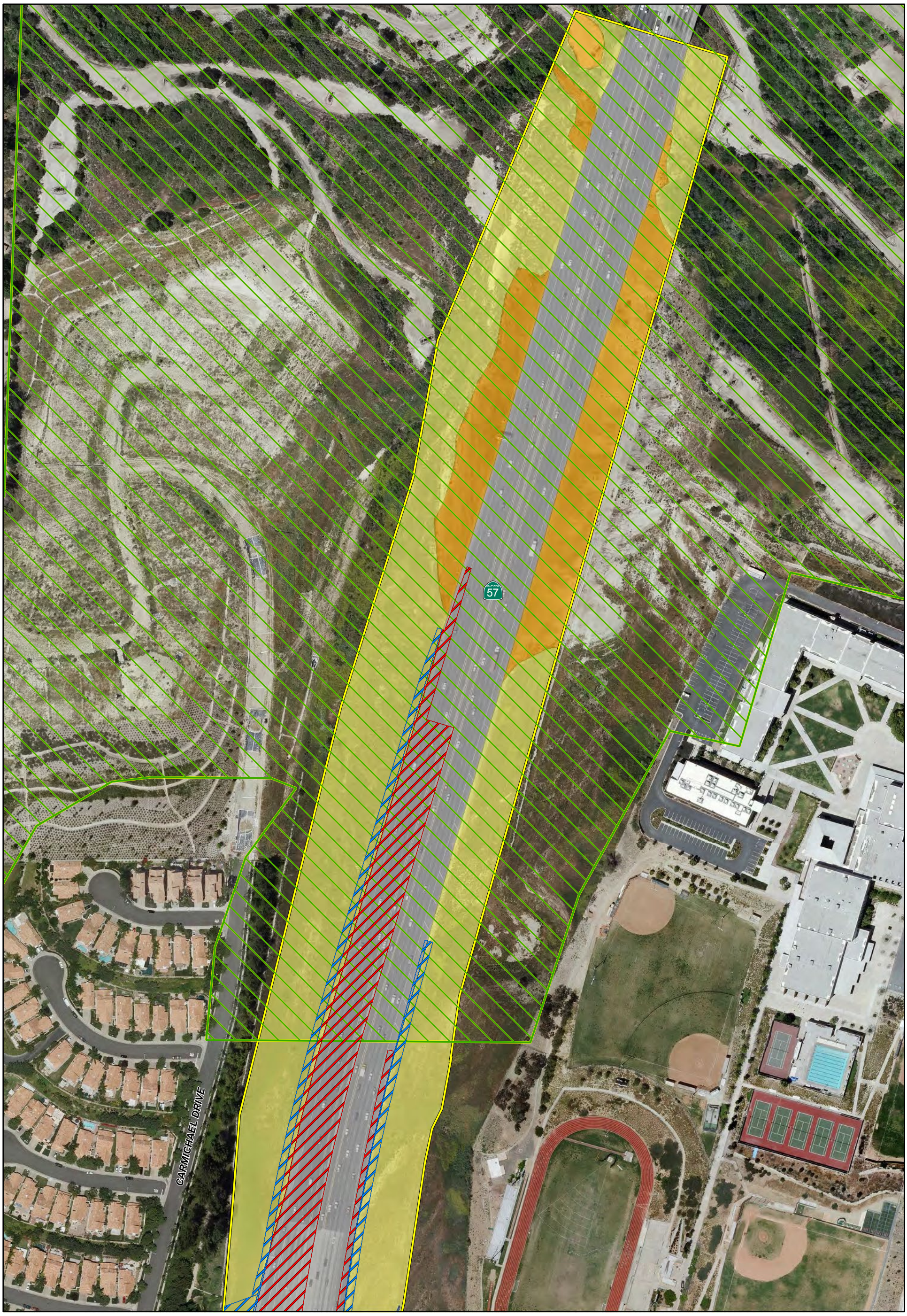

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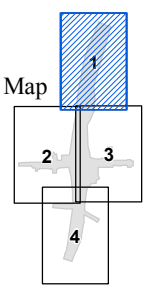

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 9

- Permanent Impact
- Temporary Impact

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercources

Sheet 1 of 4

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 9

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-7a

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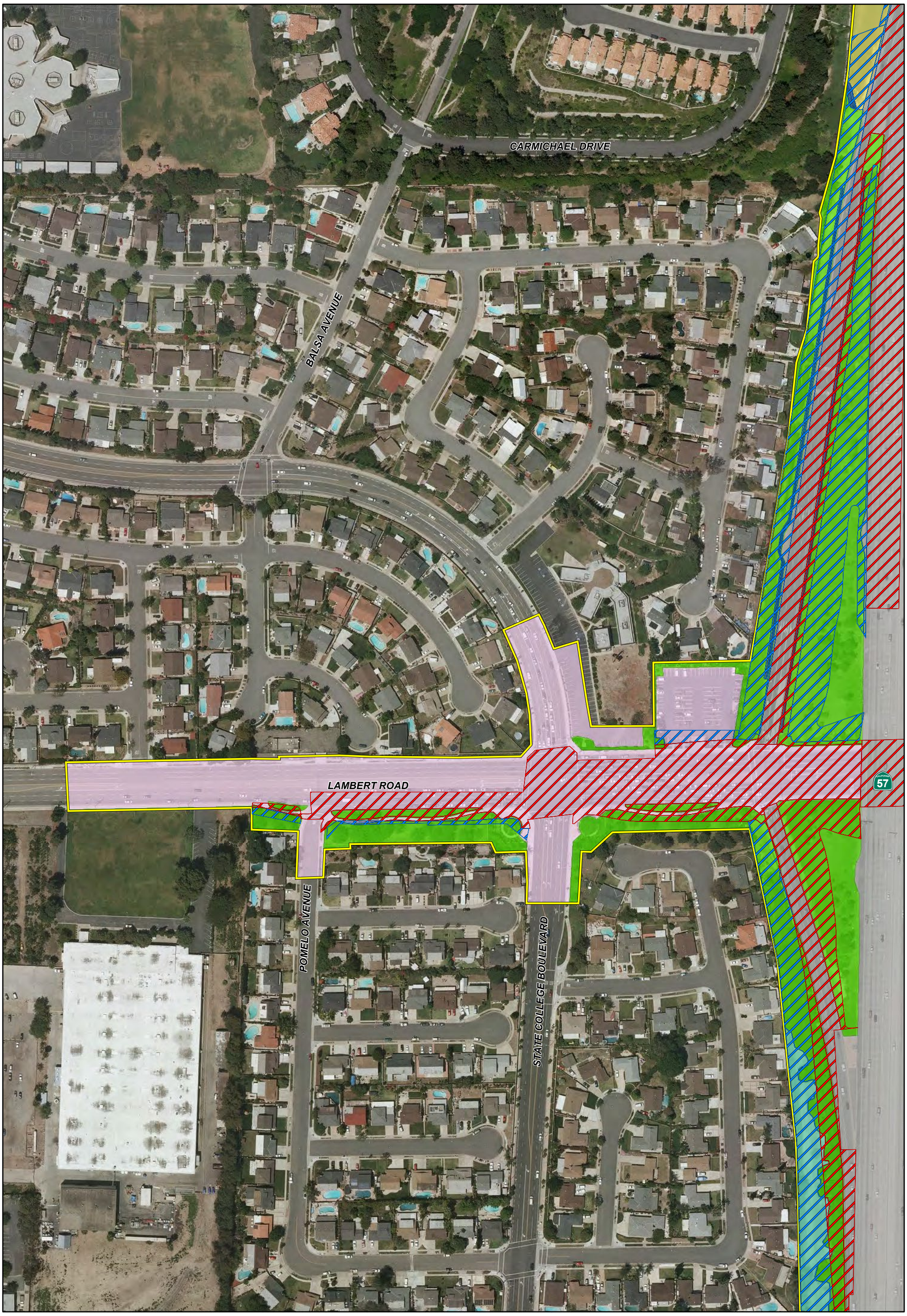

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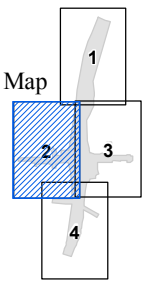

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 9

- Permanent Impact
- Temporary Impact

LAND COVER

- Disturbed or Barren
- Ornamental Landscaping
- Ruderal
- Sage Scrub-Grassland
- Transportation
- Urban and Commercial
- Watercources

SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 9

8/5/12 JN 10-107792-18226 MAS

Figure 2.4-7b

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Source: Eagle Aerial, 2010; Federal Registry Critical Habitat, 2007.

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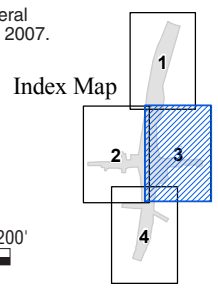

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 9

- Permanent Impact
- Temporary Impact

LAND COVER

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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 9

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-7c

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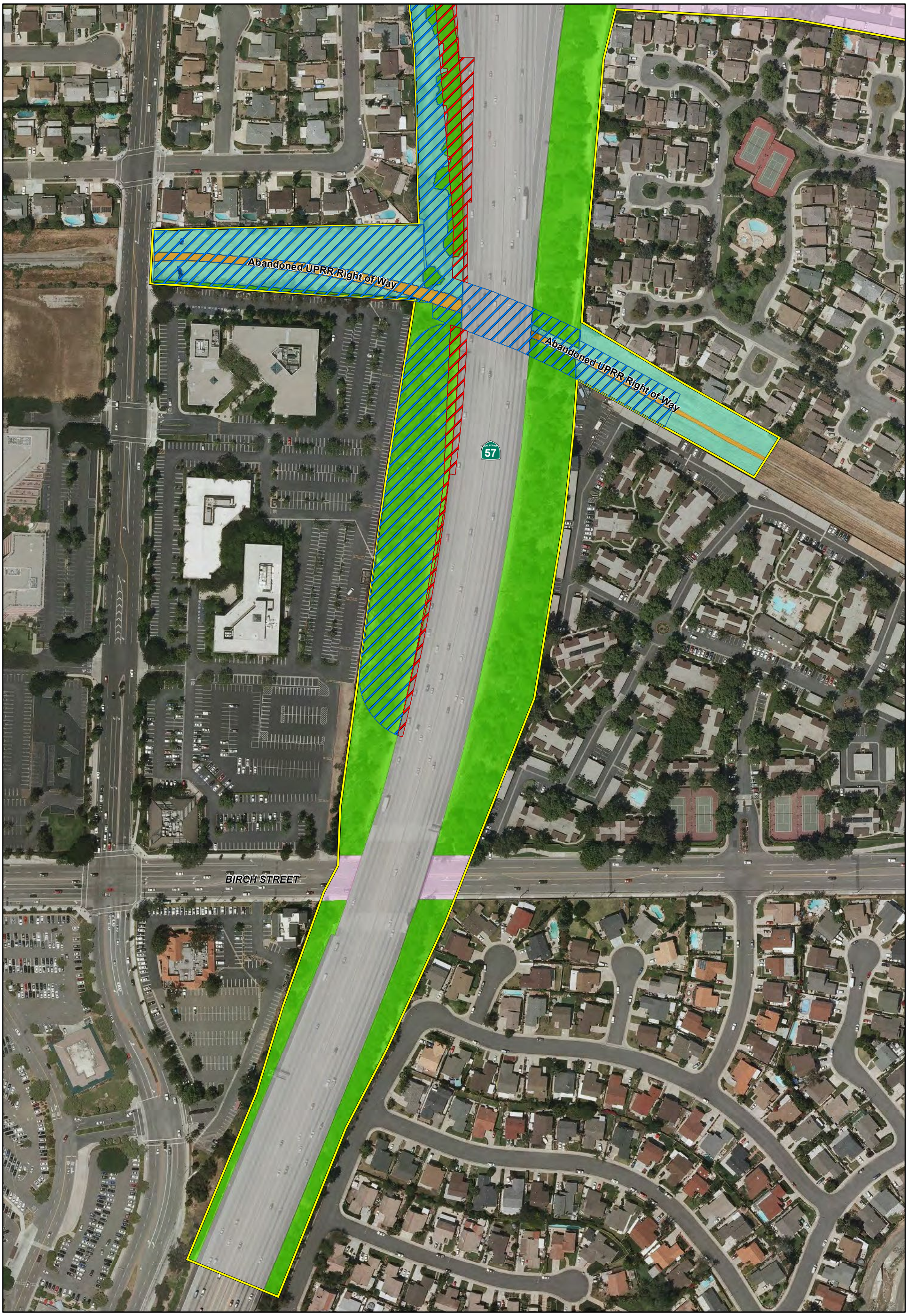

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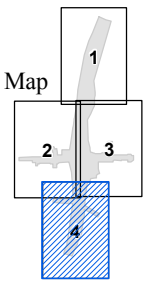

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LEGEND

- Biological Study Area
- Coastal California Gnatcatcher Final Critical Habitat, 12/19/07

IMPACTS TO LAND COVER • ALT 9

- Permanent Impact
- Temporary Impact

LAND COVER

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- Ornamental Landscaping
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SR-57/LAMBERT ROAD INTERCHANGE IMPROVEMENT PROJECT • IS/EA

Impacts to Habitat Communities Alternative 9

8/5/13 JN 10-107792-18226 MAS

Figure 2.4-7d

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2.4.6 INVASIVE SPECIES

2.4.6.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 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 (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.4.6.2 Affected Environment

Landscaped area currently exists within the BSA, mainly related to the commercial and residential properties adjacent to the proposed project site; however, USFWS designated critical habitat for the CAGN is present at the northern end of the BSA; refer to Figures 2.4-1a through 2.4-1d, Vegetation Communities.

Exotic plant species exist within the nonnative plant communities throughout the 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, CSS, chaparral, and riparian habitats. Consequently, scattered plant species associated with these plant communities are often found in these areas.

A total of 14 exotic plants occurring on the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory were identified in the BSA. Of these species, there are three with an overall high rating, seven with a moderate rating, and four with a limited rating. Invasive species that have severe ecological effects are given a high rating. Species with a high rating identified within the BSA are Hottentot-fig, English ivy, and red brome.

2.4.6.3 Environmental Consequences

A Jurisdictional Delineation was prepared in February 2012 and a Natural Environment Study (NES) was prepared in February 2014.

Build Alternatives 7A and 9

Construction (Short-Term) Impacts

Invasive plant species can travel on vehicles and in the loads they carry, and can be moved from site to site during spraying and mowing operations. Weed seeds can be inadvertently introduced into the corridor on equipment during construction and through the use of mulch, imported soil or gravel, and sod.

In compliance with Caltrans policy, the construction activities, landscaping and erosion control included in the proposed project would not use species listed as noxious weeds. Landscape designs would be submitted for review and approval by a qualified biologist. The review would

determine that no invasive, exotic plant species would be used in any proposed landscaping, and that suitable substitutes are proposed. Avoidance and minimization measures are provided and impacts during construction regarding the introduction of invasive species are not considered adverse.

Operation (Long-Term) Impacts

Operation and maintenance of both Build Alternatives, Alternatives 7A and 9, would not increase the threat of invasive species beyond the existing threat associated with vehicle and pedestrian use on SR-57 and Lambert Road. No new invasive species would be introduced into the project site. No invasive, exotic plant species would be used in any proposed landscaping. Avoidance and minimization measures have been provided regarding invasive species and impacts from invasive species are not considered adverse.

No Build Alternative

Under the No Build Alternative, no new construction would occur and there would be no new impacts to invasive species.

2.4.6.4 Avoidance, Minimization, and/or Mitigation Measures

INV-1 Prior to the start of any construction activities, a weed abatement program will be developed to minimize the importation of nonnative plant material during and after construction. If invasive weed species are already growing within the project area, special care will be taken during transport, use, and disposal of soils containing invasive weed seeds to ensure that invasive weeds are not spread into new areas by the project. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds. Eradication strategies will be employed should an invasion occur. This weed abatement program will be approved by the City and Caltrans District 12 Environmental Branch.

INV-2 No invasive species listed in the National Invasive Species Management Plan, State of California Noxious Weed List, or Cal-IPC Invasive Plant Inventory list will be included in the landscaping plans for the proposed project. Landscaping will not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas, and water runoff from landscaped areas will be directed away from adjacent native habitats and contained and/or treated within the development footprint. Caltrans will review the landscaping plans for the project and then submit them to the Carlsbad USFWS Office for review and approval.

In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the proposed project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. During construction protective measures will be taken to ensure that invasive species are not introduced or spread, including:

- During construction, the construction contractor will inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another.
- During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible.
- During construction, the construction contractor will ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.
- During construction, the construction contractor will ensure that all material stockpiled is sufficiently watered or covered to prevent excessive amounts of dust.
- During construction, soil/gravel/rock will be obtained from weed-free sources.
- Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.
- After construction, affected areas adjacent to native vegetation will be revegetated with plant species approved by the Department's District Biologist that are native to the vicinity.
- After construction, all revegetated areas will avoid the use of species listed in the California Invasive Plant Council (Cal-IPC's) California Invasive Plant Inventory that have a high or moderate rating.

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2.5 CUMULATIVE IMPACTS

2.5.1 REGULATORY SETTING

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative effect 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 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.

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary 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 the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR), Section 1508.7 of the Council on Environmental Quality (CEQ) Regulations.

2.5.2 METHODOLOGY

Cumulative impacts were identified by comparing the impacts of the proposed project and other past, current, or proposed actions in the area to establish whether, in the aggregate, they would result in cumulative environmental impacts. Both direct and indirect impacts are assessed. The cumulative effects analysis focuses on those issues and resources that would be affected by the combination of stress factors on the environment; this analysis does not include impacts to the coastal zone, wild and scenic river areas, farmland, and designated parks, recreation, and Section 4(f) resources due to the absence of such resources in the proposed project area. The analysis provided in this section considered the effects of the other projects in combination with each individual build alternative, Build Alternative 7A (Preferred Alternative) and Build Alternative 9, in assessing whether a particular environmental parameter would experience cumulative adverse impacts. Specific geographic boundaries for cumulative effects are determined for each environmental topic analyzed and may vary accordingly.

The proposed project serves the City of Brea, with SR-57 serving more regional traffic. Therefore future actions anticipated to occur include further growth within the City of Brea, as well as Orange County. The growth would require continued expansion of supporting infrastructure such as roadways (i.e., State Route 57), commercial uses, public services, and utilities. The anticipated growth is reflected in the regionally adopted growth projections and is planned for in the City and County General Plans.

The following eight steps serve as guidelines for identifying and assessing cumulative impacts and are based on the *Caltrans Standard Environmental Review – Guidance for Preparers of Cumulative Impact Analysis* (Caltrans February 2012).[12]

- Identify the resources to consider in the cumulative impact analysis by gathering input from knowledgeable individuals and reliable information sources.
- Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.
- Describe the current health and historic context of each resource.
- Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.
- Identify the set of other current and reasonably foreseeable future actions or projects and their associated environmental impacts to include in the cumulative impact analysis.
- Assess the potential cumulative impacts.
- Report the results of the cumulative impacts analysis.
- Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact.

2.5.3 CUMULATIVE IMPACTS

The following discussion of potential cumulative impacts is presented by environmental resources area. No cumulative impact discussion is provided for coastal zone, wild and scenic river areas, farmland, or parks, recreation, and Section 4(f) resources, since there are no anticipated impacts to these resources from the Build Alternatives.

The purpose of the proposed project is to provide additional capacity and improve the overall operational performance of the interchange. The proposed project is intended to reduce the current congestion and better accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards.

2.5.3.1 Human Environment

Land Use

The cumulative study area for Land Use is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. The City of Brea General Plan (2003) was reviewed to understand the development trends, land use-related goals, and specific City policies that could affect or be affected by past, present, and future projects.

The proposed project area includes a variety of land uses including residential, commercial/office, industrial uses, and open space. According to the City of Brea General Plan, as of 2002, approximately 26 percent of land uses are designated as residential, 12 percent are designated industrial, and 5 percent are designated commercial/office within the City. As discussed in

[12] California Department of Transportation. *Guidance for Preparers of Cumulative Impact Analysis*. Online: http://www.dot.ca.gov/ser/cumulative_guidance/approach.htm.

Section 2.2.1, Land Use, the City of Brea is currently built out with a mix of various types of residential communities and commercial/industrial areas. Approximately 63 percent of the City is developed while the remaining 38 percent is designated as parks, open space, and vacant lands.

Reasonably foreseeable projects identified within the City of Brea include new development projects and transportation improvement projects. The reasonably foreseeable development projects are provided in Table 2.5-1, Cumulative Projects. Of these, the closest project recently constructed is the SR-57 Northbound Widening Project. The SR -57 Northbound Widening Project started in January 2011 and was completed in summer of 2014. The project limits extended from Orangethorpe Avenue in the City of Placentia north to the SR-57/Lambert Road interchange. The construction of the proposed project (SR-57/Lambert Road Interchange Improvement Project) is expected to begin in 2016 and be completed in 2017. Based on the completion of the SR-57 Northbound Widening Project and the anticipated start date of the SR-57/Lambert Road Interchange Improvement Project, residents in the City of Brea would have a 2-year period (2014 to 2016) during which they would not experience inconvenience as a result of the construction of these two projects. Therefore, the impacts of these two projects would not be compounded, and no construction conflicts between these two projects are anticipated.

Although areas adjacent to SR-57 are highly urbanized, the incremental effects of the proposed project must be considered within the context of other past, present, and reasonable foreseeable transportation-related changes in the area. It is probable and reasonable to assume that, although highly developed, the City of Brea would allow various forms of land use amendments that would further intensify land uses in the area. The projects evaluated in this cumulative analysis would introduce new construction activities in the area, as well as an increased level of growth and traffic into the future. It is probable that land development of various degrees would continue with or without the proposed project and other similar transportation improvements. Thus, no adverse cumulative land use impacts are anticipated.

The reasonably foreseeable projects in the area could result in additional traffic as well as growth within the City of Brea. All of the related projects planned for the proposed project area are consistent with land use policies and designations of the City of Brea General Plan. Cumulative impacts to land use resources as a result of implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, are not anticipated because the proposed project is consistent with existing plans and policies and would be compatible with existing land uses. Therefore, the proposed project would not contribute to a cumulative land use impact with regard to conflict with existing plans, policies, or regulations or represent a use that would conflict with surrounding land uses.

Growth

The cumulative study area for Growth is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. As discussed in Section 2.2.2, Growth, the Southern California Association of Governments (SCAG) projections (2012), show that by 2035 the City of Brea is expected to increase its population from 39,282 to 52,674; this is a 25 percent increase in households. According to the City of Brea General Plan, the City is built out with a mixture of various types of residential communities and commercial/industrial uses. Approximately 63 percent of the City is developed while the remaining 38 percent is designated as parks, open space, and vacant lands. Additional future population and employment growth within the City is anticipated to occur in the form of redevelopment.

The Build Alternatives, Build Alternative 7A (Preferred Alternative) and Build Alternative 9, would not generate long-term additional employment, income, or housing opportunities within the region. The Build Alternatives would only create additional temporary jobs during construction, with a work force anticipated to come for the surrounding area. Therefore, the proposed project would not create an adverse cumulative impact on growth within the proposed project area.

Community Impacts

The cumulative study area for Community Impacts is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. The area evaluated under community impacts covers a range of socioeconomic populations and neighborhood characteristics. SCAG data between 2000 and 2010 show that the City population grew 11 percent over a ten-year period. The City population is largely White (67 percent), with a Hispanic population of 25 percent; refer to Section 2.2.3.1, Community Character and Cohesion, for details. A larger percentage of the residents tend to rent housing units rather than own, with an average household size of three persons.

Construction of the proposed project would occur concurrently with other ongoing and planned projects in the vicinity. The community within the proposed project area (Census Tracts 15.04, 15.06, 15.06, 218.14, and 218.15) may experience impacts due to construction activities, including traffic detours, lane closures, and an increase in localized noise levels; however, such impacts would be temporary and would cease once construction is completed. As stated above, the SR-57 Northbound Widening Project is recently constructed, being completed in summer 2014 and the proposed project would commence in 2016, resulting in a two-year period of no construction. Therefore, community disruptions and displacements would be minimal and cumulative impacts would not be adverse.

In addition, the communities surrounding the proposed project are characterized as moderately cohesive, with no environmental justice populations being present in the affected area. Therefore, community disruptions and displacements under either Build Alternative 7A (Preferred Alternative) or Build Alternative 9 are expected to be minimal and would not contribute to the cumulative adverse impacts to the community.

The reasonably foreseeable projects are mostly infill projects on undeveloped properties and transportation improvement projects. There are limited displacements associated with these projects. The SR-57/Lambert Road interchange is an existing transportation facility that provides access to the City of Brea. The proposed project would not result in any permanent adverse community impacts other than displacements resulting from Build Alternative 7A (Preferred Alternative); however, Build Alternative 7A (Preferred Alternative) would result in limited commercial and residential displacements, and Build Alternative 9 would not result in acquisitions and displacements. Both Build Alternatives are would result in overall economic/employee and residential/resident benefits. For these reasons, cumulative contributions of the SR-57/Lambert Road interchange project to the cumulative community impacts are not expected to be adverse. Therefore, planned development in the proposed project vicinity, and in conjunction with the proposed project, would not result in adverse cumulative community impacts. Thus, no adverse cumulative impacts to the respective communities are anticipated.

Relocations

Build Alternative 7A (Preferred Alternative) would require one full acquisition and 14 partial acquisitions. Under Build Alternative 7A (Preferred Alternative), a partial acquisition of the Country

Woods apartment complex located in the southeast quadrant of the SR-57/Lambert Road interchange would result in the removal of two apartment buildings. As a result, approximately 17 residential units would be displaced.

Build Alternative 9 would not result in full acquisitions; however, it would result in partial acquisitions of 14 nonresidential parcels. None of these acquisitions under Build Alternative 9 would result in the displacement of businesses or residential relocations.

According to the Relocation Impact Memorandum (approved June 2012), sufficient replacement properties exist within the city and adjacent cities for relocated residents and employees. Given that adequate replacement properties have been identified, Build Alternative 7A (Preferred Alternative) would not result in adverse impacts related to community character and cohesion.

The reasonably foreseeable projects are mostly infill projects on undeveloped properties and transportation improvement projects. There are limited displacements associated with these projects. As such, the proposed project would not substantially add to relocation cumulative impacts associated with projects in the surrounding area. Cumulative impacts are not considered adverse.

Environmental Justice

Five measures were utilized to evaluate environmental justice: (1) percentage of non-White residents; (2) percentage of Hispanic residents; (3) percentage of population below poverty level; (4) median household income; and, 5) transit-dependent population in the study area. The composition of minority and low-income populations within the study area census tracts is provided in Section 2.2.3.3, Environmental Justice, Table 2.2.3-15, Environmental Justice Populations. The population is largely White (67 percent), with a Hispanic population of 25 percent; refer to Section 2.2.3.1, Community Character and Cohesion, for details. Some low-income populations are present within the area; however areas east of SR-57 are occupied by residents with a median income between $80,000 and $100,000. A larger percentage of the residents tend to rent housing units rather than own, with an average household size of three persons.

The proposed project would not cause disproportionately high and adverse effects on any minority or low-income populations. Therefore, as no individual impacts would occur from the proposed project, no additional cumulative impacts would result from implementation of the proposed project.

Utilities/Emergency Services

The utilities within the proposed project area consist of water service and sewer service, fire and police protection services, and community facilities. The city currently provides these services. Therefore the cumulative study area for Utilities/Emergency Services is comprised of the City of Brea.

Construction of the proposed project would occur concurrently with other ongoing and planned projects in the vicinity. The Build Alternatives may require utility relocations in the immediate vicinity and the extended area of the proposed project. Temporary disruption to service may occur during construction but are not considered adverse. Therefore, the proposed project, when combined with other projects in construction, would result in negligible impacts because service

disruptions would be minimal and because excavation activities must coordinate with local services to minimize accidental service disruptions.

During construction of the proposed project, in conjunction with other related projects, there could be delays to emergency-response providers related to multiple construction projects occurring concurrently within the study area. Although coordination with police and fire stations is required so that alternative routes can be planned, alternative routes may increase response times during the construction period. The Build Alternatives, in conjunction with other projects in construction, would result in temporary response increases. Because each individual project would require a construction transportation management plan (TMP), and because the impacts are temporary in nature, cumulative impacts related to emergency services are not considered adverse.

Utility services and infrastructure would remain similar to existing conditions upon completion of the proposed project. The proposed project would not increase the need for domestic water services, wastewater facilities, or solid waste disposal, or contribute to a cumulative effect on such resources. Emergency response times for fire, police, and ambulance providers are anticipated to improve as a result of the proposed project; therefore, the proposed project would not contribute to cumulative impacts to emergency response services. The Build Alternatives would not combine with past, present, or reasonably foreseeable projects, therefore cumulative operational impacts would not occur as a result of the proposed project.

Traffic/Transportation/Pedestrian and Bicycle Facilities

As discussed in Section 2.2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities, both Build Alternatives 7A and 9 would generally improve level of service (LOS) for intersections and roadway segments and would improve ramp queuing. The proposed project would alleviate existing congestion and is not anticipated to result in increased traffic resulting from adding vehicles to the project area. The analysis of future traffic conditions, Year 2040, is inherently a cumulative analysis because it considers traffic generated by future planned land uses and the effect of future planned transportation improvements and projected population growth. Therefore, the proposed project would not combine with the cumulative projects to result in permanent traffic and transportation impacts beyond what is projected for Year 2040.

In the immediate vicinity of the proposed project, the SR-57 Northbound Widening Project that is recently constructed, completed in summer 2014, while the proposed project is anticipated to commence in 2016; therefore, these two projects would be constructed concurrently. The proposed project would result in temporary lane closures and traffic detours during construction. The other transportation projects, as well as some development projects, may result in the need for temporary lane closures or traffic detours; however, these impacts would be minimized through the use of appropriate staging to avoid long duration closures, development of TMPs for each individual project, cooperation among the California Department of Transportation (Caltrans), City of Brea, and Orange County Transportation Authority (OCTA) staff, and implementation of signage programs. Temporary cumulative impacts associated with concurrent construction activities in the area would increase the amount of truck and construction worker traffic on area streets, thereby causing a potential deterioration in traffic service levels caused by slow-moving construction equipment. Impacts of this nature are short-term and would be proportionally minimized as each construction project is completed. In addition, the implementation of the TMPs for each individual project would minimize the impacts of construction traffic associated with the cumulative projects in the vicinity of the project study area. Cumulative impacts would not be adverse.

Visual/Aesthetics

The cumulative study area is comprised of the same landscape units and viewshed as was identified for the proposed project, as shown in Section 2.2.6, Visual/Aesthetics. The regional landscape is characterized by expansive broad open canyons/washes and rolling hills of northeastern Orange County. The proposed project area has been subject to suburban development for over 40 years. The landscape unit is generally located within a flat stretch of land at the base of the Puente and Chino Hills geographic features, which contrast with the urban forms of the City of Brea. In general, the SR-57 freeway corridor is urban in nature, and views from this corridor are generally of suburban and urban development. Existing land uses within the proposed project area are predominantly low- and medium-density residential, office, industrial, and regional commercial, as well as public uses. The most prominent natural visual feature within the proposed project area is the San Bernardino Mountains to the north.

The overall visual impacts from the proposed project would be similar to those experienced currently. However, as a result of Build Alternative 7A (Preferred Alternative), views from the Country Woods Apartment Complex would include the SR-57 northbound off-ramp and thus measures were provided to screen the apartment residences' views of the SR-57/Lambert Road interchange. Views from the El Torito Grill Restaurant would be altered with the introduction of a soundwall; however implementation of VIS-5 would reduce any impacts. Thus, visual impacts from the proposed project would not be adverse. In addition, implementation of Caltrans' recommended Standard Specifications for Construction and recommended measures would further minimize visual impacts occurring during proposed project construction.

The cumulative projects are predominantly infrastructure improvements (to existing infrastructure) and in-fill development projects that would not substantially change the character of the area. Therefore, the proposed project, when combined with cumulative projects, would not significantly alter the visual character and quality of the area and cumulative impacts would not be adverse.

Overall, the visual effect of the proposed project and other projects in the vicinity would be temporary in nature and would not have an adverse cumulative effect. The proposed project area is not within a visually sensitive setting due to the urbanized condition of the proposed project area. Implementation of the proposed project would not substantially impact views along the eligible state Scenic Highway designated portion of SR-57, and therefore, would not contribute to cumulative effects on this visual resource.

Further, cumulative effects on resources can be avoided or lessened with use of construction materials that are consistent with the general character of the area, architectural treatments, landscaping design, and property lighting techniques to direct light on-site and away from adjacent properties. Therefore, development of the Build Alternatives would not have adverse cumulative impacts on visual/aesthetic resources.

Cultural Resources

The cumulative impacts resource study area (RSA) encompasses the City of Brea. The resources of concern that could potentially be cumulatively affected by the proposed project in conjunction with other foreseeable projects include Native American resources.

According to the Historic Properties Survey Report (HPSR, 2012b) which includes the Archaeological Survey Report (ASR, 2012c), the Area of Potential Effects (APE) for cultural resources encompasses the proposed project footprint and parcels adjacent to it. One cultural

resource, Brea-Olinda Field, extends to the northern portion of the APE on SR-57 and the eastern portion of the APE on Lambert Road. A component of this field, Wildcatter's Park, has been previously recommended for inclusion in the National and California Registers. In addition, the City of Brea and its fringes are considered sensitive for Native American resources due to their proximity to Native American habitation sites in Brea Canyon and Carbon Canyon.

There are known archaeological and cultural resources in the proposed project vicinity. Therefore, construction of the proposed project, in conjunction with other related projects, could encounter undocumented important archaeological or cultural resources. In the event that human remains and/or artifacts are found during the construction of a project within the area, the site would be protected until it can be evaluated by a qualified archaeologist. Therefore, implementation of the avoidance, minimization, and/or mitigation measures by each individual project would be required for cultural resources. Given this, potential cumulative effects upon historical/archaeological resources would not be adverse.

2.5.3.2 Physical Environment

Hydrology and Floodplain

The proposed project site is located within the San Gabriel River Watershed; thus the cumulative study area is comprised of this watershed, as identified in Section 2.3.1, Hydrology and Floodplain. Impacts to the floodplain would not occur because the proposed project is located outside of the 100-year floodplain. Therefore, the proposed project would not contribute to a regional cumulative loss of floodplain acreage, nor raise the elevation of the 100-year base floodplain. Surface water/runoff for the proposed project is within the gutters of Lambert Road, which is collected by the City of Brea drainage network and connects to the Loftus Diversion Channel. Standard BMPs would be required to reduce any runoff during construction activities, thus ensuring that no impacts to the site or the surrounding area occur. The proposed project's incremental contribution to hydrology and floodplain impacts would not be considerable, adverse, or substantial.

Water Quality and Storm Water Runoff

The proposed project site is located within the San Gabriel River Watershed; thus the cumulative study area is comprised of this watershed, as identified in Section 2.3.2, Water Quality and Storm Water Runoff. The proposed project site is located within an urban municipal separate storm sewer system (MS4) National Pollutant Discharge and Elimination System (NPDES) permitted area. As stated above, surface water/runoff for the proposed project is within the gutters of Lambert Road, which is collected by the City of Brea drainage network and connects to the Loftus Diversion Channel. The proposed project does not discharge directly or indirectly to an Area of Special Biological Significance.

Water Quality

Regionally, cumulative impacts would result from the increased rate of erosion and/or siltation of exposed soils in waters downstream of the proposed project site. Eroded soils would be transported in runoff and would settle out of the water downstream, increasing siltation. While suspended, these soil particles may prevent sunlight from reaching aquatic plants, clog fish gills, or choke other organisms. Other pollutants common in soils near highways such as heavy metals, oil and grease, fertilizer, and pesticides would adhere to these soil particles and would be transported downstream with them. These absorbed pollutants would degrade water quality and

would harm aquatic life by causing algal blooms, or interfering with photosynthesis, respiration, growth, and reproduction.

The proposed project, as well as the above-listed projects, would cause siltation and water quality impacts. Although each project would be subject to standard NPDES requirements, these projects could contribute to regional, cumulative siltation and water quality impacts; however, given that SR-57 is an existing facility, combined with the limited amount of new impervious surfaces introduced with the proposed project, the contribution of the proposed project to regional cumulative water quality impacts is not expected to be substantial.

The proposed project would be required to implement appropriate design pollution prevention best management practices (BMPs) to target potential stormwater runoff pollutants during operation, consistent with the Storm Water Management Plan (SWMP). Under federal regulation, all new development projects are required to incorporate design BMPs and treatment BMPs to improve existing water quality. Therefore, the proposed project is not anticipated to contribute to long-term adverse cumulative water quality impacts.

Stormwater Runoff

In combination with the development of the cumulative projects listed above, the additional storm water runoff contributed by the proposed project would have the potential to contribute to adverse cumulative storm water runoff impacts; however, standard drainage design practices to minimize scour and sedimentation, and implementation of BMPs would avoid or minimize the storm water runoff impacts for each project. Adverse cumulative water quality impacts are not anticipated.

Geology, Soils, Seismicity, Topography

The cumulative study area for Geology, Soils, Seismicity, and Topography is comprised of the surrounding area within the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. Project development in the proposed project vicinity may result in short-term increases in erosion due to grading activities. All development would be required to comply with standard engineering practices for erosion control during construction and to implement the required SWPPP to minimize potential soil erosion impacts. In addition, implementation of erosion control measures and adherence to all requirements set forth in the NPDES permit required for construction activities would reduce construction-related erosion and siltation impacts.

Increased development intensity in the surrounding area could also expose persons and property to potential impacts associated with seismic activities; however, on a project-by-project basis, construction in accordance with the standards of the California Building Code (CBC), as well as adherence to standard engineering practices, would reduce the potential for structural damage due to seismic activity, landslides, and liquefaction, and other geologic hazards, to the maximum extent feasible. Thus, no adverse cumulative impacts related to geology, soils, seismicity, or topography are anticipated.

Paleontological Resources

The cumulative impacts RSA encompasses the City of Brea. The resources of concern that could potentially be cumulatively affected by the proposed project in conjunction with other foreseeable projects include paleontological resources.

As stated in the Paleontological Resources Identification and Evaluation Report (2012d), the literature review and locality searches produced information showing that sediments dating from the Pliocene through Pleistocene Periods within the Area of Project Disturbance (APD) have the potential to contain significant non-renewable paleontological resources. Thus, it is likely that paleontological resources would be encountered during the excavation phase of construction of the proposed project within these sediments.

In the absence of avoidance and minimization measures, cumulative development could impact important paleontological resources within the underlying geological units in the area; however, potential impacts would be site-specific and evaluated on a project-by-project basis. All proposed development is required to comply with all applicable state and federal regulations concerning preservation, salvage, handling, and curation of paleontological resources. Therefore, implementation of the avoidance, minimization, and/or mitigation measures by each individual project would be required for paleontological resources. Given this, potential cumulative effects upon paleontological resources would be reduced and impacts would not be adverse.

Hazardous Wastes/Materials

The cumulative study area for Hazardous Waste/Materials is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. The Phase I Initial Site Assessment for the proposed project identifies approximately 29 listed regulatory sites within a one-mile radius of the proposed project site. Additionally, due to the nature of the use of the proposed project site and the removal of structures, aerially deposited lead, asbestos containing materials, and lead based paints potentially occur in the area.

The primary types of hazardous material-related impacts attributable to the construction of the proposed project are from the handling of contaminated soil and/or groundwater encountered during construction. Because any contaminated material encountered during the construction of the either Build Alternative, Build Alternative 7A (Preferred Alternative) or Build Alternative 9, or any of the other cumulative projects identified in the vicinity would be handled, transported, and disposed of in accordance with all applicable laws, regulations, and agency oversight, no adverse cumulative impacts are anticipated.

Air Quality

Cumulative projects include local development as well as general growth within the project area; however, as with most development, the greatest source of emissions is from vehicular traffic that can travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered would cover an even larger area. Accordingly, the cumulative analysis for a project's air quality analysis must be regional by nature. Therefore, the cumulative impact area for Air Quality is the South Coast Air Basin (SCAB).

As discussed in Section 2.3.6, Air Quality, SCAB is characterized as having a "Mediterranean" climate. The general region lies in the semi-permanent, high-pressure zone of the eastern Pacific, thus the climate is mild and tempered by cool sea breezes. Table 2.3.6-4, Attainment Status, provides the area attainment status for criteria air pollutants.

Construction and operation of cumulative projects would further degrade the local air quality, as well as the air quality of SCAB. Air quality would be temporarily degraded during construction activities that occur separately or simultaneously; however, the greatest cumulative impact on the

quality of regional air would be the incremental addition of pollutants from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. It should be noted that the proposed project is a transportation improvement, and not a direct trip generator.

With respect to emissions that may contribute to exceeding state and federal standards, a CO and particulate matter screening analysis was performed. The results of this analysis illustrate that localized levels would not violate published air quality standards, and therefore, does not present an adverse cumulative impact. Implementation of the proposed project would correct existing geometric deficiencies and mitigate projected operational deficiencies from the anticipated increase in traffic demand and congestion from the forecasted growth and development in the area. Furthermore, the Build Alternatives 7A and 9 conditions would improve traffic flow and would not create additional emissions.

Noise

The existing noise sensitive land uses within the proposed project area include single-family residences, multi-family residences, commercial, and office uses. The primary source of noise within the proposed project area is from vehicular traffic.

As the proposed project is an interchange improvement, the cumulative study area for noise analysis includes the reasonably foreseeable actions along the SR-57 corridor within the proposed project area. The cumulative resource study area for noise includes land uses in the proposed project vicinity that have single-family residences or commercial structures.

As discussed in Section 2.3.7, Noise, there are locations within the proposed project area that currently approach or exceed noise standards. Table 2.3.7-5, Predicted Traffic Noise Levels, dBA Leq, provides the existing noise levels, future No Build noise levels, and future noise levels under both Build Alternatives 7A (Preferred Alternative) and 9, with the bold numbers representing existing levels that approach or exceed the NAC. Under existing conditions, of the 130 modeled receptor locations, seven receptors approach or exceed the 67 dBA continuous equivalent sound level (Leq) for Activity Category B. The future noise levels at these seven receptors would be reduced under both Build Alternatives, as compared to existing conditions. These seven receptors would not approach or exceed the 67 dBA Leq for Activity Category B as a result of the proposed project.

Under existing conditions, of the 130 modeled receptor locations, one receptor approaches or exceeds the 72 dBA Leq NAC for Activity Category E. The proposed project would result in long-term impacts from the completed project; however, in the context of existing traffic noise, this impact would not be generally perceptible, as all levels in areas approaching or exceeding the 72 dBA Leq threshold would be within 3 dBA of existing conditions; 3 dBA is below the level perceptible to the human ear. Noise abatement would be implemented to reduce the noise level increase at this location.

The operational noise impact analysis is predicated on future projections, and those future projections assume the other projects in the vicinity to be in place and functioning as planned. No additional cumulative impacts, therefore, are expected beyond those that already might be disclosed in the impact noise analysis and for which abatement is proposed.

2.5.3.3 Biological Environment

Natural Communities

The cumulative study area for Natural Communities is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. Vegetation communities identified within the proposed project study area include Ornamental Landscaping, Disturbed or Barren, and Sage Scrub-Grassland, Cleared or Graded, Urban, and Transportation. Vegetation within the proposed project site and surrounding area provides habitat of low value for native wildlife species, as the city is largely built out.

According to the Natural Environment Study (NES) (2014b), the proposed project would result in the permanent and temporary impacts to United States Fish and Wildlife Service (USFWS) designated critical habitat for California gnatcatcher (CAGN); however, this habitat within the biological study area (BSA) is highly disturbed and is not of high quality or ecosystem value. Because of this, the proposed project, in conjunction with other projects, is not expected to result in adverse cumulative impacts to this habitat.

Implementation of the proposed project would contribute to cumulative impacts on areas adjacent to, or in the vicinity of, the study area. The proposed project's contribution to the regional loss of these resources would not be substantial, as the proposed project area is generally considered to be of low biological value to plant and wildlife species.

Wetland and Other Waters

The cumulative study area for Wetland and Other Waters is comprised of Coyote Creek and its tributary Fullerton Creek. This area could be reasonably affected by impacts resulting with the proposed project. The proposed project area includes eight drainage features within the BSA, which connect to Fullerton Creek, either directly or indirectly. The total proposed project acreage of potential USACE jurisdiction within the BSA is less than 0.01 acre.

Cumulative impacts to waters of the U.S. or wetlands would occur if the proposed project, in conjunction with other related projects, results in substantial impacts to these resources areas. The USACE, Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) would be required to issue permits for the individual projects, and the permits could be conditioned. Issuance of the respective permits and associated conditions by the jurisdictional agencies would ensure that substantial cumulative impacts would not occur.

For the proposed project, less than 0.01 acre of non-wetland waters is potentially subject to USACE jurisdiction, and 0.01 acre would be subject to California Department of Fish and Wildlife (CDFW) jurisdiction. Since the proposed project would not result in impacts to potentially jurisdictional areas, a Section 404 Permit from the USACE, a Streambed Alteration Notification to the CDFW, or a Section 401 Water Quality Certification from the RWQCB, are not expected to be required for the proposed project, and the proposed project would not contribute to cumulative impacts.

Plant Species

The cumulative study area for Plant Species is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. The BSA is mainly comprised of nonnative landscaped, ruderal, ornamental vegetation, or bare ground. Sage scrub-grassland

occurs on steep slopes adjacent to SR-57 on the northern end of the BSA. No Threatened or Endangered plants have the potential to occur within the proposed project limits. The indirect effect of the proposed project's construction on the vegetation in the immediate vicinity of the construction area would not reduce the plant population below self-sustaining levels. As no Threatened or Endangered plants have the potential to occur within the proposed project limits, no such impacts are anticipated. No impacts would occur to plant species with the proposed project, and therefore, the proposed project would not contribute to cumulative impacts on plant species.

Animal Species

The cumulative study area for Animal Species is comprised of the City of Brea and nearby Carbon and Tonner Canyons. This area could be reasonably affected by impacts resulting with the proposed project. Due to the urban nature of the proposed project site, minimal habitat for native wildlife species is provided within area. Several special-status species have been documented within the vicinity of the BSA, associated with coastal scrub habitat in nearby Carbon Canyon and Tonner Canyon and riparian habitat associated with nearby Brea Creek. Trees in the BSA have a limited potential to support nesting migratory birds/raptors; however, nesting birds are not anticipated to occur within the proposed project site. Impacts to raptor nests are protected by CDFW regulations. Additionally, direct and indirect effects on California gnatcatcher designated critical habitat are expected to occur as a result of both Build Alternatives 7A and 9.

Cumulative impacts to additional species may occur if implementation of the proposed project occurs concurrently with other projects in the immediate vicinity. Indirect noise impacts from concurrent multiple projects may discourage breeding of nesting raptors in the area. Implementation of measures to minimize harm is proposed to minimize and avoid adverse direct, indirect, and cumulative biological impacts. With implementation of these measures, impacts would not be adverse.

Threatened and Endangered Species

The cumulative study area for Threatened and Endangered Species is comprised of the City of Brea and the critical habitat limits of the CAGN. This area could be reasonably affected by impacts resulting with the proposed project. The BSA is in an urbanized area that no longer contains substantial wildlife habitat. The BSA does not contain suitable habitat to support any of the special-interest plant species; however, The BSA supports suitable habitat for a variety of special-status wildlife species. Critical habitat for the CAGN is located in the northern portion of the proposed project site. While the sage scrub-grassland within the BSA contains essentially grassland in proximity to sage scrub habitats north and east of the BSA, the close proximity of this habitat to SR-57, a noisy, heavily-traveled transportation corridor, is expected to preclude CAGN from successfully using this habitat for dispersal, foraging, or nesting.

Because focused surveys were not conducted for CAGN due to personnel safety, timing, and costs, all sage scrub-grassland vegetation is assumed occupied by CAGN within the project boundaries. Direct and indirect impacts on CAGN designated critical habitat are expected to occur as a result of the proposed project. Because of the low quality habitat and the small amount of permanent impacts within CAGN-designated critical habitat, less than 0.5 acre, proposed project impacts are not considered adverse. With the implementation of avoidance, minimization, and/or mitigation measures, impacts would not be adverse.

Other projects within the proposed project area would be evaluated on a project-by-project basis to determine the presence of threatened or endangered species, the presence of critical habitat, and the appropriate measures required to reduce such effects. As proposed project impacts would not be adverse, the proposed project, in conjunction with past, present and reasonably foreseeable projects, would not result in a cumulative effect on threatened or endangered species.

Invasive Species

The cumulative study area for Invasive Species is comprised of the City of Brea. This area could be reasonably affected by impacts resulting with the proposed project. Exotic plant species exist within the nonnative plant communities throughout the BSA, within patches of native plant communities, and in areas that have been disturbed by human uses. A total of 14 exotic plants occurring on the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory were identified in the BSA.

Protective measures implemented on a project-by-project basis would ensure that no invasive species are introduced or spread within the region. With implementation of guidance consistent with E.O. 13112, the landscaping and erosion control included in the proposed project would avoid the use of species listed as noxious weeds. Therefore, the proposed project, in conjunction with the cumulative projects, would not have a substantial cumulative effect.

2.5.4 PROJECTS CONTRIBUTING TO CUMULATIVE IMPACTS

Table 2.5-1, Cumulative Projects, identifies the major cumulative projects in the City of Brea. For the consideration of impacts, the City of Brea General Plan (2003) was used for land development analysis and the Orange County Transit Authority (OCTA) Long Range Regional Transportation Pan (LRTP) and RTP were used for transportation projects.

Reasonably foreseeable projects identified within the City of Brea, include new development projects and transportation improvement projects. The projects are in varied degrees of planning, design, and construction. The scope of such projects may change during the planning phase; consequently, their environmental impacts may be altered. Each of the projects listed would require separate consultation with resource agencies for project impacts, as appropriate. Projects that are speculative in nature were not included in this cumulative analysis.

2.5.5 MEASURES TO MINIMIZE HARM

Specific measures to minimize harm are identified in Chapter 2 of this Initial Study/Environmental Assessment (IS/EA) for each environmental concern analyzed. These measures address project-specific and cumulative short-term and permanent impacts.

Table 2.5-1 Cumulative Projects

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	**Development**	**CIP**	**Development**	**CIP**	**Development**
PN 7197 - Imperial Highway Smart Street Project Segment "D"	**Brea/Elm Mixed Use Development** 501, 503, 509 515 S. Brea Blvd; 30 units: 3 single family, 19 townhomes, 8 duplexes	**PN 7449 - Carbon Canyon Reservoir Slope Paving**	**Blackstone Development** *Residential development,* Approx. 800 acres, 701 single family, 94 apartments	**PN 7251 – SR-57 / Lambert Interchange**	**128 Olinda Drive** 4 single family homes 3,194 s.f. to 3,562 s.f. per unit
PN 7210 - Safe Routes to School 2010 *Upgraded existing pedestrian signal heads to "countdown" type throughout the city, installed speed feedback signs on State College and Associated, and upgraded a pedestrian detection system at Associated/Sleepy Hollow*	**Birch Elementary School** 3145 E. Birch St; 16 regular classrooms, 3 kindergarten classrooms, an office and library/media center building, lunch shelter area and fields, play areas and parking lots, 4 temporary classrooms	**PN 7204 - Birch St. Median Landscape Phase 2**	**La Floresta** *Commercial and residential development* **La Floresta Village Site** Bordered by Imperial, Rose and Valencia; 119 acres; 1,110 residential units, 156,800 s.f. mixed-use commercial, 53.27 acres adult recreational center **Birch Hills Site** at current Birch Hills Golf Course, 91.3 acres, 75.60 acres open space, community facility, 247 high density residential dwellings	**PN 7276 - Lambert @ Puente Intersection Improvements**	**Central Park Village** *Mixed use development* 3 commercial buildings totaling 31,000 s.f.; 3-story medical office building is 45,000 square feet, 96 single-family attached townhomes with attached two-car garages and 444 rental multi-family apartments surrounding two parking structures and located above the one-story retail units along West Central Ave
PN 7213 - Traffic Signal at Birch/Voyager *Installed a traffic signal at the intersection*	**Stone Valley Townhomes** 124 Orange, 22 units	**PN 7248 - Traffic Signal System Master Computer Upgrade** *Development and implementation of new timing patterns on Birch*	**Summerwind by Trumark Homes** 1000 Site Dr, 5.49 net acres, 57 single family detached residential units	**PN 7277 - Central/Brea Intersection Widening**	**Madrona** *Residential development* 6700 Carbon Canyon Rd, 163 units
PN 7279 - Elm Street Resurfacing & Water Improvements	--	**PN 7450 - Berry Street Pump Station** *Installation of new water engines for pump station*	--	**PN 7278 - Imperial/Berry Intersection Widening**	--
PN 7282 - Residential Streets Rehab 2010/2011 *Resurfaced pavement in the Cinnamon Ridge neighborhood*	--	**PN 7862 - Birch St. Median Landscape Phase 1**	--	**PN 7283 - Residential Streets Rehab 2011/2012** *Resurfacing pavement and replacing water mains in the Country Hills Estate neighborhood*	--

Table 2.5-1 Cumulative Projects (Continued)

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	**Development**	**CIP**	**Development**	**CIP**	**Development**
PN 7289 - Puente Ave. Rehab	**SR-57 Northbound Widening Project** *Widens Northbound SR-57: Orangethorpe Avenue to Lambert Road (Placentia and Brea) and Katella Avenue to Lincoln Avenue (Anaheim)*			**PN 7295 - Elm Street Widening**	
PN 729 - Alley Rehab Project Phases 1 & 2 *Alley north of Birch between Randolph and Poplar, alley north of Birch and east of Flower, and alley south of Birch and east of Redwood*	--	--	--	**PN 7297 - Lambert Road Rehab Phase 1**	--
PN 7292 - Country Road Townhomes Curb Ramps	--	--	--	**PN 7452 - Glenbrook Tract Water Main Project**	--
PN 7294 - State College Blvd. Rehab	--	--	--	**PN 7617 - Sewer Main Relining**	--
PN 7296 - Midbury Tract Rehab	--	--	--	**PN 7618 - Sewer Upgrade Phase 4** *Replacing existing sewer main and adding new sewer main along Brea Creek Channel from Lambert to Eastwood*	--
PN 7301 - Laurel School Alley *Rehabilitated the alley adjacent to the east side of Laurel School from Imperial to Birch*	--	--	--	**PN 7619 - Master Plan Sewer Upgrade Phase 5** *Replacing existing sewer mains on Cherry from Peach to Alder and on Alder from Cherry to Laurel*	--

Table 2.5-1 Cumulative Projects (Continued)

COMPLETED		IN CONSTRUCTION		FUTURE PROJECTS	
CIP	Development	CIP	Development	CIP	Development
PN 7429 - Brea Plaza Water Main Replacements	--	--	--	**PN 7899 - Brea War Memorial** *Installing memorial at the Brea Civic and Cultural Center*	--
PN 7456 - Guitar Center Water Improvements	--	--	--	**PN 7903 - Super Block I Parking Structure**	--
PN 7463 - Birch Street Water Main Replacement	--	--	--	**PN 7905 - Eastside Community Facility** *Providing a community facility on the east side of town*	--
PN 7839 - City Hall Park Bandstand *Rehabilitated existing City Hall Park gazebo*	--	--	--	**PN 7906 - City Yard Paving** *Repairing existing pavement and constructing new pavement west of the existing gas pump*	--
PN 7873 - Tracks at Brea Phase 1 *Created a bike path along the Brea Canyon Flood Control Channel*	--	--	--	**Bristol /State College Bus Rapid Transit Corridor** *Identified in the 2035 LRTP by OCTA*	--
PN 7886 - City Entry Signs *Installed entry signs at State College/Elm and Lambert/Pioneer*	--	--	--	**HOV Interchange at SR-57/Cerritos Avenue**	--
PN 7904 - Solar Energy & Efficiency Projects	--	--	--	**SR-57 Northbound Truck Climbing Lane** *Provdes for one truck climbing land in the northbound direction from Lambert Road north to the Los Angeles County Line. Identified in the 2035 LTRP by OCTA*	--

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2.6 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s,s,s,2–tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and “Adaptation.” “Greenhouse Gas Mitigation” is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. “Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)[13].

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operation efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.[14]

2.6.1 REGULATORY SETTING

2.6.1.1 State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and proactive approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order (EO) S-3-05 (June 1, 2005): The goal of this EO is to reduce California’s GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent

[13] http://climatechange.transportation.org/ghg_mitigation/
[14] http://www.fhwa.dot.gov/environment/climate_change/mitigation/

below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Assembly Bill 32 (AB32), Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 8, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the ARB to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

2.6.1.2 Federal

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis.[15] FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include

[15] To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. U.S. EPA in conjunction with National Highway Traffic Safety Administration (NHTSA) issued the first series of a series of GHG emissions standards for new cars and light-duty vehicles in April 2010.[16]

The U.S. EPA and NHTSA are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO_2 emissions by about 270 million metric tons

[16] http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq

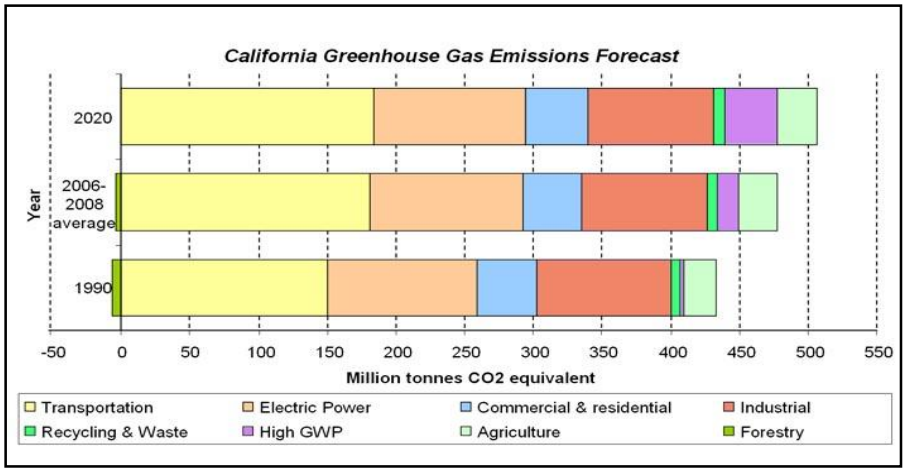
and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

2.6.2 PROJECT ANALYSIS

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.[17] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 2.6-1. California Greenhouse Gas Forecast



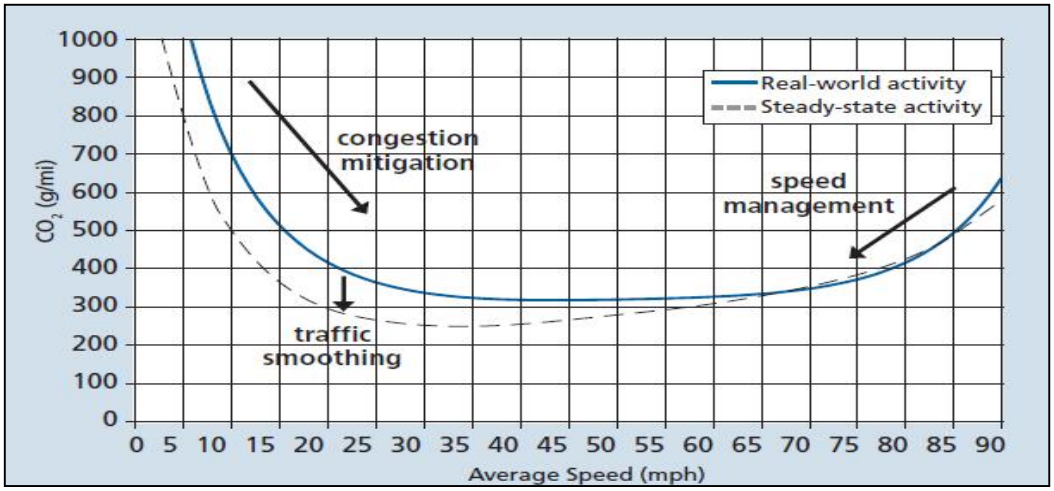
Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made

[17] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

GHG emissions are from transportation, the Department has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[18]

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide (CO_2) from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0-25 miles per hour; refer to Figure 2.6-2 below. To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel, corridors GHG emissions, particularly CO_2, may be reduced.

Figure 2.6-2. Possible Effect of Traffic Operation Strategies in Reducing On-Road CO_2 Emission[19]



The proposed project is a transportation infrastructure project that would improve the circulation system for vehicular traffic in the proposed project vicinity; reduce congestion, delay, and associated pollutant emissions; and improve safety in the area. In general, the proposed project would provide the following capacity increasing improvements under both Build Alternatives 7A and 9: (1) widen the southbound SR-57 off-ramp to a two-lane off-ramp with an auxiliary lane on southbound SR-57, and the ramp would be widened to provide a fourth lane as it approaches Lambert Road; (2) add a third receiving lane to the southbound on-ramp at the intersection with Lambert Road; and (3) widen the eastbound side of Lambert Road to provide two right-turn lanes from eastbound Lambert Road to the SR-57 southbound on-ramp. In addition, under Build Alternative 9, the northbound SR-57 on-ramp would be widened from two lanes to three lanes. Thus, the proposed project would provide additional capacity and improve the overall operational performance of the interchange. Without any improvements to the interchange, the anticipated future peak-hour volumes would result in longer queues that may extend further onto the freeway causing excessive delays and a safety hazard. The purpose of the proposed project is to reduce

[18] Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

[19] Traffic Congestion and Greenhouse Gases: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May-June 2010)<http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf>

the current congestion and better accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards.

The improvement in operations compared to the No Build conditions results in higher vehicle efficiency along local roadways and would not increase CO_2 emissions when compared to the future no-build conditions, which is consistent with the results for the analysis of the other criteria pollutants. Additionally, as indicated in Table 2.6-2 future CO_2 levels would emissions decline below existing conditions with implementation of AB 1493.

Additionally, the proposed project is programmed in the RTP (RTP IDs 2M0724 ORA000107) and is therefore recognized as an improvement project that would improve transportation operations in the region. The proposed project would provide better traffic flow and potentially increase safety for both truck traffic and general traffic traveling through the proposed project area. The 2012 RTP includes programs, policies, and measures to address air emissions, including GHGs. Measures that help mitigate air emissions, including GHG emissions, are comprised of strategies that reduce congestion, increase access to public transportation, improve air quality, and enhance coordination between land use and transportation decisions. SCAG's vision includes the introduction of a high-speed, high-performance regional transport system that may potentially reduce freeway congestion and provide an alternative to the single-occupancy automobile.

Table 2.6-1, Daily Greenhouse Gas Emissions, depicts the estimated Future emissions from vehicles traveling within the proposed project limits. As shown in Table 2.6-1, the vehicles in the proposed project area currently generate 849.49 tons per day of CO_2. CO_2 emissions would increase during the Opening Year and Horizon Year scenarios due to growth in vehicle miles traveled (VMT). Table 2.6-1 also indicates that emissions during the future Build conditions would be less than future No Build conditions due to the reduction in VMT from implementation of the proposed project.

Table 2.6-1 Daily Greenhouse Gas Emissions

Scenario	VMT	CO_2[1, 2]	CO_2 (Pavley I + LCFS) [1, 2]
	VMT/day	tons/day	tons/day
Existing (2009)	1,632,500	849.49	835.44
Opening Year (2017)			
No Build	1,750,164	918.59	772.99
Build (Alternatives 7a and 9)[3]	1,743,687	915.19	770.13
Difference from Existing (Percent Change)	*111,187 (6.8%)*	*65.70 (7.7%)*	*-65.31 (-7.8%)*
Difference from No Build (Percent Change)	*-6,477 (-0.4%)*	*-3.40 (-0.4%)*	*-2.86 (-0.4%)*
Horizon Year (2040)			
No Build	2,012,060	1,095.71	761.06
Build (Alternatives 7a and 9)[3]	1,991,167	1,084.33	753.16
Difference from Existing (Percent Change)	*358,667 (23.3%)*	*234.84 (27.6%)*	*-82.28* (-9.9%)
Difference from No Build (Percent Change)	*-20,893 (-1.0%)*	*-11.38 (-1.0%)*	*-7.90* (-1.0%)
CO_2 = carbon dioxide; LCFS = Low Carbon Fuel Standard			

Sources: Based on traffic data from SR-*57/Lambert Road Interchange Improvement Project Traffic Data*, 2012 and supplemental data, 2013; Air Quality Assessment 2013
Notes:
1. Emissions calculated using EMFAC2011.

2. Based on traffic volumes provided in, SR-*57/Lambert Road Interchange Improvement Project Traffic Data*, May 2012.
3. No difference is shown in the VMT for both Build Alternatives due to the standardized differences for all ramps in the traffic modeling. As a result, the ramp configurations in each Build Alternative would have the same distance and VMT would be the same.

These CO_2 emissions numbers provide a useful for a comparison between alternatives. The numbers are not necessarily an accurate reflection of what the true CO_2 emissions will be because CO_2 emissions are dependent on other factors that are not part of the model such as the fuel mix (EMFAC model emission rates are only for direct engine-out CO_2 emissions, not full fuel cycle; fuel cycle emission rates can vary dramatically depending on the amount of additives like ethanol and the source of the fuel components), rate of acceleration, and the aerodynamics and efficiency of the vehicles. In comparing the operational CO_2 emissions under the build and no build scenarios, the project is not expected to result in an increase in operational CO2 emissions. Construction emissions, however, will be unavoidable.

2.6.3 CONSTRUCTION EMISSIONS

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. The proposed project would comply with any state, federal, and/or local rules and regulations developed as a result of implementing control and mitigation measures proposed as part of their respective State Implementation Plans.

2.6.4 CEQA CONCLUSION

While construction activities would result in a slight increase in GHG emissions during construction, it is anticipated that any increase in GHG emissions due to construction would be offset by the improvement in operational GHG emissions under the future Build Alternatives. In addition, as discussed above, there are also limitations with EMFAC and with assessing what a given CO2 emissions increase means for climate change. Therefore, it is Caltrans determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

2.6.5 GREENHOUSE GAS REDUCTION STRATEGIES

The Department continues to be involved on the Governor's Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger's Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a

corresponding reduction in GHG emissions, while accommodating growth in population and the economy. The Strategic Growth Plan relies on a complete systems approach to attain CO2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in Figure 2.6-3, Mobility Pyramid.

The Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. The Department works closely with local jurisdictions on planning activities, but does not have local land use planning authority. The Department assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; the Department is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

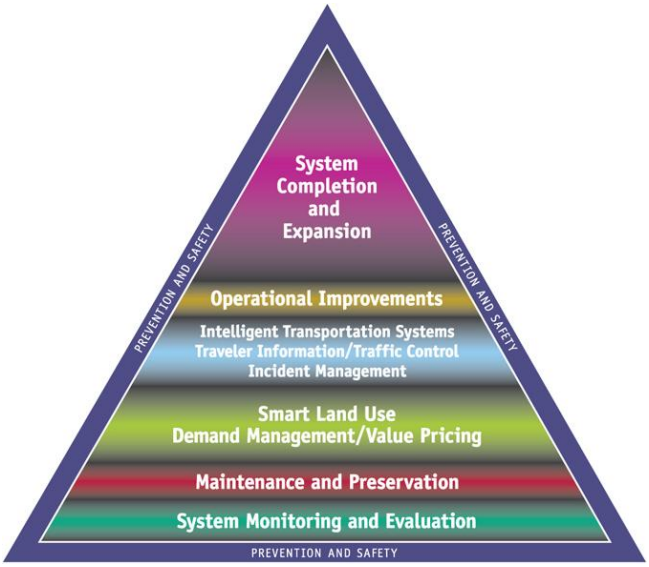


Figure 2.6-3. Mobility Pyramid

The Department is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391(Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs.

Table 2.6-2 summarizes the Departmental and statewide efforts that the Department is implementing to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 2.6-2 Caltrans Climate Change Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings Million Metric Tons (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements and Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy and GHG into Plans and Projects	Office of Policy Analysis and Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational and Information Program	Office of Policy Analysis and Research	Interdepartmental, Cal EPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 percent limestone cement mix	1.2	4.2
				25 percent fly ash cement mix	0.36	3.6
				> 50 percent fly ash/slag mix	Not Estimated	Not Estimated
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					**2.72**	**18.18**

Source: California Department of Transportation, *Climate Action Program at Caltrans*, December 2006.
Notes:
ITS = Intelligent Transportation Systems; Cal EPA = California Environmental Protection Agency; CARB = California Air Resources Board; CEC = California Energy Commission; MPO = Metropolitan Planning Organization; BT&H = Business, Transportation & Housing Agency

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)[20] provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. The Department and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS commonly consists of electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

2. In addition, the Council of Orange County Governments provides ridesharing services and park-and-ride facilities to help manage the growth in demand for highway capacity.

3. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. The project proposes planting in the intersection slopes, drainage channels, and seeding in areas next to frontage roads as well as planting a variety of different-sized plant material and scattered skyline trees where appropriate but not to obstruct views.

4. The project would incorporate the use of energy-efficient lighting, such as LED traffic signals. LED bulbs cost $60 to $70 each, but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED bulbs themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the project's CO_2 emissions.[21]

5. According to the Department's Standard Specifications, the contractor must comply with all local Air Pollution Control District's (APCD) rules, ordinances, and regulations for air quality restrictions. This includes CARB's no-idling rule (Section 2489 of the California Code of Regulations) and SCAQMD Rule 2449 (In-Use Mobile Source Emission Reduction Programs).

2.6.6 ADAPTATION STRATEGIES

"Adaptation strategies" refer to how the Department and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There

[20] http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml
[21] Knoxville Business Journal, "LED Lights Pay for Themselves," May 19, 2008 at http://www.knoxnews.com/news/2008/may/19/led-traffic-lights-pay-themselves/.

may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011[22], outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks .

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop The California Climate Adaptation Strategy (Dec 2009)[23], which summarizes the best-known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report[24] to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

[22] http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation
[23] http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF
[24] *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at http://www.nap.edu/catalog.php?record_id=13389.

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

In 2010, interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected. Additionally, the project was programmed for construction in 2011 and is exempt from the requirements set forth in the executive order.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, the Department is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, the Department will be able review its current design standards to determine what changes, if any, may be needed to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. The Department is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

CHAPTER 3 – COMMENTS AND COORDINATION

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and identify potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this proposed project have been accomplished through a variety of formal and informal methods, including: project development team (PDT) meetings, interagency coordination meetings, and a public participation meeting held on March 25, 2015. This chapter summarized the results of the California Department of Transportation's (Caltrans') and the City of Brea's (City's) efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

3.1 CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES

During the preparation of the Initial Study (IS)/Proposed Mitigated Negative Declaration (MND) and Environmental Assessment (EA)/Finding of No Significant Impact (FONSI), monthly PDT meetings were held to discuss proposed project design, factors to be considered during the environmental study process, and scheduling issues. Staff from the Caltrans District 12, the City of Brea, Orange County Transportation Authority (OCTA), and several consulting firms attended these meetings. As part of the coordination necessary for the environmental study process, the following Federal, State, and local agencies were conferred:

3.1.1 CULTURAL RESOURCES

As part of the cultural investigation, a record search was conducted with the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) located at California State University, Fullerton. In addition, additional specialized listings for cultural resources were consulted. The Native American Heritage Commission (NAHC) was contacted in December 2011 and letters were sent to Native American groups and individuals in December 2011. For those individuals and groups that did not respond to the letters, follow-up phone calls were conducted in January 2012 and again in April 2012. In addition, the California Department of Conservation Online Mapping System was searched for the locations of active and inactive oil wells in the project vicinity. The Brea Historical Society was contacted in April 2010 regarding cultural/historic resources.

3.1.2 HAZARDS/HAZARDOUS MATERIALS

As part of the Phase I Initial Site Assessment prepared for the proposed project, record searches were conducted with the California Department of Oil, Gas, and Geothermal Resources (DOGGR) Wildcat maps, Department of Toxic Substance Control (DTSC), Regional Water Quality Control Board (RWQCB), in January 2012. Record searches with the Orange County Orange County Health Care Agency and Brea Fire Department were conducted in February 2012.

3.1.3 BIOLOGICAL RESOURCES

Lists of special status species were generated from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Electronic Inventory, current listings for special status species from the United States Fish and Wildlife Service (USFWS), and Electronic Inventory, and the Information Planning and

Conservation System (IPAC) in December 2011. An updated record search in the IPAC database for federally-listed endangered, threatened, proposed, and candidate species and critical habitat in the vicinity of the proposed project was completed in August 2015 (Appendix G). Informal Section 7 consultation regarding the critical habitat for the California gnatcatcher (CAGN) at the north end of the proposed project was completed with the USFWS. The Biological Assessment (BA) for Build Alternative 7A (Preferred Alternative) found that the proposed project effects are not likely to adversely affect CAGN and its designated critical habitat areas within the BSA. The USFWS concurred that the proposed project is not likely to adversely affect CAGN and its designated critical habitat areas within the BSA on October 8, 2015 (Appendix H).

3.2 PUBLIC PARTICIPATION

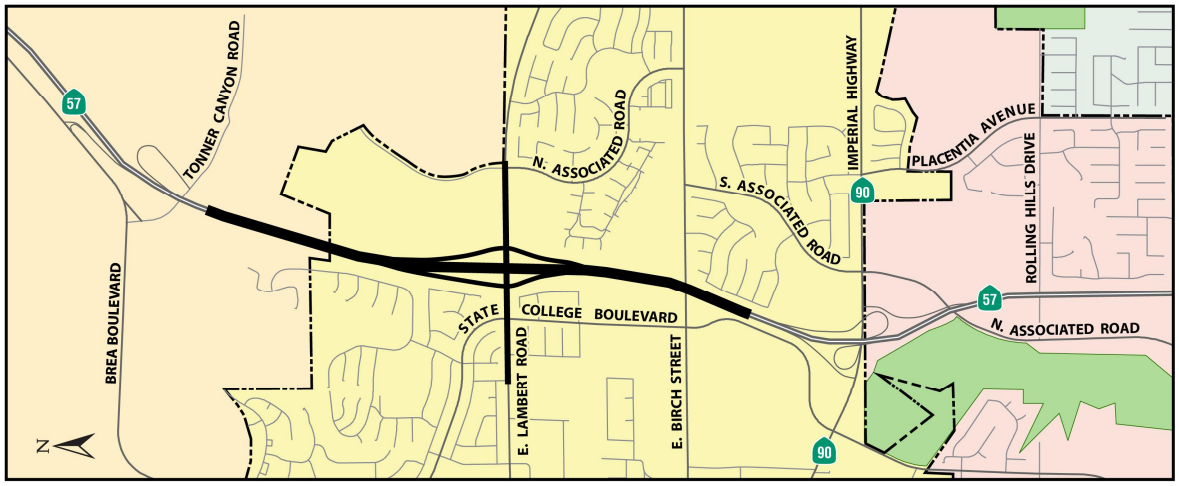
The Public Notice, provided below, was printed in three newspapers of general circulation: (1) Los Angeles Times on Monday March 2, 2015 and Tuesday March 3, 2015; (2) Unidos on Monday March 2, 2015 and Tuesday March 3, 2015; and (3) the La Habra/Brea Star Progress on Friday, March 6, 2015. Sixteen (16) people attended the public meeting. During the public meeting, five work stations highlighted the following areas: entire project process (preliminary engineering through construction); project alternatives; project right-of-way needs; existing and proposed soundwalls; and a comment station.

Many of the attendees asked questions at the work stations; Table 3.2-1, March 25, 2015 Public Meeting Summary of Issues Raised, provides a summary of the general questions received at the work stations related to the proposed project and the environmental process. In addition, three (3) attendees submitted written comment cards and two (2) attendees submitted verbal comments to the court reporter. The written and verbal comments are listed below in Section 3.3.1, List of Comments Received, and are responded to in greater detail in Section 3.3.2, Comments and Responses.

Table 3.2-1. March 25, 2015 Public Meeting Summary of Issues Raised

General Concern	Response Provided in IS/MND Section
What is the project?	Refer to Sections 1.0, Proposed Project, 1.4, Project Description
How is the project being funded?	Refer to Section 1.1, Introduction
What is the purpose of the project?	Refer to Section 1.2, Purpose and Need
Why is this project needed?	Refer to Section 1.2, Purpose and Need
When will the project be completed?	Refer to impact analyses, first reference to the dates is Section 2.2.3, Community Impacts
What are the anticipated noise levels after construction?	Refer to Section 2.3.7, Noise
How much noise will be generated by construction activities?	Refer to Section 2.3.7, Noise
Will the neighborhood in the southwest quadrant get a soundwall?	Refer to Section 2.3.7, Noise
Were biological resources considered?	Refer to Section 2.4, Biological Environment
Were hazards considered?	Refer to Section 2.3.5, Hazardous Waste/Hazards
Which alternative has been selected as the preferred alternative?	Refer to Section 1.5, Comparison of Alternatives
What was the mailing radius for noticing the IS/EA availability and the public meeting?	Refer to Section 5.0, Distribution List

Notice of Intent to Adopt a Mitigated Negative Declaration/ Finding of No Significant Impact and Notice of Availability for an Initial Study/Environmental Assessment Notice of Public Meeting for Proposed Improvements to the SR-57/Lambert Road Interchange



Esta información esta disponible en Español, por favor de llamar al (949) 724-2021

WHAT IS BEING PLANNED

California Department of Transportation (Caltrans), in cooperation with the City of Brea, proposes to improve the State Route (SR) 57/Lambert Road interchange from post mile (PM) 20.1 to PM 21.8. The SR-57/Lambert Road Interchange Improvement Project (proposed project) would improve traffic operations on SR-57 and Lambert Road, in the interchange area. Improvements would include widening the southbound SR-57 on- and off-ramps, lowering the Lambert Road profile to provide 15-foot standard vertical clearance under the Lambert Road Undercrossing, widening Lambert Road from 1,000 feet west of State College Boulevard to Pointe Drive, and reconfiguring the north and southbound SR-57 on- and off-ramp/Lambert Road intersections.

WHY THIS NOTICE?

Caltrans and the City of Brea are hosting a public meeting to provide the community with information about the Initial Study/Environmental Assessment for the proposed project. In this "open house" meeting you may attend anytime between 4:00 p.m. and 7:00 p.m. to view information, maps and descriptions of the project area. The SR-57/Lambert Road Interchange project team will be available to take your questions, comments and suggestions regarding the proposed improvements. The final decision on the project approval will be made pending the results of public input. NO DECISION ON THE PROJECT WILL BE MADE AT THIS MEETING.

WHEN AND WHERE?

March 25, 2015
4:00 p.m. to 7:00 p.m.
City of Brea Community Room A
1 Civic Center Circle
Brea, CA 92821

CAN'T ATTEND?

Visit http://www.dot.ca.gov/dist12/files/SR57LAM/ from March 2, 2015 to April 2, 2015 to view and comment on the IS/EA.

The document is also available for review and copying at the following locations during business hours:

	Caltrans District 12 Office 3347 Michelson Drive Suite #100 Irvine, CA 92612 (949) 724-2000	City of Brea City Hall 1 Civic Center Circle Brea, CA 92821 (714) 990-7600	Brea Branch Library 1 Civic Center Circle - Plaza Level Brea, CA 92821 (714) 671-1722
WHEN IS THE PUBLIC REVIEW/COMMENT PERIOD?	The IS/EA is available for public review/comment beginning March 2, 2015. The purpose of the public review and comment period is to afford interested parties the opportunity to provide their input on this proposed project. Comments will be accepted on the document until 5:00 p.m., April 2, 2015. Comments may be submitted in person at the public meeting, via email at D12SR57Lambert@dot.ca.gov, or mailed to the following address: California Department of Transportation 3347 Michelson Drive, Suite #100 Irvine, CA 92612 ATTEN: Paul Cochran – Environmental Analysis		
CONTACT/SPECIAL ACCOMMODATIONS	In compliance with the Americans with Disability Act of 1990, individuals who require special accommodation (American Sign Language or other language interpreter, accessible seating, documentation in alternate formats, etc.) please contact the Public Information Officer at (949) 724-2021 (Voice). TDD users may contact the California Relay Service TDD line at 1-800-735-2929 or Voice Line at 1-800-735-2929 (Voice) or 711. ***Esta información esta disponible en Español, por favor de llamar al (949) 724-2021***		

3.3 COMMENTS AND RESPONDING TO COMMENTS

The Draft IS/EA was circulated for public review beginning March 2, 2015 and ending April 2, 2015. As stated above, an "open house" public meeting was held on March 25, 2015 at the City of Brea Community Room A to solicit input from the community members. To date, no written comments have been received by Federal and local agencies on the Draft IS/EA. The Governor's Office of Planning and Research provided a letter acknowledging compliance with the State Clearinghouse review requirements for draft environmental documents; to date, no other written comments have been received by state agencies. Twenty-five (25) comments have been received by interested parties; comments on the Draft IS/EA were submitted either at the public meeting, or via letter or email. A copy of each numbered letter, email, or verbal comment and a lettered response to each comment is provided in this section.

3.3.1 LIST OF COMMENTS RECEIVED

3.3.1.1 Written Comments Received

State Agencies

1. Governor's office of Planning and Research, State Clearinghouse and Planning Unit, State Agency, April 2, 2015

Interested Parties

2. Hunt Braly, Poole & Shaffery, Interested Party, letter Dated March 24, 2015
3. Hunt Braly, Poole & Shaffery, Interested Party, letter Dated April 2, 2015
4. Nathan Lachman, Interested Party, email dated March 31, 2015
5. William Miller, Interested Party, email dated March 31, 2015
6. Juanita Luevano, Interested Party, email dated March 31, 2015
7. Tim and Judy Scott, Interested Parties, email dated April 1, 2015
8. Greg Verrecchia, Interested Party, email dated April 1, 2015
9. Ron and Shelley Gomez, Interested Parties, email dated April 1, 2015
10. Michelle and Benjamin Mauricio Cortes, Interested Parties, email dated April 1, 2015
11. Ed Alvarez, Interested Party, email dated April 1, 2015
12. Chris and Cherie Mathews, Interested Partied, email dated April 1, 2015
13. LCT David Dumond, Interested Party, email dated April 1, 2015
14. Dan and Ana Sotomayor, Interested Parties, email dated April 1, 2015
15. Bob and Cristina Naughton, Interested Parties, email dated April 1, 2015
16. Millie Omura, Interested Party, email dated April 1, 2015
17. Frank and Elaine Cerrato, Interested Parties, email dated April 2, 2015
18. Claude and Linda Pasquis, Interested Parties, email dated April 2, 2015
19. Terri Walworth, Interested Party, email dated April 2, 2015
20. Jacquelyn Guss, Interested Party,

a. email dated April 2, 2015

b. email dated April 2, 2015

21. Dan Kelley, Interested Party, email dated April 2, 2015
22. Tom Szynal, Interested Party, email dated April 2, 2015

3.3.1.2 Comment Cards

23. Barry Andrews, Interested Party, comment card received at the public meeting on March 25, 2015
24. Kerry Prindible, Interested Party, comment card received at the public meeting on March 25, 2015
25. Christopher and Kimberly Madden, Interested Parties, comment card received at the public meeting on March 25, 2015

3.3.1.3 Verbal Comments

26. Verbal Comments received by the court reporter at the public meeting, March 25, 2015

    a. Steven Vargas, Brea City Councilman, Interested Party

    b. Christie Russell, Interested Party

3.3.2 COMMENTS AND RESPONSES

The comments received (letters, emails, and oral comments) on the Draft IS/EA are addressed in their entirety in this section. Each comment contained in the letter, email, comment card, or received at the public meeting has been assigned a reference code. The responses to reference code comments follow each letter or verbal comment list. Of the 25 written comments and two (2) verbal comments, five topical themes were identified. These are topics where several interested parties had similar comments.

3.3.2.1 Topical Responses

The responses to the issues identified in multiple comments are provided below and cover five main topics:

1. Noticing Process for the Availability of the Draft IS/EA and the Public Meeting
2. Existing and Operational (Long-Term) Noise Levels, Including Noise Levels from Truck Traffic on SR-57 at Night, in the Southwest Quadrant of the Project
3. Request for a Soundwall in the Southwest Quadrant of the Project
4. Existing and Operational (Long-Term) Air Quality Concerns
5. Existing and Operational (Long-Term) Traffic and Level of Service

Specific comments related to these topics are addressed in the individual responses provided in Section 3.3.2.2, Written Responses, Section 3.3.2.3, Comment Card Responses, and Section 3.3.2.4, Verbal Comment Responses, below.

Topical Response 1: Noticing Process for the Availability of the Draft IS/EA and the Public Meeting

According to State CEQA Guidelines, Section 15072, the lead agency shall give notice by "*at least one of the following procedures to allow the public the review period provided under Section 15105:*

> *(1) Publication at least one time by the public agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas;*
>
> *(2) Posting of notice by the public agency on and off the site in the area where the project is to be located;*
>
> *(3) Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the project is located. Owners of such property shall be identified as shown on the latest equalized assessment roll."*

In accordance with the State CEQA Guideline, the Notice of Intent to Adopt the Mitigated Negative Declaration/Finding of No Significant Impact and Notice of Availability for an Initial Study/Environmental Assessment and Notice of Public Meeting for Proposed Improvements to the SR-57/Lambert Road Interchange was posted at the Orange County Clerk's office for the 30-day review period. The notice was mailed to contiguous property shown on the latest equalized assessment roll; the distribution list can be reviewed in Chapter 5, Distribution List. The notice was also printed in three newspapers of general circulation: (1) Los Angeles Times on Monday March 2, 2015 and Tuesday March 3, 2015, the "newspaper of largest circulation;" (2) Unidos on Monday March 2, 2015 and Tuesday March 3, 2015, identified as the Spanish newspaper of largest circulation; and (3) the La Habra/Brea Star Progress on Friday, March 6, 2015, the "newspaper of general circulation in the area affected."

In addition, hard copies of the IS/EA, containing information about the public meeting on the page titled "General Information about this Document", were provided for public review at the Brea Library, City of Brea, and the Caltrans District 12 Office in Irvine. Fifteen hardcopies of the Draft IS/EA were hand-delivered to the Governor's Office of Planning and Research, State Clearinghouse and Planning Unit, for State agency circulation. An electronic copy of the Draft IS/EA, containing information regarding the public meeting on the page titled "General Information about this Document", was also posted on the following website: http://www.dot.ca.gov/dist12/files/SR57LAM/.

If further public meetings and workshops are conducted during the remaining CEQA/NEPA process and the remaining project outreach, the public's concerns regarding noticing will be taken into consideration and an investigation will be conducted regarding other modes of noticing and/or providing noticing in additional newspapers of general circulation or additional mailings.

Topical Response 2: Existing and Operational (Long-Term) Noise Levels, Including Existing Noise Levels from Truck Traffic on SR-57 at Night, in the Southwest Quadrant of the Project

The Draft IS/EA provided information regarding noise levels in Section 2.3.7. Information in Section 2.3.7 is based upon the Noise Study Report dated April 2013 and the Noise Abatement Decision Report (NADR) dated February 2014. Figure 2.3.7-2a provides the locations of the

short-term monitoring locations, the long-term 24-hour monitoring locations, and the modeled receptor locations. The neighborhood in the southwest quadrant of the project area, bounded by Lambert Road on the north, the former railroad right-of-way on the south, SR-57 on the east and State College Boulevard on the west, was analyzed within the Noise Study Report. The noise analysis for this area included short-term monitoring locations ST-6 and ST-7 and long-term monitoring location LT-1. The modeled receptors for the neighborhood included R-46 through R-61. In addition, Figure 1-5, Existing Wall Features, provides the location of the two existing soundwalls in this area, while Figure 2.3.7-2a depicts not only the two existing soundwalls but also the two existing retaining walls. The two soundwalls are described as follows:

1. Soundwall on the north end of the SR-57 southbound on-ramp (length - 390 feet, maximum height – 10 feet)
2. Soundwall along the southbound SR-57 on-ramp to approximately the former railroad right-of-way (length – 1,090 feet, maximum height – 6.3 feet)

Table 2.3.7-5, Predicted Traffic Noise Levels, dBA L_{eq}, provides the noise levels under Existing, Future No Build, Alternative 7A, and Alternative 9 conditions. Table 3.3.2-1, Southwest Quadrant Neighborhood Predicted Traffic Noise Levels, dBA L_{eq}, below, is an excerpt from Table 2.3.7-5 showing only the noise levels for the southwest quadrant neighborhood under Existing, Future No Build, Build Alternative 7A (Preferred Alternative), and Build Alternative 9 conditions. As shown in both Table 3.3.2-1, below, and Table 2.3.7-5, Build Alternative 7A (Preferred Alternative) and Build Alternative 9 result in a reduction in noise levels compared to the No Build Alternative.

It should be noted that a 6.3-foot-tall soundwall currently exists along the westerly edge of the southbound on-ramp. The soundwall was included as part of the predicted traffic noise study analysis for the existing condition, future no build condition, and Build Alternative 7A (Preferred Alternative) and Build Alternative 9 conditions. The soundwall will be relocated to accommodate Build Alternatives 7A (Preferred Alternative) and 9. Table 2.3.7-5, above, and Table 3.3.2-1, below, indicate that noise levels would be lower for Build Alternatives 7A and 9 than the modeled existing noise levels.

Under NEPA, a project is required to consider soundwall mitigation if the project area noise levels exceed the Noise Abatement Criteria (NAC) threshold of 67 dBA for a residential community. As noted in Table 2.3.7-5 and Table 3.3.2-1, below, 15 of 16 modeled receptors in the southwest quadrant neighborhood do not exceed the 67 dBA NAC. However, under both build alternatives, the provision of the replaced 6.3-foot soundwall reduces the noise to levels to below 67 dBA at all 16 locations.

Under CEQA, a project is only required to consider noise mitigation if the project causes significant noise increase over the existing level of noise. For this area of concern, the predicted noise levels are reduced in 15 of 16 modeled receptor locations and there is no change for the 16th receptor location. This project did not increase the noise significantly.

Table 3.3.2-1 Southwest Quadrant Neighborhood Predicted Traffic Noise Levels, dBA Leq

Receptor No.	Location	Noise Abatement Criteria	Modeled Existing[1]	Future No Build	Alternative 7A	Change from Existing Noise Level	Alternative 9	Change from Existing Noise Level
R-46	Woodland Avenue	B (67)	**66.1**	**66.1**	64.0	-2.14	63.9	-2.24
R-47	Woodland Avenue	B (67)	64.3	64.3	62.2	-2.14	62.2	-2.14
R-48	Woodland Avenue	B (67)	63.8	63.8	61.8	-2.04	61.8	-2.04
R-49	Woodland Avenue	B (67)	63.6	63.6	61.7	-1.94	61.6	-2.04
R-50	Woodland Avenue	B (67)	63.2	63.3	61.7	-1.54	61.7	-1.54
R-51	Woodland Avenue	B (67)	60.9	61.0	59.9	-1.04	59.9	-1.04
R-52	Woodland Avenue	B (67)	59.7	60.0	59.4	-0.34	59.5	-0.24
R-53	Avocado Street	B (67)	**67.9**	**67.8**	65.8	-2.14	65.8	-2.14
R-54	Woodland Avenue	B (67)	**66.0**	**66.1**	64.7	-1.34	64.7	-1.34
R-55	Woodland Avenue	B (67)	65.4	65.5	64.0	-1.44	64.0	-1.44
R-56	Woodland Avenue	B (67)	65.4	65.5	64.0	-1.44	64.0	-1.44
R-57	Woodland Avenue	B (67)	**66.0**	**66.1**	64.7	-1.34	64.7	-1.34
R-58	Redbud Street	B (67)	**66.2**	**66.3**	64.8	-1.44	65.0	-1.24
R-59	Papaya Place	B (67)	65.4	65.4	64.9	-0.54	64.9	-0.54
R-60	Guava Place	B (67)	65.6	65.8	64.4	-1.24	64.5	-1.14
R-61	Papaya Place	B (67)	64.0	64.1	64.0	0.0	64.0	0.0

Source: Table 2.3.7-5 Predicted Traffic Noise Levels, dBA, Leq; IS/EA, Section 2.3.7, Noise, page 2.3.7-15.
Bold: noise levels that approach or exceed the noise abatement criteria (NAC) under NEPA.

In addition, with respect to truck traffic noise in the early morning hours, receptor LT-1 was in place and collected 24 hours of noise data. It confirmed that the period of loudest traffic noise is between 6PM and 7PM. It's logical that heavy truck jake-brakes would be occurring between 3AM and 5AM because this would be the period of lightest traffic ("free-flow" conditions) where trucks would be at a high rate of speed coming down the southbound SR-57 grade. 3AM to 5AM also coincides the quietest period of time over the 24-hour period. The long-term 24-hour noise level measurement monitors are not able to identify noise generated from heavy truck jake-brakes; however, jake-brake noise would be averaged into the ambient noise levels.

Topical Response 3: Request for a Soundwall in the Southwest Quadrant of the Project

Under NEPA, a project is required to consider soundwall mitigation if the project area noise levels exceed the Noise Abatement Criteria (NAC) threshold of 67 dBA for a residential community. As noted in Table 2.3.7-5 and Table 3.3.2-1, above, 15 of 16 modeled receptors do not exceed the 67 dBA NAC. However, under both build alternatives, the provision of the replaced 6.3-foot soundwall reduces the noise to levels to below 67 dBA at all 16 locations. As such, a taller soundwall is not warranted for mitigation under NEPA.

Under CEQA, a project is only required to consider noise mitigation if the project causes significant noise increase over the existing level of noise. For this area of concern, the predicted noise levels are reduced in 15 of 16 modeled receptor locations and there is no change for the 16th receptor location. This project did not increase the noise significantly and therefore, a taller soundwall is not warranted for mitigation under CEQA.

It should be noted that a 6.3-foot-tall soundwall currently exists along the westerly edge of the southbound on-ramp. The soundwall was included as part of the predicted traffic noise study analysis for the existing condition, future no build condition, and future Build Alternative 7A (Preferred Alternative) and Build Alternative 9 conditions. The soundwall will be relocated to accommodate Build Alternatives 7A (Preferred Alternative) and 9. Table 2.3.7-5 and Table 3.3.2-1, above, indicate that noise levels would be lower for Build Alternatives 7A and 9 than the modeled existing noise levels.

Topical Response 4: Construction and Operational (Long-Term) Air Quality Concerns

Air quality impacts are discussed and analyzed in Section 2.3.6, Air Quality. Information in Section 2.3.6 is based upon the Air Quality Assessment prepared in January 2013. The National and California ambient air quality standards are provided in Table 2.3.6-1. As discussed in Section 2.3.6, the South Coast Air Quality Management District (SCAQMD) operates several air quality monitoring stations throughout the South Coast Air Basin (SCAB). The project site is located within Source Receptor Area (SRA) 16 (North Orange County). The communities within an SRA are expected to have similar climatology and subsequently, similar ambient air pollutant concentrations. The La Habra Monitoring Station is the closest monitoring station to the site (approximately 3.80 miles east) within SRA 16. This station monitors carbon monoxide (CO), nitrogen dioxide (NO_2), and ozone (O_3). The next closest monitoring station is the Anaheim Monitoring Station (approximately 6.7 miles south). This station monitors particulate matter 10 microns in diameter or less (PM_{10}), and particulate matter 2.5 microns in diameter or less ($PM_{2.5}$). The Costa Mesa Monitoring Station (approximately 18 miles southwest) was used to gather data

for SO_X.[25] The data collected at these stations is considered to be representative of the air quality experienced on-site.

Air quality data for CO, O_3, NO_2, sulfur dioxide (SO_2), PM_{10}, and $PM_{2.5}$ from 2009 to 2011 is provided in Table 2.3.6-2, Local Air Quality Levels. Table 2.3.6-3, Criteria Air Pollutants, briefly describes the health and atmospheric effects and typical sources of O_3, CO, PM_{10}, $PM_{2.5}$, NO_2, SO_2, and lead (Pb). The attainment status for each of these pollutants is provided in Table 2.3.6-4, Attainment Status, in the IS/EA. Table 2.3.6-4 shows that the project is in an area of federal nonattainment for O_3 (8-hour), PM_{10}, and $PM_{2.5}$. The project is located in an area of state nonattainment for O_3 (1-hour and 8-hour), PM_{10}, $PM_{2.5}$, and NO_2. The following paragraphs summarize the impacts analyzed in Section 2.3.6.

The proposed project was submitted to stakeholders at a Transportation Conformity Working Group (TCWG) meeting on March 27, 2012, pursuant to the interagency consultation requirement of 40 CFR 93.105 (c)(1)(i). The U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), SCAQMD, and other interagency consultation participants that were present at the TCWG meeting concurred that the project is not a project of air quality concern (POAQC). The project would not add diesel truck capacity, and the project would not be a major truck traffic generator. Additionally, the proposed project would reduce congestion. Therefore, the proposed project would not be considered a POAQC and would be considered exempt under 40 CFR 93.126, as it would not create a new, or worsen an existing, $PM_{2.5}$ or PM_{10} violation.

A CO hot-spot screening analysis was conducted per the 1997 Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) developed by the Institute of Transportation Studies at the University of California, Davis. The analysis concluded that implementation of the proposed project would provide better flow for both truck traffic and general traffic traveling through the project area. Additionally, the proposed project does not involve parking lots, and therefore would not increase the number of vehicles operating in cold start mode. As a result, the proposed project has sufficiently addressed the potential CO impact, project impacts would not be adverse, and no further analysis or mitigation is needed.

In order to further minimize construction-related emissions, all construction vehicles and equipment would be required to be equipped with state-mandated emission control devices pursuant to state emission regulations and standard construction practices. After construction of the proposed project is complete, all construction-related impacts would cease. Short-term construction particulate matter emissions would be further reduced through the implementation of dust suppression measures outlined within SCAQMD Rule 403. Caltrans Standard Specifications for Construction (Section 14-9 [Air Quality]) would also be adhered to. The proposed project would comply with any state, federal, and/or local rules and regulations developed as a result of implementing control and mitigation measures proposed as part of their respective State Implementation Plans (SIPs). Therefore, project construction is not anticipated to violate state or federal air quality standards or contribute to the existing air quality violations in the SCAB.

According to the SIP, the project applicant is required to include specifications, estimates, and control measures in its final plans that would limit PM_{10} emissions during construction. Since PM_{10} emissions primarily occur during the grading phase of construction, the SCAQMD has established Rule 402 and Rule 403. During construction, the property owner, developer, and contractors are

[25] Although not located in SRA 16, the Costa Mesa Monitoring Station is the closest station to the project that monitors SO_X.

required to comply with regional rules, which assist in reducing short-term construction-related air pollutant emissions. Rule 402 requires that air pollutant emissions not be a nuisance off-site. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. Compliance with SCAQMD Rules 402 and 403 would ensure impacts are not adverse in regards to PM_{10} emissions during construction of either Build Alternative 7A (Preferred Alternative) or Build Alternative 9.

Mobile source air toxics (MSAT) were also analyzed in Section 2.3.6. Table 2.3.6-5, MSAT Emissions, presents the estimated MSAT emissions from traffic within the project study area. The data indicates that MSAT emissions would not vary significantly between future No Build and Build Alternatives 7A and 9. The purpose of the proposed interchange modification is to provide better traffic flow for both truck traffic and general traffic traveling through the project area. This project would not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the No Build scenario. Moreover, U.S. EPA regulations for vehicle engines and fuels would cause overall MSATs to decline significantly over the next 20 years. FHWA predicts MSATs will decline in the range of 57 percent to 87 percent, from 2000 to 2020, based on regulations now in effect. This would both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project.

The IS/EA found that no avoidance, minimization, and/or mitigation measures are required for operational air quality impacts, as the project would not produce substantial operational air quality emissions. For construction related air quality impacts, in addition to implementing all applicable Best Available Control Measures from the SCAQMD Rule 403 and Rule 403.1, three avoidance and minimization measures are required to reduce and otherwise address particulate emissions during construction. These measures include requiring the project to have a dust control plan prior to the start of construction; compliance with State Vehicle Code Section 23114, with special attention to sections regarding the prevention of such material spilling onto public streets and roads; and compliance with Caltrans Standard Specifications for Construction (Sections 14-9 [Air Quality]).

Topical Response 5: Existing and Operational (Long-Term) Traffic and Level of Service

Traffic impacts are discussed and analyzed in Section 2.2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities. Information in Section 2.2.5 is based upon the Traffic Study prepared in July 2012. When evaluating traffic impacts, existing conditions are identified, mainly in terms of the roadway or intersection level of service (LOS). As discussed in Section 2.2.5, in the northbound direction, SR-57 exceeds the 1,600 vehicles per hour per lane for the high occupancy vehicle (HOV) lanes during both the AM and PM peak hours. In the southbound direction, SR-57 operates at LOS E during the AM peak hours between Lambert Road to south of Tonner Canyon Road, while the HOV lanes exceed the 1,600 vehicles per hour per lane for the HOV lanes during the PM peak hours. The results of the merge/diverge analysis for existing conditions can be found in Table 2.2.5-6, Ramp Merge/Diverge Analysis Summary – Existing (2011) Conditions. The following ramps have merge/diverge areas at LOS E, based on existing conditions: Lambert northbound diverge (PM peak hours) and Lambert southbound diverge (AM peak hours). A summary of the existing intersection LOS is provided in Table 2.2.5-8, Existing (2011) Conditions ICU and Delay Summary. All intersections achieve the performance standard.

The Traffic Study and Section 2.2.5 provide a comparison between existing and the year 2040 average daily trip (ADT) volumes is given in Table 2.2.5-9, ADT Volumes – Existing (2011) and 2040 Conditions. The mainline volume increase between 2011 and 2040 is approximately 33 percent. The 2040 traffic volumes forecasts for the interchange show an overall increase of approximately 27 percent as compared to existing traffic volumes. The AM peak hour shows an increase of approximately 28 percent over the existing counts and the PM peak hour shows an approximately 26 percent increase.

As described in the Traffic Study, the following assumptions and data sources were used to determine year 2040 traffic volumes and LOS.

- For the freeway volumes, year 2035 traffic volumes were prepared by the Orange County Transportation Authority (OCTA) using the Orange County Traffic Analysis Model (OCTAM) Version 3.3. Due to the difference between the OCTAM 3.3 horizon year of 2035 and the project study horizon year of 2040, volumes for the freeway mainline segments were increased to reflect 2040 conditions.
- Volumes for the study area intersections were derived from the Brea Area Traffic Analysis Model (BATM). This used land use projections based on the current General Plan for the City. A nominal one percent growth is then applied to the BATM 2035 volumes to derive 2040 volumes.
- To derive the Lambert Interchange No Build volumes, the BATM was used, with geometric constraints consistent with the existing conditions applied at the interchange intersections. These resulted in volumes that are similar in magnitude to existing, which generally represents the capacity of the existing interchange. The resulting diversion (primarily to the SR-57/Imperial Highway interchange) shows the impacts of the No-Build Alternative (or the beneficial effects of the Build Alternative).

As discussed in Section 2.2.5, the 2040 freeway mainline operation impact analysis results for the No Build and Build Alternatives 7A and 9 are summarized in Table 2.2.5-12. The results are the same for both Build Alternatives, as well as the No Build Alternative. Compared to existing conditions, the 2040 analysis includes two additional SR-57 auxiliary lanes in the northbound direction south of the interchange (recently constructed as part of the SR-57 Northbound Widening Project) and an additional SR-57 auxiliary lane in the southbound direction north of the interchange. The forecast mainline volumes are demand volumes which exceed the capacity for both mainline and HOV segments. Queues would form because the demand volume cannot be served, resulting in congestion occurring outside of the peak hours.

With respect to the ramp and ramp-freeway junctions, Table 2.2.5-13 shows an acceptable LOS at all ramps, with the exception of the Lambert Road southbound off-ramp with respect to the No Build Alternative. Under the No Build Alternative, the Lambert Road southbound off-ramp would operate at unacceptable LOS during the AM peak hour. Build Alternative 7A (Preferred Alternative) exhibits the best performance for the northbound on-ramps. Table 2.2.5-14 shows an improved LOS for Build Alternatives 7A and 9.

With respect to intersection operations, Table 2.2.5-15 shows that under both Build Alternatives, the LOS at the ramp intersections would improve. The intersections at State College Drive and Lambert Road would remain LOS E under Build Alternative 9; however, the delay would decrease by 1.3 seconds per vehicle as compared to the Year 2040 No Build Alternative. Additionally, there are three locations where, although LOS is below the acceptable criteria, the capacity utilization

measures decrease, resulting in slightly less delay; refer to Table 2.2.5-16. This is considered a beneficial effect of both Build Alternatives.

As stated in Section 2.2.5, the queuing analysis results show that the available ramp storage would accommodate the future demand under Build Alternatives 7A and 9. Lambert Road would experience some queues that exceed the storage capacity under both Build Alternatives. For the off-ramps, the results show that there is no potential for vehicle queuing to extend back to the freeway mainline. The 2040 traffic volumes would not exceed the volume that can be serviced by a 900 vehicles per hour per lane (vph/lane) metered lane for both Build Alternatives (refer to Table 2.2.5-19).

3.3.2.2 Written Reponses

Comment 1: Governor's office of Planning and Research, State Clearinghouse and Planning Unit, April 2, 2015

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

Edmund G. Brown Jr.
Governor

Ken Alex
Director

April 2, 2015

Paul Cochran
California Department of Transportation, District 12
3347 Michelson Drive, Suite 100
Irvine, CA 92612

Subject: State Route 57/Lambert Road Interchange Improvement Project
SCH#: 2015031005

Dear Paul Cochran:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on April 1, 2015, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. 1-A

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

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

Document Details Report
State Clearinghouse Data Base

SCH#	**2015031005**
Project Title	State Route 57/Lambert Road Interchange Improvement Project
Lead Agency	Caltrans #12
Type	**MND** Mitigated Negative Declaration
Description	Caltrans, in cooperation with the City of Brea (City), proposes to improve the SR 57/Lambert Road interchange from post mile 20.1 to PM 21.8. The proposed project would improve traffic operations on SR-57 and Lambert Road, in the interchange area. Improvements would include widening the southbound SR-57 median shoulder, reconfiguring the northbound and southbound SR-57 on- and off-ramps, lowering the Lambert Road profile to provide 15-foot standard vertical clearance under the Lamber Road Undercrossing and widening Lambert Road from 1,000 feet west of State College Blvd to Pointe Drive, and reconfiguring the north and southbound SR-57 on- and off-ramp/Lambert Road intersections.

Lead Agency Contact

Name	Paul Cochran		
Agency	California Department of Transportation, District 12		
Phone	949 724 2861	*Fax*	
email			
Address	3347 Michelson Drive, Suite 100		
City	Irvine	*State* CA	*Zip* 92612

Project Location

County	Orange			
City	Brea			
Region				
Lat / Long	33° 55' 28.6" N / 117° 52' 48.7" W			
Cross Streets	SR-57, Lambert Road, State College Blvd, N. Associated Drive			
Parcel No.				
Township	*Range*	*Section*	*Base*	SBB&M

Proximity to:

Highways	SR-57
Airports	
Railways	
Waterways	8 drainage features, Fullerton Creek
Schools	
Land Use	

Project Issues	Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Growth Inducing; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, Division of Transportation Planning; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 03/02/2015 *Start of Review* 03/02/2015 *End of Review* 04/01/2015

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

Response to Comment 1: Governor's office of Planning and Research, State Clearinghouse and Planning Unit, April 2, 2015

1-A The participation of the State Clearinghouse in the public review process of this document is appreciated. The State Clearinghouse distributed the Draft IS/EA to selected agencies for review, in compliance with State Clearinghouse review requirements (30-day public circulation period) for draft environmental documents and pursuant to the California Environmental Quality Act (CEQA). No state agencies submitted comments to the State Clearinghouse by the close of the public circulation period. This information is included in the record.

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Comment 2: Hunt Braly, Poole & Shaffery, LLP, March 24, 2015

Cochran, Paul A@DOT

From: Hunt C. Braly [hbraly@pooleshaffery.com]
Sent: Wednesday, March 25, 2015 12:49 PM
To: D12SR57Lambert@DOT
Subject: Comment on State Route 57/Lambert Road Interchange Improvement Project
Attachments: CE.CA.Dept.Trans.03.24.15.pdf

Dear Mr. Cochran,

Attached please find my comment letter dated March 24, 2014. I will also be attending the public meeting this afternoon.

Please confirm receipt.

Hunt

Hunt C. Braly
Partner
Direct: 661.287.3631 ■ Cell: 805.373.5849 ■ hbraly@pooleshaffery.com

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1

POOLE SHAFFERY
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Writer's Email: hbraly@pooleshaffery.com

March 24, 2015

Sent Via U.S. Mail and Email: D12SR57Lambert@dot.ca.gov

California Department of Transportation
3347 Michelson Drive, Suite #100
Irvine, CA 92612-1692
Attn: Paul Cochran, Environmental Analysis

Re: State Route 57/Lambert Road Interchange Improvement Project
Initial Study with Proposed Mitigated Negative Declaration
December, 2014

Dear Mr. Cochran,

This firm represents the interests of David Delrahim and Southwest Fuel Management, Inc., the Tenants who operate the Brea Car Wash ("Car Wash") at 1700 E. Lambert Road, Brea, California. The current lease runs into 2024 and the Tenant has several five year options to renew. As a result, the Tenant has a significant financial interest in retaining the Car Wash as an operating business and having your agency, and the various other approval parties, choose an alternative for the Lambert Road Interchange Improvement Project (the "Project") which has the least amount of impact to the Car Wash and allows it to continue in business.

Our review of the Initial Study indicates you are considering two build alternatives, 7A and 9, for the Project. Alternative 9 does not take the Car Wash property and destroy the business. The Initial Study acknowledges that Alternative 9, which had been rejected in the 2007 Project Study Report ("PSR"), now provides sufficient traffic improvements and states the following, "...the Project Development Team (PDT) evaluated the year 2040 traffic forecast volumes and has determined that the year 2040 traffic forecasts are substantially lower than the year 2040 forecast volumes in the approved 2007 PSR. This reduction in forecast traffic volumes for year 2040 allows Build Alternative 9 to adequately accommodate the year 2040 forecast traffic and again be a viable alternative". (Section 1.4 Page 1-17). 2-A

In comparison, Alternative 7A will not only require the full acquisition of the Car Wash property, it would also require the acquisition of a significant portion of the Country Woods apartment complex. Alternative 9 requires neither of these takings. While it appears that Alternative 7A will provide a little additional decrease in related delay within the interchange, Alternative 9 still provides more than a 30% decrease in related traffic delay (Section 1-5 page 1-51-52

In your discussion of the construction impacts on the Car Wash, the Initial Study does not properly recognize that the Car Wash is not just a trip attractor, but also relies on pass-by-traffic. As a result there could be significant impact on the Car Wash during construction activity. Any traffic management plan (TMP) must include provisions to provide signage and ensure 2-B

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acceptable ingress and egress to the Car Wash during its operating hours. (Section 2.2, 1.4 Page 2.2.1-15 2-B

In regards to long term operational impacts, the Initial Study incorrectly states that there are no significant differences between Alternatives 7A and 9. The Statement that Alternative 7A will only result in a limited number of full and partial acquisitions, and as a result its impact is the same as Alternative 9 which does not have any acquisitions of businesses or residential units, is inaccurate. In addition, stating that both alternatives will not cause a high degree of disruption is not accurate. Clearly Alternative 7A has much more significant impacts than Alternative 9 due to the acquisition, and relocation, of businesses and residential units. 2-C

The Initial Study states that Alternative 7A is consistent with Brea General Plan Policy CE-11.1 which is inaccurate. Using the terminology that it will only result in a minor displacement is misleading when an entire business and a significant portion of an apartment complex are being taken. The Initial Study should clearly indicate that Alternative 9 is more consistent with this Brea General Plan Policy than Alternative 7A. (Page 2.2.1-16-17) 2-D

We note that the Project Study states that the taking of the Car Wash under Alternative 7A would result in the loss of $37,000 a year in property taxes to the City and an estimate of $7,320 in sales taxes to the City. Since the Study concludes that there is no replacement property in the City of Brea, this approximate $50,000 in tax revenue will be an annual loss to the City (Page 2.2.3-16-18). 2-E

While we agree that Alternative 9 would not result in adverse impacts related to community character and cohesion, and would result in fewer impacts overall as compared to 7A, including no closure of Lambert Road, it is important, as previously stated, that access to the Car Wash during construction be mitigated so as not to impact the business during its operating hours. (Page 2.2.3-14,15,18) 2-F

The Initial Study analyzed the Car Wash and the impact of the taking under Alternative 7A as follows: "The car wash facility to be displaced was established in 1990 and is located in the southeast quadrant of the SR-57/Lambert Road interchange. Auto wash facilities primarily depend on pass-by traffic; however, with a long establishment period, they likely had secured local clientele. If the carwash relocates outside of the city, it may experience loss of local clientele. This loss may be offset if the business reestablishes itself in a site similar to its existing location (e.g. at a freeway interchange or a primary arterial intersection." (Page 2.2.3-27) However, the document provides no potential like locations. There is reference to the Draft Relocation Impact Memorandum which apparently identified seven sites in Anaheim, Placentia and Fullerton. Importantly none of the potential new sites are in Brea. In addition, it is estimated that 20-49 employees will be displaced under Alternative 7A. 2-G

Under Section 2.3.5 Hazardous Materials/Waste there is discussion of the potential for contamination from the Car Wash. "Thus, although no contamination to soil or groundwater from hazardous materials has been reported, this property has the potential for soil contaminated 2-H

with the car wash and associated gas station." (Page 2.3.5-12,13). As a result the taking of the Car Wash property under Alternative 7A could result in significant costs to Caltrans. 2-H

The Initial Study does not provide any cost information, but it would appear that the construction costs for Alternative 9 will be significantly less than Alternative 7A due to the configuration proposed. In addition, Alternative 7A would add millions of dollars in additional costs due to the acquisition of two properties and the closing of the Car Wash. 2-I

In conclusion, it is clear that Alternative 9 is the best choice for not just the Car Wash, but for the community. It is less costly while still providing significant traffic relief and does not require the costly elimination of a local business along with a portion of an apartment complex. For these reasons on behalf of the Car Wash, we urge you to select Alternative 9 2-J

We forward to you and your client's review of this proposal and am available to discuss and your continence.

Very truly yours,

Hunt C. Braly

Hunt C. Braly

cc: Client

HCB/sa

Response to Comment 2: Hunt Braly, Poole & Shaffery, LLP, March 24, 2015

2-A The 2007 Project Study Report (PSR) evaluated ten alternatives and eliminated nine from further consideration based either on impacts to resources, feasibility, ability to meet the purpose and need, and/or cost. At the time of the 2007 PSR, alternatives were evaluated based on performance and not on potential environmental impacts; refer to Section 1.7, Alternatives Considered but Eliminated from Further Discussion. Build Alternative 9 was an alternative that was originally rejected during the 2007 PSR; however, the project development team (PDT) subsequently re-evaluated the year 2040 traffic forecast volumes and determined that the year 2040 traffic forecasts are substantially lower than the year 2040 forecasts evaluated in the 2007 PSR. Section 1.4, Project Description, provides the detailed background information regarding changes in traffic forecast volumes which allowed the Draft IS/EA to analyze Build Alternative 9.

Thus, the Draft IS/EA evaluated two build alternatives, Build Alternative 7A (Preferred Alternative) and Build Alternative 9, and a No Build Alternative. A comparison of alternatives is provided in Section 1.5, Comparison of Alternatives. The following table compares three intersections (State College/Lambert Road Build, SR-57 Southbound Ramps/Lambert Road, and SR-57 Northbound Ramps/Lambert Road) under the No Build, Build Alternative 7A (Preferred Alternative), and Build Alternative 9 scenarios. This table shows the delay at the three intersection, the LOS at the three intersections and the difference in delay between the No Build and Build Alternatives. Under the No Build scenario, the total AM/PM peak hour delay within the interchange (northbound and southbound ramp intersections) is 184.41 seconds (80.0 seconds + 29.2 seconds + 46.4 seconds + 28.8 seconds). Build Alternative 7A (Preferred Alternative) would reduce congestion related delay within the interchange by approximately 80.6 seconds (43 percent). Build Alternative 9 would reduce congestion related delay within the interchange by approximately 59 seconds (31 percent).

Location	AM Peak Hour			PM Peak Hour		
	Delay	LOS	Delay Difference from No Build Alternative	Delay	LOS	Delay Difference from No Build Alternative
No Build						
7. State College and Lambert Road	**61.2**	**E**	--	**57.3**	**E**	--
8. SR-57 SB Ramps and Lambert Road	**80.0**	**F**	--	46.4	D	--
9.SR-57 NB Ramps and Lambert Road	29.2	C	--	28.8	C	--
Build Alternative 7A (Preferred Alternative)						
7. State College and Lambert Road	45.1	D	-16.1	52.2	D	-5.1
8. SR-57 SB Ramps and Lambert Road	39.4	D	-40.6	24.9	C	-21.5
9. SR-57 NB Ramps and Lambert Road	19.2	B	-10.0	18.6	B	-10.2
Build Alternative 9						
7. State College and Lambert Road	47.3	D	-13.9	**56.0**	**E**	-1.3
8. SR-57 SB Ramps and Lambert Road	36.4	D	-43.6	18.8	B	-27.6
9. SR-57 NB Ramps and Lambert Road	35.1	D	+5.9	35.1	D	+6.3

Source: Traffic Study, 2012
LOS Criteria based on Average Delay (sec/veh): A (0.0-10.0); B (10.1-20.0); C (20.1-35.0); D (35.1-55.0); E (55.1-80.0); F (>80.1)
Bold = Exceeds performance standard of level of service (LOS) D
Greater than 300 - delay is greater than 200 sec/veh
[1] All-way stop – delay represents the intersections average vehicle delay
[2] Yield – delay represents the yielding movement with highest approach delay

Build Alternative 7A (Preferred Alternative) is able to achieve 12 percent more reduction in congestion related delay primarily due to three factors: 1) the new northbound loop on-ramp eliminates the conflicting high volume movements (high volume eastbound left turns opposing high volume westbound through movements) at the northbound ramp intersection, 2) more balanced distribution of through and turning movements across all eastbound lanes, and 3) increased spacing between the ramp intersections, which provides additional vehicle queue storage.

Build Alternative 9 achieves acceptable levels of service for traffic operations through roadway widening and the addition of turning lanes. The operational limitation of maintaining the diamond interchange configuration is that the conflicting high volume movements (high volume left turns opposing high volume through movements) in both the eastbound and westbound directions are not reduced and limits the amount of congestion reduction that can be delivered by the project.

As discussed in Section 1.6, Identification of a Preferred Alternative, on April 9, 2015, the PDT decided to recommend Build Alternative 7A as the Preferred Alternative. Build Alternative 7A (Preferred Alternative) was recommended over Alternative 9 with the following justification:

- Build Alternative 7A provides superior interchange traffic operations and congestion relief in both the near term and long term. The partial clover leaf interchange configuration provides the greatest capacity to handle traffic increases beyond the 2040 design horizon.

- The proposed interchange reconfiguration directly addresses the project need of reducing the number of conflicting traffic movements and minimizing potential safety hazards. The new northbound loop on-ramp eliminates conflicting high volume movements at the northbound ramp intersection (high volume eastbound left turns opposing high volume westbound through movements), thereby directly enhancing traffic safety. This configuration also provides more efficient traffic flow through the interchange due to a more balanced distribution of through and turning movements across all eastbound lanes on Lambert Road.

- The proposed interchange reconfiguration directly addresses the project need of increasing the signal queue capacity by maximizing the distance between the northbound and southbound ramp intersections providing optimum traffic operations through the interchange.

- The proposed interchange configuration provides three significant benefits to the northbound mainline: 1) the addition of the northbound loop on-ramp distributes northbound freeway merge movements over two locations providing superior freeway ramp operations; 2) the #5 northbound general purpose lane, which currently terminates south of Lambert Road, is extended through the interchange; and 3) a full standard northbound mainline cross section is extended from south of Lambert Road through the interchange.

Thus Build Alternative 7A (Preferred Alternative) is able to achieve a 12 percent more reduction in congestion related delay, provide superior interchange traffic operations and congestion relief in both the near term and long term, reduce the number of conflicting traffic movements and minimizing potential safety hazards, increase the signal queue

capacity, and improve SR-57 mainline movement. Please refer to Topical Response 5 regarding traffic and level of service (LOS). The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

2-B Access to all commercial uses in the proposed project area would be maintained during construction. A Traffic Management Plan (TMP) would minimize construction traffic delay impacts by providing signage, detours, and a public awareness program. Several avoidance and minimization measures for the project require the issuance and adherence to a TMP. In addition, efforts will be made to coordinate with businesses within the project area regarding the placement of signs during construction.

- Measure COMM-4 requires the project to develop and implement a construction (traffic) management program that maintains access to and from the proposed project area through signage, detours, and flagmen.
- Measure UES-4 and Measure T-4 require the TMP to include prior notices, adequate sign-posting, detours, phased construction and temporary driveways. It further requires that the TMP specify implementation timing of each plan element (prior notices, sign-posting, detours, etc.) as determined appropriate by the lead agency. Adequate local and emergency access will be provided at all times to adjacent uses.

2-C The commenter's statement that the IS/EA states that there are "no significant differences between Alternatives 7A and 9" does not include details as to where this statement is located within the IS/EA. Comment 2-B relates page 2.2.1-15 and Comment 2-D relates to pages 2.2.1-16 and 2.2.1-17; both Comments 2-B and 2-D relate to Section 2.2.1, Land Use, which evaluates the proposed project's consistency with the State, Regional, and Local Plans and Programs. Therefore, it is assumed that Comment 2-C relates to the findings within Section 2.2.1 as well, and therefore, this response relates to the IS/EA conclusions regarding impacts, as they relate to the consistency of State, Regional and Local Plans and Program.

The IS/EA analyzes the project alternatives regarding compatibility to the City of Brea's General Plan land use designations and zoning classifications, as well as consistency with local and regional plans with Section 2.2.1, Land Use. The IS/EA was prepared in accordance with CEQA and NEPA, as well as any other applicable Federal, State, and local laws and regulations.

Impacts specifically related to relocations and right-of-way acquisitions of businesses and residences are discussed in Section 2.2.3, Community Impacts. The Community Impacts Section, Section 2.2.3, evaluates impacts in three subsections: 1) community character and cohesion (Section 2.2.3.1); 2) relocations and real property acquisitions (Section 2.2.3.2); and 3) environmental justice (Section 2.2.3.3).

For Build Alternative 7A (Preferred Alternative), with respect to relocations and real property acquisitions (Section 2.2.3.2), the IS/EA states that as of January 2012, equivalent business properties were available for the relocated business in the adjacent cities of Anaheim, Placentia, and Fullerton at the time of the property survey. In addition, an adequate number of replacement properties were available in the study area to all displaced residents, including several apartments for rent within the Country Woods apartment complex. Therefore, the IS/EA concludes that the project would not have an

adverse effect. Avoidance and Minimization Measures COMM-1 through COMM-5 and REL-1 through REL-3 will further minimize impacts.

In addition, with respect to relocations and real property acquisitions (Section 2.2.3.2), the IS/EA concluded that no businesses, employees, or residences would be displaced under Alternative 9.

2-D Each alternative's consistency with the State, regional, and local plans are analyzed separately. Both Build Alternatives were found to be consistent with Policy CD-11.1 of the City of Brea General Plan; refer to Section 2.2.1.4, Environmental Consequences. No revisions to the IS/EA are warranted.

2-E The comment does not raise issue with the adequacy of the Draft IS/EA. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

2-F Please refer to Response to Comment 2-B regarding access to the adjacent properties during construction and requirements of the TMP. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

2-G A Relocation Impact Memorandum (RIM) was prepared and approved in June 2012 and a Community Impact Assessment was prepared in October 2012; both were prepared in accordance with CEQA and NEPA. These technical studies are listed on page v of the Table of Contents, and were available in hardcopy at the Caltrans District 12 Office, the City of Brea, and the Brea Library.

The IS/EA discloses that at the time of the Relocation Impact Memorandum, seven car wash facilities were available in the cities of Anaheim, Placentia, and Fullerton. At the time of the survey, there were no replacement properties available for the car wash facility in the City of Brea; one car wash facility is approved for construction in the City. However, the RIM further states that car wash facilities for sale and lease may become available prior to construction of the proposed project.

2-H The comment does not raise issue with the adequacy of the Draft IS/EA. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

2-I While it is general practice to provide information regarding funding in the IS/EA, disclosing the cost of alternatives is not required under CEQA or NEPA. The IS/EA provides estimated Capital Construction Costs for Build Alternatives 7A and 9 as it relates to construction employment in Table 2.2.3-8, Estimated Construction Employment under the Build Alternatives. The total project cost per build alternative was provided in the Project Report, which is a separate report prepared for the proposed project by the engineering and design team. The Project Report identified the cost of Build Alternative 7A (Preferred Alternative) and Build Alternative 9 as follows:

Cost Estimate	Project Cost Estimates (in 2014 dollars)	
	Build Alternative 7A (Preferred Alternative)	**Build Alternative 9**
Roadway Items	$29,000,000	$19,600,000
Structure Items	$2,870,000	$1,100,000
Subtotal Construction Costs	*$31,870,000*	*$20,700,000*
Right-of-Way	$13,150,000	$4,234,000
Subtotal	*$45,020,000*	*$24,934,000*
Project Support	$14,043,000	$8,018,000
Total	**$59,063,000**	**$32,952,000**

2-J Section 1.5, Comparison of Alternatives, states "[a]fter the public circulation period, all comments were considered, and the PDT recommended a preferred alternative and the Caltrans District Director made the final determination of the proposed project's effect on the environment. In accordance with CEQA, no unmitigable significant adverse impacts were identified and Caltrans has prepared a Mitigated Negative Declaration (MND). Similarly, the Caltrans District Director determined the action does not significantly impact the environment, Caltrans, as assigned by FHWA, has issued a Finding of No Significant Impact (FONSI) in accordance with NEPA." This Final IS/EA includes Section 1.6, Identification of a Preferred Alternative. Your support of Build Alternative 9 is acknowledged and included in the project record. Your support of Build Alternative 9 was provided to the PDT for consideration prior to the selection of the preferred alternative.

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Comment 3: Hunt Braly, Poole & Shaffery, LLP, April 2, 2015

Cochran, Paul A@DOT

From:	Silvia Abrignani [sabrignani@pooleshaffery.com]
Sent:	Thursday, April 02, 2015 3:43 PM
To:	D12SR57Lambert@DOT
Subject:	FW: State Route 57/Lambert Road Interchange Improvement Project; Initial Study with Proposed Mitigated Negative Declaration December, 2014
Attachments:	CE.Dept.Transportation.04-02-15.pdf

Silvia Abrignani
Secretary
sabrignani@pooleshaffery.com

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From: Silvia Abrignani
Sent: Thursday, April 02, 2015 3:29 PM
To: 'D12SR571Lambert@dot.ca.gov'
Cc: 'Hunt C. Braly (hbraly@pooleshaffery.com)'
Subject: State Route 57/Lambert Road Interchange Improvement Project; Initial Study with Proposed Mitigated Negative Declaration December, 2014

Sent on behalf of Hunt C. Braly

Correspondence dated April 2, 2015

Silvia Abrignani
Secretary
sabrignani@pooleshaffery.com

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2

POOLE ■ SHAFFERY

ATTORNEYS AT LAW

Writer's Email: hbraly@pooleshaffery.com

April 2, 2015

Sent Via U.S. Mail and Email: D12SR57Lambert@dot.ca.gov

California Department of Transportation
3347 Michelson Drive, Suite #100
Irvine, CA 92612-1692
Attn: Paul Cochran, Environmental Analysis

Re: State Route 57/Lambert Road Interchange Improvement Project
Initial Study with Proposed Mitigated Negative Declaration
December, 2014

Dear Mr. Cochran,

As previously stated in our letter of March 24, 2015, this firm represents the interests of David Delrahim and Southwest Fuel Management, Inc., the Tenants who operate the Brea Car Wash ("Car Wash") at 1700 E. Lambert Road, Brea, California. We are writng this additional comment letter based on information which was disclosed at the March 25 Public Meeting hosted by Caltrans and additional information which has been provided subsequent to that date in response to our requests.

The initial study does not provide any cost information regarding the two build alternatives, 7A and 9, for the Project. At the Public Meeting, Caltrans representatives verbally acknowledged that the cost of Alternative 7A was significantly higher than Alternative 9. Since that meeting, we have been provided with the Project Study Report which includes the cost estimates. The difference is stark. The Study Report states the following (Page 1, 32 and Appendix B): 3-A

	ALTERNATIVE 7A	ALTERNATIVE 9
Construction	$31,870,000	$20,700,000
Right of Way	13,150,000	4,234,000
Total	$45,020,000	$24,934,000
Project Support	14,043,000	8,018,000
Total	$59,063,000	$32,952,000

While Alternative 7A provides a little additional decrease in related traffic delay within the interchange, Alternative 9 still provides more than a 30% decrease in related traffic delay (Section 1-5 page 1-51-52). In addition, as was repeated numerous times at the Public Meeting, this is a congestion delay project, not a safety project. As a result the claimed safety benefit for the cloverleaf design in Alternative 7A should not be the basis for selecting that alternative when it destroys a thriving business, a portion of an apartment complex and is almost double the cost. 3-B

POOLE & SHAFFERY, LLP ■ 25350 Magic Mountain Parkway ■ Second Floor ■ Santa Clarita ■ CA 91355 ■ P 661.290.2991 ■ F 661.290.3338
LOS ANGELES ■ SAN FRANCISCO ■ SANTA CLARITA ■ WALNUT CREEK ■ ORANGE COUNTY

It is important to note that Caltrans stated at the Public Meeting that it has only identified $34,000,000, from various sources, for this project. If Alternative 9 is selected, Caltrans will all the funding necessary to proceed and will not face the uncertainty of having to try find an addition $25,000,000 to build Alternative 7A. 3-C

As stated in our previous letter, the Initial Study analyzed the Car Wash and the impact of the taking under Alternative 7A as follows: "The car wash facility to be displaced was established in 1990 and is located in the southeast quadrant of the SR-57/Lambert Road interchange. Auto wash facilities primarily depend on pass-by traffic; however, with a long establishment period, they likely had secured local clientele. If the carwash relocates outside of the city, it may experience loss of local clientele. This loss may be offset if the business reestablishes itself in a site similar to its existing location (e.g. at a freeway interchange or a primary arterial intersection." (Page 2.2.3-27) However, the Initial Study provides no potential like locations. There is reference to the Draft Relocation Impact Memorandum, which we have subsequently been provided, and apparently seven sites in Anaheim, Placentia and Fullerton were identified. However, this Memorandum provides no information on the location of the sites. When Caltrans was further questioned about the location of these potential relocation sites, it stated that it did not have that information and that we should contact the City of Brea. We still have not received this information and cannot comment on the feasibility of relocating the Car Wash. 3-D

In conclusion, it is now even clearer that Alternative 9 is the best choice for not just the Car Wash, but for the community, the City of Brea and Caltrans. At a time where every dollar counts, there is no environmental reason, and no significant operational reason, for Caltrans, the City of Brea and other governmental agencies to spend an extra $27,000,000 on this project. 7A does not provide enough additional capacity improvement to overcome the facts that Alternative 9 keeps a thriving business in tack, residents from being displaced, and is almost half the cost. For all of the reasons contained in this letter, and our previous letter of March 24, 2015, we urge that Alternative 9 be selected. 3-E

We look forward to your review of these comments and my clients and I are available to discuss and your continence.

Very truly yours,

Hunt C. Braly

Hunt C. Braly

cc: Client
City of Brea
Congressman Ed Royce
Senator Bob Huff
Assemblyman Curtis Hagman

HCB/sa

Response to Comment 3: Hunt Braly, Poole & Shaffery, LLP, April 2, 2015

3-A Please refer to Response to Comment 2-I regarding project cost. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

3-B Please refer to Response to Comment 2-A regarding the potential decrease in traffic delays for both Build Alternative 7A (Preferred Alternative) and 9. Please Refer to Response to Comment 2-J regarding the selection of a preferred alternative. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

3-C The comment does not raise issue with the adequacy of the Draft IS/EA. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

3-D Please refer to Response to Comment 2-G regarding replacement car wash facilities. At the time of the Relocation Impact Memorandum (Approved June 2012), replacement properties were searched using www.bizben, www.loopnet.com, and were accessed January 17, 2012. As described in Appendix E, Summary of Relocation Benefits, any business displaced shall be offered relocation advisory assistance for the purpose of locating a replacement property, which is provided by a Relocation Agent. Appendix E further states that the Relocation Agent will:

- Determine your needs and preferences;
- Explain the relocation benefits and eligibility requirements;
- Provide information on replacement properties for your consideration;
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location; and
- Assist you in completing loan documents, rental applications or relocation claims forms.

In addition, the Relocation Agent will also provide information on security deposits; interest rates and terms; typical down payments; permits, fees and local planning; SBA loan requirements; real property taxes; and consumer education literature. The Relocation Agent will also provide current listings of other available replacement properties.

The Relocation Assistance Program specifies that before any project which involves the displacement of people can be undertaken, a Replacement Housing Study (Relocation Impact Memorandum) must be completed to determine the needs of relocatees and the availability of replacement housing or business properties.

3-E Please refer to Response to Comment 2-J regarding the selection of a preferred alternative. Your support of Build Alternative 9 is acknowledged and included in the project record. Your support of Build Alternative 9 was provided to the PDT for consideration prior to the selection of the preferred alternative.

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Comment 4: Nathan Lachman, March 31, 2015

Cochran, Paul A@DOT

From: LACHMAN, NATHAN G [nl2316@att.com]
Sent: Tuesday, March 31, 2015 3:29 PM
To: D12SR57Lambert@DOT
Cc: 'elida.roto@hotmail.com'
Subject: VERY CONCERNED RESIDENT - IMPORTANT

Importance: High

To Whom This May Concern;

I'm a local resident at 324 N Woodland Avenue in the City of Brea, California. I understand that Caltrans is looking to expanding the SR57 FWY project which will dramatically impact my residents as well as my fellow neighbors. I also understand that there was a city meeting on March 25, 2015 at our local Civic Center pertaining to this future project. I'm extremely distressed that no one in my local neighborhood was informed of this meeting and I'm just now receiving updates on this project. Expanding the freeway will bring a large disturbance to my family and neighbors for numerous months not to mention untidiness to my backyard. 4-A

I'm also being informed that Caltrans does not plan to put up a large sound barrier along my hillside/backyard. If this is the case I will be reaching out to a family referred law firm (Leibold McCelndon & Mann) who specialize in Land Use & Zoning, Municipal Law, and CEQA. We will be addressing this entire situation and the dramatic impact this will have on my family and property value/home. 4-B

I would like to hear back from someone pertaining to this project within the next 24-48 business hours and expect to have this project re-evaluated especially pertaining to the sound wall for my backyard. 4-C

Best Regards,

Nathan Lachman

1

Response to Comment 4: Nathan Lachman, March 31, 2015

4-A Please refer to Topical Response 1 regarding the noticing of the availability of the Draft IS/EA and the public meeting. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

4-B Please refer to Topical Response 2 regarding existing noise levels and Topical Response 3 regarding a soundwall in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

4-C Thank you for your review of, and comments on, the Draft IS/EA. Please refer to Topical Response 3 pertaining to a soundwall in the southwest quadrant of the project. All comments are responded to through this Response to Comments chapter in the Final IS/EA.

Comment 5: William Miller, March 31, 2015

Cochran, Paul A@DOT

From: Bill Miller [bill4miller@netzero.net]
Sent: Tuesday, March 31, 2015 7:45 PM
To: D12SR57Lambert@DOT
Subject: 57 freeway/Lambert widening

To Whom it may concern,

I am a home owner living adjacent to the 57 freeway on the west side. My home backs up to the Lambert/57 on ramp. As it is 5-A

now we live fairly close to the on ramp and the noise is at times, unbearable. Not to mention the irritation from car fumes. You take about 5-B

accidents that happen on the freeway, and there are a lot, some that have ended up just about in our back yard. This is not a good thing to be

happening and with the widening of the on ramp it makes the danger that much closer. I agree with the widening of the on ramp but I do think 5-C

more thought should be put into making a higher and stronger retaining wall. All I ask is widen it, improve it but make it safer as well.

William H. Miller
318 woodland Ave
Brea, CA 92821

1

Response to Comment 5: William Miller, March 31, 2015

5-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

5-B Please refer to Topical Response 4 regarding existing and operational (long-term) air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

5-C The purpose of the proposed project, as discussed under Section 1.2.1, is to reduce the current congestion, increase signal queue capacity, and better accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards. Please refer to Topical Response 3 regarding the existing soundwall and its replacement. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 6: Juanita Luevano, March 31, 2015

Cochran, Paul A@DOT

From: juanita_luevano@yahoo.com
Sent: Tuesday, March 31, 2015 8:19 PM
To: D12SR57Lambert@DOT
Subject: Proposed Improvements to the SR-57/Lambert Road

Would like to attend meeting with residents, current residents where not properly notified until 3/30. After meeting. Please let me know when there will be a meeting and if known, what will be the direct impact to residents. Sound, the impact on wildlife, most rodents will flee to residents, traffic, noise, dust & debris. 6-A
Current resident of 334 N.Woodland Ave.

1

Response to Comment 6: Juanita Luevano, March 31, 2015

6-A Please refer to Topical Response 1 regarding the noticing of the availability of the environmental document and the timing of the public meeting. The Draft IS/EA provides analyses for project and cumulative impacts, as well as avoidance, minimization, and/or mitigation measures for 22 resource topics. Specifically, Section 2.3.7 provides an analysis of existing, construction (short-term), and operational (long-term) noise levels. In addition, refer to Topical Responses 2 and 3 for further details regarding noise levels, impacts, and soundwalls. Chapter 2.4 provides an analysis of the natural community, wetlands and other waters, plant species, animal species, threatened and endangered species, and invasive species. Section 2.2.5 provides an analysis of roadway and intersection operations for existing, construction (short-term), and operational 9long-term) conditions. Please also refer to Topical Response 5 for additional information regarding traffic and level of service. Section 2.3.6 provides an analysis of existing, construction (short-term), and operational (long-term) air quality in the area. Please also refer to Topical Response 4 for additional information pertaining to air quality.

Comment 7: Tim and Judy Scott, April 1, 2015

Cochran, Paul A@DOT

From: TIM SCOTT [timscott0819@gmail.com]
Sent: Wednesday, April 01, 2015 8:31 AM
To: D12SR57Lambert@DOT
Subject: SR 57/ Lambert road interchange improvement proposed project

To whom it may concern:

We reside at 333 Woodland Ave. in the City of Brea. We have lived at this address for 40 years.

1.0 Currently we experience noise from the freeway almost continuously and this noise level has increased as the traffic volume has increased through time. We are especially affected by semi trailer operators who use their air brakes in the early morning hours, 3AM to 5 AM. These episodes can be heard from about one mile north of the Lambert exit and continue with increasing volume down to about Imperial. I do not believe that your sound studies have accumulated data during this time frame and if they did you would see significant spikes in sound level that is not reasonable and probably not lawful. Historically there has not been enforcement to help mitigate this NOISE issue. 7-A

2.0 We require sound walls similar to those that have been constructed on the east side of the 57 to protect our neighborhood and property values 7-B

3.0 Without sound walls similar to those that have been constructed south of Imperial and protecting Craig Park, sleeping through the night will be almost impossible. Even talking, having a conversation, in our backyard can be difficult. With increased truck, and car traffic noise, we will experience significant reduction in quality of life in the neighborhood. 7-C

4.0 Increased truck and car traffic will increase particulate loading in the ambient air in the neighborhood. Please refer to SCAQMD studies outlining the health effects of particulates especially on children. How will this be addressed? 7-D

5.0 NOx and Sulfur emissions will increase with increasing truck and car traffic. How will this increase in emissions be mitigated? 7-E

6.0 We were not informed of the meeting that occurred on 25 March. We do not subscribe to a local news paper, nor do most of our neighbors and there was no mail notification. So, there was no opportunity for working people to attend the 4:00PM meeting. 7-F

7. The e-mail address on the notification is incorrect. 7-G

8.0 Therefore we object: THERE IS SIGNIFICANT IMPACT ON THE QUALITY OF LIFE AND ENVIRONMENTAL IMPACT AND HEALTH AND SAFETY TO THE NEIGHBORHOOD. 7-H

Tim and Judy Scott

TIM SCOTT
timscott@pesystems.net
714 529 7704

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Response to Comment 7: Tim and Judy Scott, April 1, 2015

7-A Please refer to Topical Response 2 regarding existing noise levels, long-term 24-hour noise monitoring locations, and truck traffic noise during nighttime hours. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

7-B Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

7-C Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

7-D Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

7-E Please refer to Section 2.3.6 and Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

7-F Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The public meeting was an open house forum and was held from 4 PM until 7 PM. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

7-G The comment does not raise issue with the adequacy of the Draft IS/EA; however, the email address and website information provided on the notice of availability were functional during the 30-day public review period. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

7-H Your objection is acknowledged and included in the project record. Your objection was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 8: Greg Verrecchia, April 1, 2015

Cochran, Paul A@DOT

From: Boostaload@aol.com
Sent: Wednesday, April 01, 2015 9:35 AM
To: D12SR57Lambert@DOT
Subject: Freeway widening

I live on Woodland ave and my house backs up to the freeway on the west side. I just found out about this on the March 31. I thought the freeway widening was done. Apparently there was a city council meeting about this that a lot of people were unaware of. Also a notice was published in the Orange Co. Register. I subscribe to the Register and did not see the notice. My question is why weren't the people who would be affected the most by this notified by mail ? Not everyone can attend city council meetings and not everyone subscribes to the Register. 8-A

Now I understand that a sound wall will not be put up.That is totally WRONG!!!! In order to widen the freeway one lane the grading will come half way down the slope behind my house putting the freeway basically in my backyard. I feel the right thing to do is at least put a sound wall up to curtail the noise,block some of the road dust and maintain our property values. 8-B

Concerned in Brea,
Greg Verrecchia

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Response to Comment 8: Greg Verrecchia, April 1, 2015

8-A Please refer to Topical Response 1 regarding the noticing of the availability of the Draft IS/EA and the public meeting. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

8-B Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 9: Ron and Shelley Gomez, April 1, 2015

Cochran, Paul A@DOT

From: Ron [ronnshel95@gmail.com]
Sent: Wednesday, April 01, 2015 5:24 PM
To: D12SR57Lambert@DOT
Subject: Propose SR57/Lambert Rd.

To whom it may concern,

We reside at 934 avocado Street in the city of Brea. We just heard that there's a proposal to expand the 57 freeway. It's a big concern to us that there is no sound wall to be constructed on the east side of the 57 to protect our neighborhood from all the noises. Without a sound wall similar to those constructed in the south of imperial. It will be difficult to enjoy our backyard conversation with our family and children. With all the noises and pollution with the expansion of SR57 at Lambert Rd peaceful and enjoyable day in my backyard will be difficult. Please please please we're not against expansion. So please give us consideration for constructing that sound wall barrier for us to have a quality life living close to the freeway. 9-A

Respectfully yours,
Ron & Shelley Gomez
934 Avocado ST. Brea

Sent from my iPhone

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Response to Comment 9: Ron and Shelley Gomez, April 1, 2015

9-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

Comment 10: Michelle and Benjamin Mauricio Cortes, April 1, 2015

Cochran, Paul A@DOT

From: Michelle Cortes [mrsmbcortes@aol.com]
Sent: Wednesday, April 01, 2015 5:52 PM
To: D12SR57Lambert@DOT
Subject: 57 southbound fwy widening

To Whom It May Concern,

We live at 363 Woodland Ave. in the city of Brea, Ca. We have lived at this address for 24 years.

We are very concerned about the plans to widen the 57 freeway going southbound from Lambert Rd. to Birch Street. We are concerned because the plan to widen the freeway does not include a plan to build a sound wall to protect our neighborhood and the surrounding neighborhoods from increasing noise, lead, sulfur, and other traffic emission pollution. 10-A

We are very concerned about the increasing noise caused from semi trucks and trailers, especially in the early morning from 3-5 am and if the freeway is widened this will continue to increase and cause more noise pollution, especially when most people are trying to get sleep. 10-B

We do not understand why sound walls were constructed on the north side of the 57 freeway, but they are not in the plans for the southern bound side. Even in our back yard, the noise from the freeway is still very loud and this will continue to be even louder. 10-C

We are very concerned about all of the health implications that widening the freeway without a proper soundwall will cause. 10-D

We were not informed of the meeting that took place on March 25th at 400 pm. There should be proper notification to all residents if there is going to be a meeting so that all residents impacted can be present. 10-E

We therefore object to the widening of the freeway without making a proper soundwall. 10-F

Michelle and Benjamin Mauricio Cortes
mrsmbcortes@aol.com
714-510-0209

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Response to Comment 10: Michelle and Benjamin Mauricio Cortes, April 1, 2015

10-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

10-B Please refer to Topical Response 2 regarding existing noise levels, long-term 24-hour noise monitoring locations, and truck traffic noise during nighttime hours. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

10-C Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

10-D Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels and Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

10-E Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The public meeting was an open house forum and was held from 4 PM until 7 PM. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

10-F Your objection to the project without incorporation of a soundwall in the southwest quadrant of the project area is acknowledged and included in the project record. Your objection to the project without incorporation of a soundwall in the southwest quadrant of the project area was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 11: Ed Alvarez, April 1, 2015

Cochran, Paul A@DOT

From: Ed Alvarez [edalvarez626@gmail.com]
Sent: Wednesday, April 01, 2015 6:18 PM
To: D12SR57Lambert@DOT
Subject: SR 57 Freeway Widening. NEED SOUND WALLS!

I reside at 322 Guava Pl. Brea, CA 92821, and I believe that sound walls are necessary due to the increase in traffic. 11-A The Southbound 57 freeway at Lambert is a downhill grade and big rig trucks use their air brakes constantly when there isn't any traffic. It is very noisy and many trucks use them especially at night. Please reconsider and place a sound wall to protect the residents from the additional noise and air pollution that will be generated by the widening of the freeway. 11-B

Thank You,
Ed Alvarez, (714) 398-9713.

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Response to Comment 11: Ed Alvarez, April 1, 2015

11-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels as well as truck traffic noise during nighttime hours. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

11-B Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project area. Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 12: Chris and Cherie Mathews, April 1, 2015

Cochran, Paul A@DOT

From: Chris Mathews [chrsmathews@yahoo.com]
Sent: Wednesday, April 01, 2015 8:58 PM
To: D12SR57Lambert@DOT; Chris Mathews; suburbandoor@aol.com; timscott@pesystems.net
Subject: Neihgborhood concerns regarding freeway project

To Mr. Paul Cochran or whom it may concern.

My family lives at 940 Papaya Pl. in the city of Brea. We have lived here for 12 years.
It has recently come to our attention that that there was a public meeting on March 25, 2015 regarding the proposed freeway project where we residents of the affected neighborhoods had an opportunity to ask questions and give comments. Nobody in our neighborhood I have spoken to had any knowledge of such a meeting. We were not informed by the city of Brea, Caltrans or the DOT. 12-A

Here are our concerns.

The noise we experience from the southbound traffic is constant and at night it gets worse with the semi truck traffic using their air breaks as they are moving faster in the night time and very early morning hours down the hill approaching Lambert and Imperial Highway. Sometimes our windows shake and our house even vibrates as these trucks pass by. 12-B

Even worse is the noise caused by the traffic getting on the SB57 onramp.
We hear, see and feel every vehicle getting on the freeway. Especially the motorcycles and emergency vehicles because there is no sound wall protection at all here.
The air quality is another issue. The dust in the air is bad enough already without the addition of another lane added to Lambert and the freeway and the southbound onramp bringing more traffic even closer to our homes. 12-C
Our property values are another issue. How will the additional traffic and noise affect the value of our homes? 12-D
If the proposed project is to go forward, our neighborhood environment's health, safety, quality of living and home values MUST be protected by sufficient sound walls such as the ones built south of Imperial Highway protecting Craig Park and the ones built on protecting the northbound side of the 57 neighborhoods. 12-E

Chris and Cherie Mathews
chrsmathews@yahoo.com
(714) 697-8797

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Response to Comment 12: Chris and Cherie Mathews, April 1, 2015

12-A Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

12-B Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels, long-term 24-hour noise monitoring locations, and truck traffic noise during nighttime hours. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

12-C Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

12-D Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels and Topical Response 3 regarding soundwalls in the southwest quadrant of the project area. Please refer to Topical Response 5 regarding traffic.

Regarding property values, case law and other section s of the California Environmental Quality Act (CEQA) Guidelines further confirm that economic impacts alone are not environmental impacts. For example, CEQA Guidelines Section 15131(1) allows that an environmental document may trace the cause and effect from a project to economic or social changes that in turn result in physical changes, but the "focus of the analysis *shall be on the physical changes*" (emphasis added). Therefore, the Draft IS/EA provides analyses for the physical impacts associated with the proposed project, as well as avoidance, minimization, and/or mitigation measures, for 22 resource topics. Please refer to Response to Comment 6-A regarding proposed project impact analysis within the IS/EA. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

12-E Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project area. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 13: LTC David Dumond, April 1, 2015

Cochran, Paul A@DOT

From: David Dumond [davidcdumond@icloud.com]
Sent: Wednesday, April 01, 2015 8:58 PM
To: D12SR57Lambert@DOT
Subject: 57 lambert project

To whom it may concern,
I have lived at 914 east redbud street for 20 years and have witnessed the progressive loud noise and steady increase of vehicle at the lambert /57 intersection. There has been so much building without the concern of the infrastructure that now we have heavy congestion for many hours at this intersection. It is frustrating to see such a beautiful county turn into another Los Angeles. It the planners had to live next to the highway like my family they would reject the proposed plan. There is more noise and contaminated air than I experience during my tour in Afghanistan. Brea use to be a pleasant place to live. Please don't destroy what little we have. 13-A

LTC David Dumond
914 east redbud street
Brea CA
714 345-6103

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Response to Comment 13: LTC David Dumond, April 1, 2015

13-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Please refer to Topical Response 4 regarding air quality. Please refer to Topical Response 5 regarding traffic and level of service. Your objection is acknowledged and included in the project record. Your objection was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

Comment 14: Dan and Ana Sotomayor, April 1, 2015

Cochran, Paul A@DOT

From: anakarina [anakarinadiva@gmail.com]
Sent: Wednesday, April 01, 2015 9:15 PM
To: D12SR57Lambert@DOT
Subject: State Route 57/Lambert Road interchange improvement project

We, Dan and Ana Sotomayor live at 402 N. Woodland Ave, Brea, and have lived here for over 30 years.

We totally object this project as it'll impact our quality of life, environmental impact, health and safety of our surroundings. 14-A

Furthermore we were not given any notice to attend the meeting on 3/25/2015, and we will be impacted directly. 14-B

The proposed project will impact our quality of life. It'll be much noisier than it already is not taking into consideration the increase in air pollution. Our property value will decrease and our retirement nest egg will be diminished. 14-C

Please feel free to add us to your mailing list, anakarinadiva@gmail.com and provide us with any updates regarding this project and/or any other pending projects which will directly impact us. 14-D

Respectfully, Dan and Ana Sotomayor

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Response to Comment 14: Dan and Ana Sotomayor, April 1, 2015

14-A Your objection to the project is acknowledged and included in the project record. Your objection to the project was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

14-B Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The public meeting was an open house forum and was held from 4 PM until 7 PM. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

14-C Please refer to Topical Response 2 regarding noise levels and Topical Response 4 regarding air quality. Please refer to Response to Comment 6-A regarding proposed project impacts and Response to Comment 12-D regarding property values. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

14-D Thank you for your comment. You have been added to the distribution list for any remaining outreach related to this project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 15: Bob and Cristina Naughton, April 1, 2015

Cochran, Paul A@DOT

From: Naughton, Bob (ES) [Bob.Naughton@adp.com]
Sent: Wednesday, April 01, 2015 9:28 PM
To: D12SR57Lambert@DOT
Subject: SR 57/Lambert Road Interchange Improvement Proposed Project

To Whom this may concern:

We reside at 924 Redbud St. in the City of Brea. The need for a wall on the 57 Freeway to prevent the contamination of exhaust and noise on our side of the freeway is way past due.

- The noise level from the 57 freeway is getting to the point of unbearable. We can't watch TV in our house with the windows open because of the noise. 15-A
- If we are in our backyard or on the patio all you hear are the large trucks.
- The particles of contaminates from the freeway is beyond acceptable levels and our patio furniture is constantly covered in black dust, not to mention what it is doing to our lungs. 15-B
- This contamination will only increase with the growing traffic. 15-C
- This increasing noise and pollution is driving down the property value.

Why we were not better informed of the meeting regarding this project is ridiculous. There currently exist sound walls on the other side of the freeway and in this same area. Why one neighborhood would be taken care of and the other ignored is irresponsible and just openly inviting unnecessary lawsuits. We as residence object to the idea that you would ignore and not add sound walls on our side of the freeway. This is unacceptable and the impact to our health, environment and lose of home value will not be accepted. 15-D 15-E

Bob and Cristina Naughton

Bob Naughton
Cell (714) 420-2212
Office (714) 562-2126
Fax (714) 562-2153
bob_naughton@adp.com

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Response to Comment 15: Bob and Cristina Naughton, April 1, 2015

15-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels, long-term 24-hour noise monitoring locations, and truck traffic noise during nighttime hours. Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

15-B Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

15-C Please refer to Topical Response 2 regarding noise levels and Topical Response 4 regarding air quality. Please refer to Response to Comment 6-A regarding proposed project impacts and Response to Comment 12-D regarding property values. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

15-D Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The public meeting was an open house forum and was held from 4 PM until 7 PM. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

15-E Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 16: Millie Omura, April 1, 2015

Cochran, Paul A@DOT

From: laurie omura [lomura1020@hotmail.com]
Sent: Wednesday, April 01, 2015 9:56 PM
To: D12SR57Lambert@DOT
Subject: 57 Fwy Widening

To whom this may concern,

I was directed to this website by a neighbor. I have lived on Woodland Ave, on the west side of the 57 freeway, for 50 years and have been made aware of the plan to widen the freeway. I object to the widening of the freeway but even more so to the idea of no sound wall. This idea is beyond comprehension and I wish to verbalize my extreme objection to it. We do not deserve this treatment by the City of Brea or the State of California. 16-A

Very Sincerely,
Millie Omura
374 North Woodland Ave
Brea

Sent from Windows Mail

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Response to Comment 16: Millie Omura, April 1, 2015

16-A Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Your objection to the project is acknowledged and included in the project record. Your objection to the project was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

Comment 17: Frank and Elaine Cerrato, April 2, 2015

Cochran, Paul A@DOT

From: Elaine Cerrato [ercerrato@sbcglobal.net]
Sent: Thursday, April 02, 2015 7:08 AM
To: D12SR57Lambert@DOT
Subject: SR 57/Lambert road interchange improvement proposed project

We have lived at 351 Guava Place for 24 years. Although I understand the need to widen the 57 freeway to accommodate the increased traffic I don't believe you have completely reviewed the effects that your plan will have on the community. 17-A
Yesterday was the first I had heard of the proposed plan. There was no attempt to contact the people who live in the neighborhood that would be affected most.
It is my understanding that you don't currently see the need for the taller sound barriers such as were installed on the east side of the 57 freeway. I don't understand why they were needed for the northbound expansion and you believe they are not needed for the south bound expansion. It seems that you are not considering our neighborhoods health, safety and property values.
The noise level from the 57 freeway has significantly escalated in the past 10 years with a particular problem being semi truck drivers engaging their air brakes in the early morning hours. 17-B
With the widening of the freeway there will be even more increased traffic with more noise and more air pollution from exhaust. I don't see where your study addressed this concern.
I do understand that the freeway expansion is necessary. This should not come at the cost of our neighborhoods quality of life. Our health and our property values should be weighed against the benefits and addressed before the project begins.
We object to your current plan that does not take into consideration the well being or quality of life of our neighborhood. 17-C

Sincerely,

Frank & Elaine Cerrato
(714) 865-7705

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Response to Comment 17: Frank and Elaine Cerrato, April 2, 2015

17-A Please refer to Topical Response 1 regarding the noticing of the availability of the Draft IS/EA and the public meeting. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

17-B Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels and truck traffic noise during nighttime hours. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Please refer to Topical Response 4 regarding air quality and Topical Response 5 regarding traffic. Please refer to Response to Comment 6-A regarding proposed project impacts and Response to Comment 12-D regarding property values. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

17-C Your objection to the project is acknowledged and included in the project record. Your objection to the project was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 18: Claude and Linda Pasquis, April 2, 2015

Cochran, Paul A@DOT

From: Claude Pasquis [claude.pasquis@gmail.com]
Sent: Thursday, April 02, 2015 12:57 PM
To: D12SR57Lambert@DOT
Subject: Fwd: 57/Lambert Construction Project

To Whom it May Concern,
We have been living at 302 Guava Pl. since February 1997. The traffic noise and dust landing on our yard from the nearby 57 Fwy has been getting progressively worse as more homes are built nearby and traffic has increased. Much of the noise comes from large trucks using their noisy Jake Brakes to slow down as they are coming down the southbound freeway lanes. 18-A

It is our feeling that as long as improvements are being made again to the freeway nearby, a sound wall should definitely be part of this improvement. It should be located between the Lambert Rd. on ramp to the southbound 57 Fwy and the adjacent homes. There were many sound walls erected during the last round of freeway expansion at different locations on the 57 Fwy. Even Craig Park is protected by a sound wall. 18-B

Please erect a sound wall to protect our homes from the freeway noise along the Lambert Rd. on-ramp to the southbound 57 Freeway.

Respectfully submitted,
Claude Pasquis
Linda Pasquis
302 Guava Pl.
Brea

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Response to Comment 18: Claude and Linda Pasquis, April 2, 2015

18-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels and truck traffic noise during nighttime hours. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Please refer to Topical Response 4 regarding air quality. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

18-B Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 19: Terri Walworth, April 2, 2015

Cochran, Paul A@DOT

From: Terri Walworth [terriwalworth@yahoo.com]
Sent: Thursday, April 02, 2015 3:46 PM
To: D12SR57Lambert@DOT
Subject: Fw: SR 57/Lambert Road Interchange improvement proposed project

My name is Terri Walworth. I live at 353 Woodland Ave Brea, CA. My neighborhood is just on the east side of the sound wall for the Lambert Road Southbound 57 on ramp.

19-A

I was just informed of the proposed project by a neighbor yesterday, April 1. It's unfortunate that CalTrans and the City of Brea did not attempt to directly inform the neighborhoods that would be most impacted by this proposed project.

My first concern regarding this project would be the sound impact. I would assume that the current sound wall will need to be removed in order to complete the construction. I didn't see anywhere in the proposed project that a new sound wall would be erected. What are the plans regarding a sound wall? And what plans are there to mitigate the increased sound during construction? As it is, I am often awakened at night by the sounds of trucks with their air brakes in the middle of the night. I don't know how sleep can be achieved with no sound wall to mask at least some of noise from the freeway. 19-B

It it mentioned in the proposal that most on ramp closures would happen over night. I assume that means that construction will be happening over night. Are there any proposals for sound mitigation during construction, since the on ramp is just a few hundred feet away from homes on Woodland Ave? 19-C

Increased traffic will increase particulate loading in the air in the neighbor hood. How will this be addressed?

NOx and Sulfur emissions will increase with the increased traffic. How will the increase in emissions be mitigated? 19-D

Because of the significant impact on the quality of life and the enviromental impact in the neighborhood, I respectfully object to this project until the above issues has been addressed. 19-E

Thank you,

Terri Walworth
email: terriwalworth@yahoo.com
714-671-3925

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Response to Comment 19: Terri Walworth, April 2, 2015

19-A Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The public meeting was an open house forum and was held from 4 PM until 7 PM. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

19-B Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels and truck traffic noise during nighttime hours. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

19-C Section 2.3.7 discusses construction noise impacts and requires Avoidance and Minimization Measures N-1 and N-2 to reduce construction noise. These avoidance and minimization measures include compliance with the construction hours specified in Caltrans' Standard Specifications and would be required to minimize construction noise impacts on sensitive land uses adjacent to the project site. Construction noise is regulated by Caltrans' Standard Specifications in Section 14-8.02, "Noise Control." The nighttime noise level from the contractor's operations, between the hours of 9:00 PM and 6:00 AM, shall not exceed 86 dBA at a distance of 50 feet. The contractor shall use an alternative warning method instead of a sound signal unless required by safety laws. In addition, the contractor shall equip all internal combustion engines with the manufacturer-recommended mufflers and shall not operate any internal combustion engine on the job site without the appropriate muffler.

19-D Please refer to Topical Response 4 regarding air quality. Further details regarding particulate matter (PM_{10} and $PM_{2.5}$), nitrogen oxides, and sulfur can be found in Section 2.3.6. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

19-E Your objection to the project is acknowledged and included in the project record. Your objection to the project was provided to the PDT for consideration prior to the selection of the preferred alternative.

Comment 20a: Jacquelyn Guss, April 2, 2015

Cochran, Paul A@DOT

From: Jacquelyn Guss [jcqlynguss@sbcglobal.net]
Sent: Thursday, April 02, 2015 3:50 PM
To: D12SR57Lambert@DOT
Cc: suburbandoor@aol.com
Subject: Proposed Widening of Southbound SR57

To: Paul Cochran, Environmental Analysis

From: Jacquelyn Guss, Resident
303 Woodland Avenue
Brea, CA 92821

Having read the Proposed Project and its alternatives for the widening of the southbound SR57, which directly impacts my neighborhood (see Sheet E, pp. 33, 35 & 49, NW quadrant), I see there are no provisions for improving the existing or providing for additional sound walls. My home is on the inside corner of Avocado and Woodland Avenue. The traffic, however, is expected to increase by 33% by 2040. I see, also, that the Brea Overhead Bridge will be widened. Again, no sound wall, although on the northbound side, a new one was erected as part of the northbound widening project. I see that the only proposed sound wall is for the El Torito Restaurant on the northbound side. Really?

Have you been here? The freeway traffic is not only clearly visible, but the noise and air pollution created by it has made both indoor and outdoor living conditions unacceptable. Most of us have installed double paned windows, not as much for their beauty or to reduce energy costs, but to block out freeway noise. These homes were built without sufficient insulation to block out freeway noise, and the walls often shake from the impact of heavy trucks, which accounts for the majority of vehicles. The exteriors of our homes are dirty and grimy, but since we are in a drought most of us hesitate to wash them down. When we have guests over for a bar-b-que, the first comment made is always about how noisy the freeway is and how it must be impossible to enjoy your backyard. All true. I am sending you in a separate email a few pictures taken within the last couple of days to illustrate my point. 20-A

We are original residents, having moved into the neighborhood before the freeway, before the Brea Mall, before the high school was moved, long before Brea became the successful commercial, industrial and residential metropolis it is today. In fact, the builder of our homes told us that the freeway would be"....way over there, beyond those trees." Today that would be about where Associated Road is, as it wanders through Country Hills. When construction of the freeway and the mall began, we were told that no walls would be constructed as it would interfere with the visibility of the mall. In reality, the mall is not visible from the freeway until long past the Brea Overhead. The final insult came when we refinanced, and in the document is a statement sayingthat our property is valued at 10% less than it would be otherwise because of the noise from the freeway.

Please reconsider your plan for the Widening of Southbound SR57 with the impact of the residents in mind. I know i am not the only one to contact you, and I hope that collectively, we will have a positive impact on your action and on your plan. Please feel free to contact me. 20-B

Sincerely,
Jacquelyn Guss
714-529-4411 H
714-883-7093 C

1

Comment 20b: Jacquelyn Guss, April 2, 2015

Cochran, Paul A@DOT

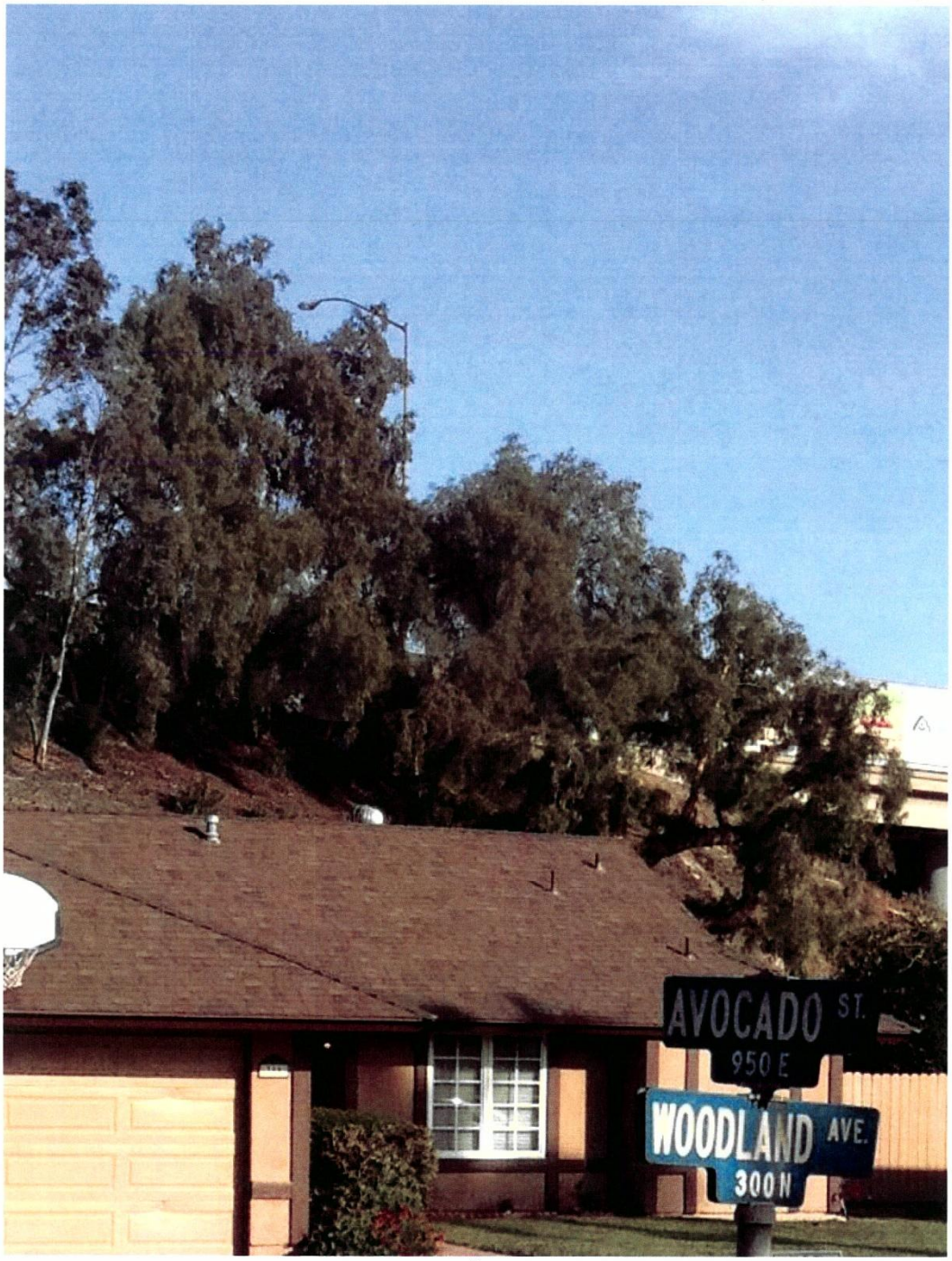
From: Jacquelyn GUSS [jcqlynguss@sbcglobal.net]
Sent: Thursday, April 02, 2015 4:33 PM
To: D12SR57Lambert@DOT
Cc: suburbandoor@aol.com
Subject: Photos Re: Proposed Project SR57

Hi Paul,
Attached are the photos to support our neighborhood's request for sound walls. These were taken from my house and car. Thanks for any help you can give us. 20-C

1

Regards, Jacque Guss

2



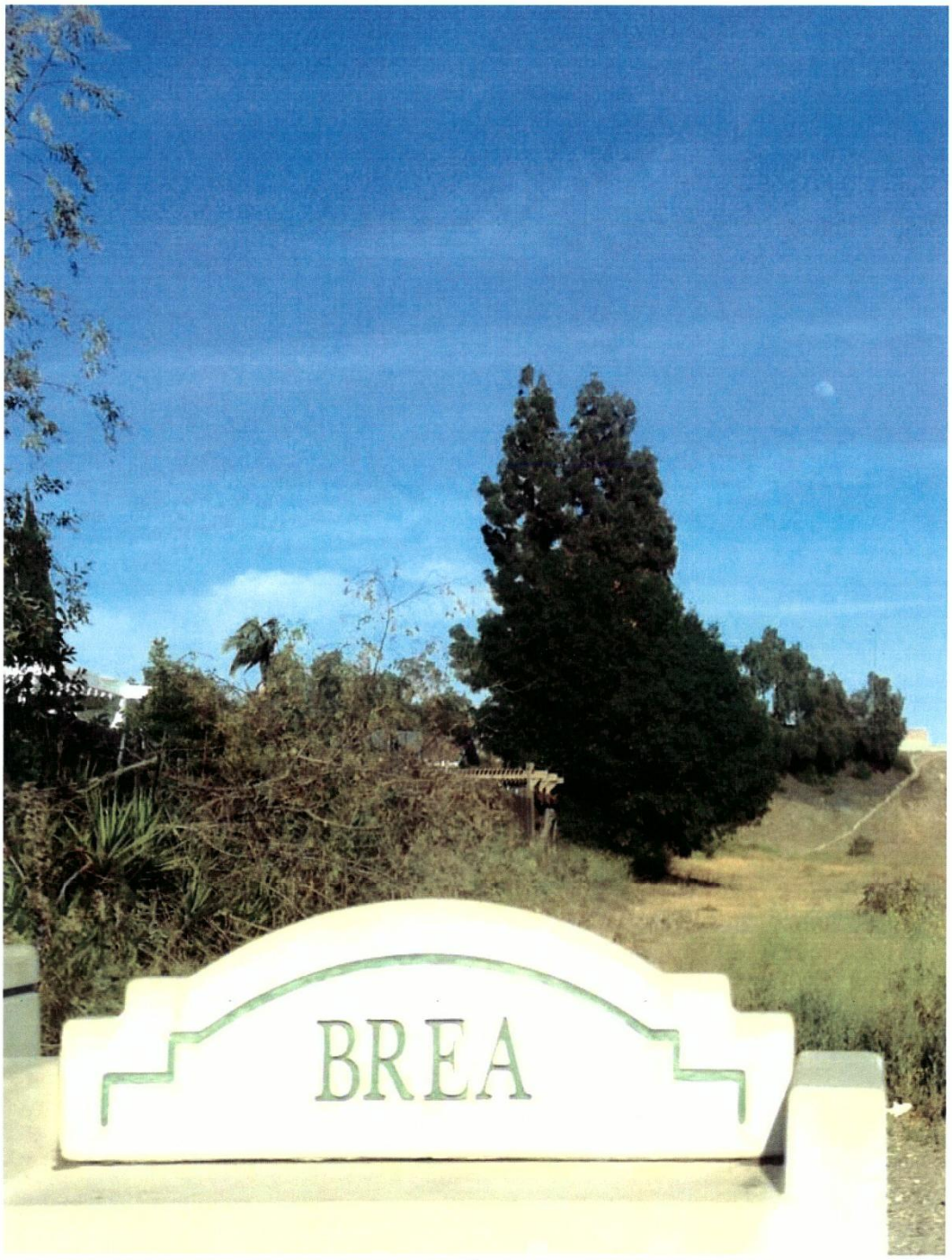
3

PICTURE SUBMITTED DID NOT COME THROUGH

4

5

6



7

Response to Comments 20a and 20b: Jacquelyn Guss, April 2, 2015

20-A Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Please refer to Topical Response 4 regarding air quality. Please refer to Response to Comment 6-A regarding proposed project impacts and Response to Comment 12-D regarding property values. The comment is noted for the project record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

20-B Your request to reconsider the project is acknowledged and included in the project record. Your request to reconsider the project was provided to the PDT for consideration prior to the selection of the preferred alternative.

20-C Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. The photos provided have been included in the project record. The comment was provided to the PDT for consideration prior to the selection of the preferred alternative.

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Comment 21: Dan Kelley, April 2, 2015

Cochran, Paul A@DOT

From: suburbandoor@aol.com
Sent: Thursday, April 02, 2015 10:31 PM
To: D12SR57Lambert@DOT
Subject: SR 57 Project

Paul Cochran,

Greetings to all of our friends at Cal Trans...

Mr. Cochran,
We, the residents and property owners in the most affected neighborhood of single family homes in the SR57/Lambert project area, would like to object!!
We need, want, and deserve a sound wall to preserve our quality of life, property values, and health.
I (we) have asked, for a sound wall, and not a 7 foot trash buffer wall that is the current wall and "standard" 21-A
To be continued....
Dan Kelley
323 Woodland

1

Response to Comment 21: Dan Kelley, April 2, 2015

21-A Please refer to Topical Response 3 regarding soundwalls in the southwest quadrant of the project. Your objection is acknowledged and included in the project record. Your objection was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

Comment 22: Thomas Szynal, April 2, 2015

Cochran, Paul A@DOT

From: Tom Szynal [szynalfamily@sbcglobal.net]
Sent: Thursday, April 02, 2015 10:33 PM
To: D12SR57Lambert@DOT
Cc: timscott0819@gmail.com
Subject: Protest to expansion of freeway and exits

To whom it may concern:

The proposed improvements to the SR-57/Lambert Road Interchange are not acceptable.

Proud owner of my property @ 920 E. Papaya Pl. BREA, Ca. 92821 22-A

Best regards

Thomas Szynal

p.s. I TALK TO MY NEIGHBORS!!!

1

Response to Comment 22: Thomas Szynal, April 2, 2015

22-A Your objection to the project is acknowledged and included in the project record. Your objection to the project was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

3.3.2.3 Comment Card Reponses

Comment 23: Barry Andrews, Comment Card, March 25, 2015

State Route 57/Lambert Road Interchange Improvement Project
Comment Card

Provide your comments in the space below. Please print clearly.

I would like CalTrans to build Alternative 9 of the Site plan.

23-A

To be placed on the project mailing list please provide a residential Mailing address below:

Name Barry Andrews
Address 293 Cattail Circle
City Brea Zip 92821
Email barry_andrews@msn.com

Return comments to:
Department of Transportation
Caltrans, District 12
3347 Michelson Drive, Suite #100
Irvine, CA 92612-1692
Attention: Paul Cochran, Environmental Analysis
Or email: D12SR57Lambert@dot.ca.gov

For special accommodations, please contact Caltrans District 12 Public Information Officer at (949) 724-2021. Telecommunications Devices for the Deaf (TDD) users may contact the California Relay Service TDD line at (800) 735-2929 or Voice Line at (800) 735-2929 (Voice) or 711.

Response to Comment 23: Barry Andrews, Comment Card, March 25, 2015

23-A Your support of Build Alternative 9 is acknowledged and included in the project record. Your support of Build Alternative 9 was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

Thank you for providing your contact information. You have been added to the project mailing list for any future project communication.

Comment 24: Kerry Prindible, Comment Card, March 25, 2015

Caltrans

State Route 57/Lambert Road Interchange Improvement Project
Comment Card

Provide your comments in the space below. Please print clearly.

This is just information for me. I live in the area and wanted to know / be informed

24-A

To be placed on the project mailing list please provide a residential Mailing address below:

Name Kerry Prindible

Address 613 Bryce Canyon Way

City Brea Zip 92821

Email prindiblekm@gmail.com

Return comments to:
Department of Transportation
Caltrans, District 12
3347 Michelson Drive, Suite #100
Irvine, CA 92612-1692
Attention: Paul Cochran, Environmental Analysis
Or email: D12SR57Lambert@dot.ca.gov

For special accommodations, please contact Caltrans District 12 Public Information Officer at (949) 724-2021. Telecommunications Devices for the Deaf (TDD) users may contact the California Relay Service TDD line at (800) 735-2929 or Voice Line at (800) 735-2929 (Voice) or 711.

Response to Comment 24: Kerry Prindible, Comment Card, March 25, 2015

24-A Thank you for your participation in the public meeting; your attendance is appreciated. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

Thank you for providing your contact information. You have been added to the mailing list for any future project communication.

Comment 25: Christopher and Kimberly Madden, Comment Card, March 25, 2015

Caltrans

State Route 57/Lambert Road Interchange Improvement Project
Comment Card

Provide your comments in the space below. Please print clearly.

25-A

To be placed on the project mailing list please provide a residential Mailing address below:

Name Christopher + Kimberly Madden

Address 23360 Raintree Dr.

City Brea Zip 92821

Email Kimberlykmadden@yahoo.com

Return comments to:
Department of Transportation
Caltrans, District 12
3347 Michelson Drive, Suite #100
Irvine, CA 92612-1692
Attention: Paul Cochran, Environmental Analysis
Or email: D12SR57Lambert@dot.ca.gov

For special accommodations, please contact Caltrans District 12 Public Information Officer at (949) 724-2021. Telecommunications Devices for the Deaf (TDD) users may contact the California Relay Service TDD line at (800) 735-2929 or Voice Line at (800) 735-2929 (Voice) or 711.

Response to Comment 25: Christopher and Kimberly Madden, Comment Card, March 25, 2015

25-A Thank you for your participation in the public meeting; your attendance is appreciated. Thank you for providing your contact information. You have been added to the mailing list for any future project communication.

3.3.2.4 Verbal Comment Reponses

Comment 26: Transcript of Proceedings for the Brea Public Meeting, SR-57/Lambert Road, March 25, 2015

In the Matter of:

BREA PUBLIC MEETING SR-57/LAMBERT ROAD

TRANSCRIPT OF PROCEEDINGS

March 25, 2015

Dianne Jones & Associates

Reporting and Videography

P.O. Box 1736
Pacific Palisades, California 90272
310.472.9882

REPORTER'S TRANSCRIPT OF COMMENTS

AT THE PUBLIC MEETING FOR PROPOSED

IMPROVEMENTS TO THE SR-57/LAMBERT ROAD

BREA, CALIFORNIA

WEDNESDAY, MARCH 25, 2015

REPORTED BY:

LorRae D. Nelson
CSR No. 7384

REPORTER'S TRANSCRIPT OF COMMENTS AT THE PUBLIC MEETING FOR PROPOSED IMPROVEMENTS TO THE SR-57/LAMBERT ROAD, held at the City of Brea City Hall, 1 Civic Center Circle, Community Room A, Brea, California, from 4:00 p.m. to 7:00 p.m. on Wednesday, March 25, 2015, before LorRae D. Nelson, Certified Shorthand Reporter No. 7384.

I N D E X

COMMENT:	PAGE
BY MR. STEVEN VARGAS	4
BY MS. CHRISTIE RUSSELL	5

Comment 26a: Steven Vargas, Verbal Comment, March 25, 2015

BREA, CALIFORNIA; WEDNESDAY, MARCH 25, 2015

4:00 P.M. to 7:00 P.M.

-o0o-

COMMENT BY STEVEN VARGAS

MR. VARGAS: My name is Steven Vargas. I'm a Brea city councilman.

I'm concerned about in one of the alternative plans you are suggesting to take out an apartment building. And I'm sure that the property owner has been notified but the tenants. So I've already asked for information if the tenants have been notified. And there is speculation that the tenants have not been notified, what I am hearing as a council member. 26-A

So when you are doing a project that affects Brea voters, whether they own the property or they rent a house or rent an apartment, they should have been notified.

I'm also a bit annoyed that it is March 25th and you are holding this public forum and it has a week left to close, when you could have held it March 1st and given the people a whole month to respond. 26-B

-o0o-

www.diannejonesassociates.com 4
310.472.9882

Comment 26b: Christie Russell, Verbal Comment, March 25, 2015

COMMENT BY CHRISTIE RUSSELL

MS. RUSSELL: Name: Christie Russell, C-h-r-i-s-t-i-e, Russell, R-u-s-s-e-l-l.

Address: 2367 Morning Dew, D-e-w, Drive in Brea. Zip 92821.

Email: Christie.Russell@gmail.com.

First concern, the data from the EIR seems to be outdated so that the noise pollution does not seem to be up to date as of the widening of Imperial and Lambert. The travel data for the 57 freeway and the onramps and offramps for Lambert was 2011, and I believe the EIR takes into effect what again was done through the Lambert widening of 2013. 26-C

Extremely concerned regarding if they do the project with the loop, that they would have to move a 97-inch water distribution, plus a 36-inch, that unintended consequences of the movement would cause water main breaks throughout the City of Brea because we do have older pipes. 26-D

Along with that, I am concerned in regards to the pipelines from So.Cal. Gas, Chevron, Exxon and all of the hazardous material pipelines that would have to be relocated, that there would be the same unintended consequences, movement and then breaks and leakages.

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310.472.9882

If they ended up finding and moving the pipes, that there had been a spill, then how long of a delay would there be in remediating the soil of the delay, who will pay for it. 26-D

Also, I'm concerned about the loss of the sales tax from the Brea Car Wash. That's a loss of over $7,000, plus the community -- or the property tax that they produce.

And also the disruption, if they do the Plan 9 with the disruption of the -- or map plan -- anyway, the one with the loop, where they would be taking part of the Country Hills Apartments, that there would be disruption to tenants. And, again, that would impact the amount of money for Brea citizens and where would they, the tenants, be relocated, so we would lose a tax base there as well. 26-E

And I'm concerned about the decibel level of the construction as well as the overall decibel level of the freeway at this point. 26-F

At least they need an EIR with current data before they even begin to -- before they agree or disagree, as far as I'm concerned, but their data needs to be up to date on all areas before they spend millions of dollars. 26-G

-o0o-

REPORTER'S CERTIFICATE

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

I, LorRae D. Nelson, hereby certify:

I am a duly qualified Certified Shorthand Reporter, in the State of California, holder of Certificate Number CSR 7384 issued by the Court Reporters Board of California and which is in full force and effect.

I am not financially interested in this action and am not a relative or employee of any of the parties.

I am the reporter that stenographically recorded the comments in the foregoing and the foregoing transcript is a true record of the comments given.

Dated: _____

_____

Response to Comment 26a: Steven Vargas, Verbal Comment, March 25, 2015

26-A Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

26-B Please refer to Section 3.3 regarding the dates of the public circulation period. Please refer to Topical Response 1 regarding noticing of the availability of the Draft IS/EA and the public meeting.

Under the California Environmental Quality Act (CEQA), a public meeting is not required for an Initial Study (IS)/Mitigated Negative Declaration (MND). However, the Draft IS/MND must be noticed and made available to the public for comment for a minimum of 30 days. Under the National Environmental Policy Act (NEPA), the Environmental Assessment (EA) must be available to the public for a minimum of 15 days prior to any public meeting or hearing. Thus, the public meeting was held within the last 15 days of the public review period, in compliance with NEPA.

Response to Comment 26b: Christie Russell, Verbal Comment, March 25, 2015

26-C The California Environmental Quality Act (CEQA) contains guidelines related to environmental documentation. CEQA Guidelines Section 15125 states that the environmental document must include a description of the physical environmental conditions in the vicinity of the proposed project as they exist at the time environmental analysis is commenced, from both a local and regional perspective. The environmental analysis commenced in 2011 with the preparation of the project description and the initiation of the technical studies.

As discussed in Section 2.3.7, short-term ambient noise monitoring occurred in 2012; however, three monitoring locations ST-1, ST-3, and ST-4 were obtained from the July 2007 Traffic Noise Impact Technical Report for the State Route (SR) 57 Northbound Widening Project because the existing conditions for the proposed project are the conditions before the construction of the SR-57 Northbound Widening Project. Existing condition noise level measurements could not be obtained at ST-1, ST-3, and ST-4 because K-rails were already placed along the edge of shoulder on the northbound side of SR-57 and changes to the site were already made as part of the SR-57 Northbound Widening Project. As shown in Figure 2.3.7-2a, ST-1 is located on the east side of SR-57 between Birch Street and the former railroad right-of-way, while ST-3 and ST-4 are located on the east side of SR-57 between the former railroad right-of-way and Lambert Road. Similarly, because the proposed project commenced in 2011, existing conditions for traffic data is 2011 for the freeway mainline, on- and off-ramps, and roadway segments and intersections. No revisions to the IS/EA are warranted.

26-D As discussed in Section 2.2.4, the proposed project would impact various underground and overhead utilities, which would require protection in place, removal, replacement, or relocation. Replacement and relocation of utilities would be conducted in cooperation with utility owners. It is expected that all utilities that require relocation would be relocated within the proposed project limits. An updated utility search would be required during the final design phase of the proposed project to determine all utility conflicts that require positive location and/or relocation. Table 2.2.4-1 provides a list of the utility providers and the potential impacts to the utilities. UES-1 requires the City coordinate with all affected utility providers to establish exact procedures and specifications for all facilities to be relocated. Additionally, the project engineer will notify other service purveyors in the vicinity of the improvements to verify that the relocations do not disrupt services to the community. UES-3 requires the at least 48 hours prior to commencement of excavation work, the City will contact Underground Service Alert (USA) to verify the nature and location of other existing underground utilities, and to avoid the unplanned disruption of pipes or service lines.

In addition, Section 2.3.5 further discusses impacts related to hazardous materials. This includes HAZ-6 and HAZ-7, which provide guidance to contractors should evidence of petroleum products, or other suspect materials or wastes, be discovered during soil excavation or other construction-related activities.

26-E CEQA Guidelines Section 15131(1) allows that an environmental document may trace the cause and effect from a project to economic or social changes that in turn result in physical changes, but the "focus of the analysis *shall be on the physical changes*" (emphasis added). Therefore, the Draft IS/EA provides analyses for the physical impacts associated with the project, as well as avoidance, minimization, and/or mitigation measures, for 22

resource topics. Specifically, Section 2.2.3 discusses and analyzes community impacts as they relate to community character and cohesion, relocations, and environmental justice. The impacts related to fiscal conditions as they relate to the proposed project's physical impacts are provided in Section 2.2.3.1, Community Character and Cohesion. Please refer to Response to Comments 2-E and 3-D regarding relocation impacts.

26-F Please refer to Topical Response 2 regarding existing and operational (long-term) noise levels. Please refer to Response to Comment 19-C regarding construction noise. The comment is noted for the record and was provided to the project development team (PDT) for consideration prior to the selection of the preferred alternative.

26-G Please refer to Response to Comment 26-C regarding the proposed project's existing conditions as defined by CEQA. The comment is noted for the record and was provided to the PDT for consideration prior to the selection of the preferred alternative.

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CHAPTER 4 – LIST OF PREPARERS

The Initial Study/Environmental Assessment (IS/EA) was prepared by the California Department of Transportation – District 12 (Caltrans) in cooperation with the City of Brea. The following individuals were involved in the preparation of this IS/EA.

4.1 PREPARERS

Bo Burick, PE, Vice President, RBF Consulting. M.A. Civil Engineering, University of California, Irvine; 21 years experience. ***Contribution: Project Manager, Project Engineer***

Darin Johnson, PE, Senior Vice President, RBF Consulting. M.B.A. Business Administration, Georgia State University, B.S. Civil Engineering, North Dakota State University; 30 years experience. **Contribution: Project Engineer**

Bruce R. Grove Jr., REA, Vice President, Kimley-Horn. B.S. Environmental Planning, California State University, Chico; 17 years experience. ***Contribution: Environmental QA/QC, and Initial Study/Environmental Assessment***

Christa Redd, Senior Environmental Planner, Kimley-Horn. M.S. Environmental and Natural Resource Sciences, University of Nevada, Reno; 16 years experience. ***Contribution: Environmental Project Manager, Initial Study/Environmental Assessment, Technical Study QA/QC***

Nicole Marotz, LEED AP, AICP, Senior Environmental Planner, RBF Consulting. M.U.E.P. Urban and Environmental Planning, University of Virginia, Charlottesville; 18 years experience. ***Contribution: Initial Study/Environmental Assessment***

Richard Beck, Senior Associate, RBF Consulting. B.S. Environmental Studies, University of California, Santa Cruz; 14 years experience. ***Contribution: Phase I Initial Site Assessment***

Kristen Bogue, Environmental Analyst, RBF Consulting. B.S. Environmental Analysis and Design, University of California, Irvine; 7 years experience. ***Contribution: Phase I Initial Site Assessment, Visual Impact Analysis, Initial Study/Environmental Assessment***

Debby Hutchinson, Graphic Designer, RBF Consulting. B.F.S. Illustration, California State University, Long Beach; 40 years experience. ***Contribution: Graphics for technical studies and Initial Study/Environmental Assessment***

Nora Jans, LEED AP, Environmental Planner, RBF Consulting. B.A. Environmental Studies, University of California, Santa Cruz; 12 years experience. ***Contribution: Water Quality Report***

Cathy Johnson, ASLA, Landscape Architect, RBF Consulting. B.S. Ornamental Horticulture, Washington State University, Pullman; 20 years experience. ***Contribution: Visual Impact Assessment***

Achilles Malisos, Environmental Analyst, RBF Consulting. M.A. Urban and Regional Planning, University of California, Irvine; 7 years experience. ***Contribution: Air Quality, Initial Study/Environmental Assessment***

Wesley Salter, Regulatory Specialist, RBF Consulting. Forestry and Natural Resources, California Polytechnic University, San Luis Obispo; 6 years experience. ***Contribution: Storm Water Data Report***

Lane Simmons, GIS Specialist, RBF Consulting. B.S. Environmental Policy, Analysis, and Planning (Minor, Geographic Information Systems), University of California, Davis; 9 years experience. Contribution: ***Contribution: Initial Study/Environmental Assessment***

Eddie Torres, Director of Technical Studies, RBF Consulting. M.S. Mechanical Engineering, University of Southern California; 13 years experience. ***Contribution: Visual Impact Analysis, Air Quality Assessment, Initial Study/Environmental Assessment***

4.2 SUBCONSULTANTS

Deborah Pracilio, LSA Associates, Inc.

King Thomas, LSA Associates, Inc.

Keith Lay, LSA Associates, Inc.

Jason Lui, LSA Associates, Inc.

Ron Brugger, LSA Associates, Inc.

Nicole West, LSA Associates, Inc.

Terri Fulton, LSA Associates, Inc.

Brooks Smith, LSA Associates, Inc.

Agnieszka Napiatek, LSA Associates, Inc.

Sarah Barrera, LSA Associates, Inc.

Cassandra Carlin, Stantec

Mauricio Escobar, Roux Associates, Inc.

Kyle Higgs, Roux Associates, Inc.

4.3 CITY OF BREA

Kanwal Singh, City of Brea

Raul Lising, City of Brea

4.4 CALTRANS REVIEWERS

Pija Ansari, Caltrans District 12, Project Management Department

Reza Aurasteh, Caltrans 12, Branch Chief, Environmental Engineering

Robert Enriquez, Caltrans District 12, Branch Chief, Right of Way Division

Eric Dickson, Caltrans District 12, Office Chief, Landscape Architecture

Mili Lim, Caltrans District 12, Design Chief

Charles Baker, Caltrans District 12, Branch Chief, Environmental Planning

Scott Rothenberg, Caltrans District 12, Environmental Planning

Paul Cochran, Caltrans District 12, Environmental Branch B

Julio Ramirez, Caltrans District 12, Environmental Engineering

Arman Behtash, Caltrans District 12, Environmental Engineering

Jane Levy, Caltrans District 12, Righ-of-Way

Batolome Rivera, Caltrans District 12, Traffic

Cheryl Sinopoli, Caltrans District 12, PQS Prehistoric Archaeology Co-PI

Kedest Ketsela, Caltrans District 12, District Biologist

Hector Salas, Caltrans District 12, National Pollutant Discharge Elimination System (NPDES)

Gustavo Ortega, Caltrans Headquarters, Geological Studies

Brenda Chang, Caltrans Headquarters, Climate Change

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CHAPTER 5 – DISTRIBUTION LIST

Public notices with respect to the SR-57/Lambert Road Interchange Improvement Project were sent to addresses for properties adjacent to, or in close proximity of, the project alignment and to the individuals and/or organizations listed in the distribution list below, who have previously requested to receive information regarding the proposed project.

The Honorable Barbara Boxer 312 N. Spring Street, Suite 1748 Los Angeles, CA 90012	The Honorable Dianne Feinstein 11111 Santa Monica Blvd., Suite 915 Los Angeles, CA 90025	The Honorable Ed Royce 39th District 210 W. Birch Street, Suite 201 Brea, CA 92821
Assembly Member Curt Hagman 55th District 13920 City Center Drive, Suite 260 Chino Hills, CA 91709	Senator Bob Huff 29th District 1800 E. Lambert Road, Suite 150 Brea, CA 92821	
Mayor Ron Garcia City of Brea 1 Civic Center Circle Brea, CA 92821	Mayor Pre Tem Brett Murdock City of Brea 1 Civic Center Circle Brea, CA 92821	Councilmember Christine Marick City of Brea 1 Civic Center Circle Brea, CA 92821
Councilmember Roy Moore City of Brea 1 Civic Center Circle Brea, CA 92821	Councilmember Marty Simonoff City of Brea 1 Civic Center Circle Brea, CA 92821	U.S. Fish and Wildlife Service Division of Ecological Services 2800 Cottage Way #W-2605 Sacramento, CA 95825-1846
U.S. Environmental Protection Agency, Region 9 Office 75 Hawthorn Street San Francisco, CA 94105	Federal Aviation Administration Western Reg Office/ Airport Div - AWP 600 P.O. Box 92007 Los Angeles, CA 90009	U.S. Army Corps of Engineers Regulatory Division 1325 "J" Street, #1350 Sacramento, CA 95814-2920
California Office of Planning and Research, State Clearinghouse P.O. Box 3044 Sacramento, CA 95812-3044	State Air Resources Board Stationary Resource Division P.O. Box 2815 Sacramento, CA 95812	California Highway Patrol Planning & Analysis Division P.O. Box 942898 Sacramento, CA 94298-0001
Native American Heritage Commission 1550 Harbor Blvd. West Sacramento, CA 95691		
APN 319-041-14 480 N State College Blvd. Brea, CA 92821-4215	APN 319-041-13 Orange County Transit 11222 Acacia Parkway Garden Grove, CA 92840-5208	APN 319-031-47, 319-021-01, 319-021-59, 319-021-60, 319-021-61, 319-021-62, 319-021-63, and 319-022-27 City of Brea 1 Civic Center Circle Brea, CA 92821-5792

APN 319-031-42 City of Brea, Redevelopment Agency C018 C/O Eric Nicoll 1 Civic Center Circle Brea, CA 92821-5792	APN 319-022-02 389 Pomelo Avenue Brea, CA 92821-4129	APN 319-371-16 One Pointe Brea Corp 7 Corporate Plaza Drive Newport Beach, CA 92660-7904
APN 320-101-14 Global Pacific Lambert, LLC 20888 Amar Road #203 Walnut, CA 91789-5054	APN 320-101-10 Country Woods Association B900 C/O Western Natl Prop Mgt P.O. Box 19528 Irvine, CA 92623-9528	APN 320-101-19 1770 E Lambert Road #230 Brea, CA 92821-8001 C028
APN 320-101-19 5500 Trabuco Road Suite 100 Irvine, CA 92620-5753 C022	APN 320-101-17 Beach Business BK 180 E Ocean Blvd. #100 Long Beach, CA 90802-4749	

CHAPTER 6 – REFERENCES

California Air Resources Board. 2013. Ambient Air Quality Standards. [online]: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed on April 9, 2014.

City of Brea. 2012. Brea Fire Department Information. [online]: http://www.ci.brea.ca.us. Accessed on February 14, 2012.

_____. 2012. Brea Police Department Information. [online]: http://www.ci.brea.ca.us. Accessed on February 14, 2012.

Department of Conservation, Division of Land Resources. 2010. Orange County Farmland Map 2010. [online]: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/ora10.pdf. Accessed on December 13, 2011.

Earth Mechanics, Inc. 2013a. Preliminary Geotechnical Design Report for SR-57/Lambert Road Interchange Improvements. July 2013.

_____. 2013b. Preliminary Materials Report, SR-57/Lambert Road Interchange Improvement. July 2013.

Federal Emergency Management Agency. 2012. Flood Insurance Rate Map Panel Number 06059C0042J. [online]: http://www.fema.gov/hazard/flood/info.shtm. Accessed March 23, 2012.

LSA Associates, Inc. 2014a. Noise Abatement Decision Report for the SR-57/Lambert Road Interchange Improvement Project. February 2014.

_____. 2014b. Natural Environment Study for the SR-57/Lambert Road Interchange Improvement Project with the Jurisdictional Delineation Report. November 2013.

_____. 2013b. Noise Study Report for the SR-57/Lambert Road Interchange Improvement Project. April 2013.

_____. 2012a. Community Impact Assessment for State Route 57/Lambert Road Interchange Improvement Project. October 2012.

_____. 2012b. Historic Property Survey Report for SR-57/Lambert Road Interchange Improvement Project. August 2012. Approved October and November 2012.

_____. 2012c. Archaeological Survey Report for SR-57/Lambert Road Interchange Improvement Project. October 2012.

_____. 2012d. Paleontological Resources Identification and Evaluation Report for State Route 57/Lambert Road Interchange Improvement Project. June 2012.

_____. 2012e. Relocation Impact Memorandum for SR-57/Lambert Road Interchange Improvement Project. April 27, 2012. Approved June 2012.

RBF Consulting. 2014. Visual Impact Assessment for SR-57/Lambert Road Interchange Improvement Project. January 2014.

_____. 2013a. Air Quality Assessment for the State Route 57/Lambert Road Interchange Improvement Project. January 2013. Approved May 2013.

_____. 2013b. Phase I Initial Site Assessment for SR-57/Lambert Road Interchange Improvement Project. January 2013.

_____. 2012a. Preliminary Storm Water Data Report for SR-57/Lambert Road Interchange Improvement Project. May 2012.

_____. 2012b. Water Quality Assessment Report for SR-57/Lambert Road Interchange Improvement Project. April 2012. Approved June 2012.

Roux Associates, Inc. 2013. Phase II Subsurface Investigation Report, Brea Auto Spa, 1700 East Lambert Road, Brea, California, 92618. August 2013.

Stantec. 2012. SR-57/Lambert Road Interchange Project, Project Approval/Environmental Document, Traffic Study. July 2012.

Appendix A

CEQA Checklist

Appendix A. CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures under the appropriate topic headings in Chapter 2.

CEQA Environmental Checklist

12-ORA-57	**20.1/21.8**	**0C110_**
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☒	☐
Implementation of the proposed project, both Build Alternatives 7A and 9, would result in modifications to the SR-57/Lambert Road interchange. Overall, proposed conditions would be similar to existing conditions with respect to viewer response and changes in views. Impacts would be less than significant as a result of the proposed project. Refer to Section 2.2.6, Visual/Aesthetics, for further detail.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
The proposed project site does not include any officially designated State scenic highways. SR-57 between Imperial Highway and SR-60 is eligible as a California State Scenic Highway. Existing landscaping would be replaced to maintain the existing character. No impacts would occur as a result of the proposed project. Refer to Section 2.2.6, Visual/Aesthetics, for further detail.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
A soundwall will be considered along northbound SR-57 along the outdoor patio for the El Torito Grill Restaurant. A new block soundwall would obstruct views of the surrounding developed area of Brea from the El Torito Grill Restaurant outdoor patio area, as well as change the character of the landscape for these viewers. Implementation of mitigation measure VIS-5 would require a transparent soundwall. Several carport structures and two apartment buildings would be removed and an internal access road would be realigned as part of Build Alternative 7A at the Country Woods Apartment Homes. The residents at Country Woods Apartment Homes would have long-duration views to proposed project				

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

improvements and would have a high awareness of the proposed project changes. Implementation of Build Alternative 7A would result in direct views to the proposed northbound SR-57 on- and off-ramps from these residences. Implementation of mitigation measure VIS-3 would require an opaque perimeter wall or appropriate landscaping to screen direct views from the Country Wood Apartment Homes to the proposed project. Impacts would be less than significant with the incorporation of mitigation. Refer to Section 2.2.6, Visual/Aesthetics, for further detail.

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

Implementation of the proposed project, both Build Alternatives 7A and 9, would result in modifications to the SR-57/Lambert Road interchange. Overall, proposed conditions would be similar to existing conditions with respect to light or glare. Impacts would be less than significant as a result of the proposed project. Refer to Section 2.2.6, Visual/Aesthetics, for further detail.

II. AGRICULTURE AND FOREST 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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

There are no designated farmlands located within or adjacent to the SR-57/Lambert Road interchange. The proposed project would not convert farmland to non-agricultural uses. No impacts would occur as a result of the proposed project. Refer to Section 2.1, *Environmental Issues with No Impacts*, for further detail.

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

There are no land uses within or adjacent to the proposed project that are zoned for agricultural uses. There are no properties within or adjacent to the project site that currently have a Williamson Act Contract. No impacts would occur as a result of the proposed project. Refer to Section 2.1, *Environmental Issues with No Impacts*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

There are no designated forest lands or timberlands within or adjacent to the project area. No land uses within or adjacent to the project area are zoned as forest land or timberland. No impacts would occur as a result of the proposed project. Refer to Section 2.1, *Environmental Issues with No Impacts*, for further detail.

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

There are no designated forest lands is within or adjacent to the project area. The proposed project would not convert forest land to non-forest land. No impacts would occur as a result of the proposed project. Refer to Section 2.1, *Environmental Issues with No Impacts*, for further detail.

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

The proposed project would improve an existing interchange within an urban setting. The proposed project would not result in conversion of farmland to non-agricultural uses nor would it convert forest land to non-forest uses. No impacts would occur as a result of the proposed project. Refer to Section 2.1, *Environmental Issues with No Impacts*, for further detail.

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?	☐	☐	☐	☒

The proposed project is listed in the 2012 financially constrained Regional Transportation Plan which was found to conform by the State Implementation Plan (SIP) by FHWA and FTA on June 4, 2012 (RTP IDs 2M0724 and ORA000107). The project is also included in the SCAG financially constrained 2013 Federal Transportation Improvement Program (FTIP) (RTP ORA120320). The SCAG FTIP was determined to conform by FHWA and FTA on December 13, 2012. The proposed project would not conflict with or obstruct implementation of an applicable air quality plan. No impacts would occur as a result of the proposed project. Refer to Section 2.3.6, *Air Quality*, for further detail.

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

Short-term construction particulate matter emissions would be reduced with the implementation of required dust suppression measures outlined within the South Coast Air Quality Management District Rule 402 and 403. The California Department of Transportation (Caltrans) Standard Specifications for Construction (Section 10 and 18 [Dust Control] and Section 39-3.06 [Asphalt Concrete Plants]) would also be adhered to. Therefore, project construction would not violate state or federal air quality standards or contribute to the existing air quality violations in the South Coast Air Basin.

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

A carbon monoxide (CO) hot-spot analysis concluded that implementation of the proposed project would alleviate several peak-hour deficiencies and would reduce congestion and overall travel time.

Therefore the project would have a less than significant impact. Refer to Section 2.3.6, *Air Quality*, for further detail.

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)?	☐	☐	☒	☐

The proposed project does not qualify as a POAQC pursuant to the March 10, 2006, final rule. The proposed project is not a new highway project that would have a significant number of, or increase in, diesel vehicles. In addition, the proposed project would not result in significant changes in traffic volume, vehicle mix, or other factors that would cause an increase in emissions compared to the No Build condition. The proposed project would reduce congestion and localized idling levels and thus would not cause or contribute to a violation of NAAQS for PM10.

Project construction would result in temporary emissions of CO, NOX, ROG, PM2.5, and PM10. The proposed project would implement applicable Best Available Control Measures from the SCAQMD Rule 403 and Rule 403.1, and implement avoidance and minimization measures shall be utilized to reduce and otherwise address impacts during construction. The proposed project would comply with any state, federal, and/or local rules and regulations developed as a result of implementing control and mitigation measures proposed as part of their respective SIPs. Therefore, project construction is not anticipated to violate state or federal air quality standards or contribute to the existing air quality violations in the SCAB.

Impacts from the proposed project are less than significant. Refer to Section 2.3.6, *Air Quality*, for further detail.

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

Sensitive receptors located near the proposed project include residential uses, institutional uses, and parks. These sensitive receptors would have short-term impacts during the construction phase of the proposed project. Impacts would cease subsequent to construction. Impacts are less than significant. Refer to Section 2.3.6, *Air Quality*, for further detail.

e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Exhaust emissions and odors from construction equipment and paving equipment would occur temporarily during project construction. However, implementation of applicable Best Available Control Measures from the SCAQMD Rule 403 and Rule 403.1, and implementation of avoidance and minimization measures shall be utilized to reduce and otherwise address impacts during construction. Impacts are less than significant. Refer to Section 2.3.6, *Air Quality*, for further detail.

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

The Biological Study Area (BSA) does not contain suitable habitat to support any of the special-interest plant species. The BSA supports suitable habitat for a variety of special-status wildlife species. USFWS-designated critical habitat for the California gnatcatcher (CAGN) is located within the northern portion of the proposed project site, within the BSA. No sensitive or special-interest animal species were observed or otherwise detected in the BSA at the time of the field visit. Although no direct take of CAGN is expected due to the low quality of habitat within the BSA, take of designated critical habitat would occur as a result of both Build Alternatives. Implementation of mitigation measure TE-1 would require sage scrub-grassland vegetation replacement at ratios of 2:1 for permanent effects and 1:1 for temporary effects. Additional minimization measures would be incorporated into the proposed project to ensure impacts are less than significant. Refer to item IV.b, below, and to Section 2.4, *Biological Environment*, specifically Sections 2.4.3, *Plant Species*, 2.4.4, *Animal Species*, and 2.4.5, *Threatened and Endangered Species*, for further detail.

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?	☐	☒	☐	☐

No riparian habitat was identified within the BSA. Drainage Feature H satisfies USACE jurisdictional criteria for waters of the U.S.; therefore, Drainage Feature H is also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Drainage Feature H is located in an area identified as a temporary staging area and construction vehicle access. Drainage Feature H is considered an environmentally sensitive area (ESA). ESA fencing would be erected outside the jurisdictional limits of Drainage Feature H to ensure avoidance during construction. Therefore, impacts in this regard are considered less than significant. Refer to Section 2.4.2, *Wetlands and Other Waters*, for further detail.

As stated in item IV.a, above, USFWS-designated critical habitat for the CAGN is located within the northern portion of the proposed project site, within the BSA. Temporary (short-term) impacts would only occur during construction activities to allow for construction and equipment staging. Temporary effects to sage scrub-grassland would be limited to incidental encroachment and areas where existing topography would be restored. Because of the low quality and the small amount of impacts to USFWS-designated CAGN critical habitat, less than 0.5 acre, operational (long-term) impacts are considered less than significant. Implementation of mitigation measure TE-1 would require sage scrub-grassland vegetation replacement at ratios of 2:1 for permanent effects and 1:1 for temporary effects. Additional minimization measures would be incorporated into the proposed project to ensure impacts are less than significant. Refer to Section 2.4, *Biological Environment*, specifically Sections 2.4.3, *Plant Species*, 2.4.4, *Animal Species*, and 2.4.5, *Threatened and Endangered Species*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Eight drainage features are within the BSA. An Arid West Region Wetland Determination Data Form was completed for Drainage H and the drainage feature did not qualify as wetlands based on the lack of sufficient hydrophytic vegetation. Due to the historic connection to a TNW (the Pacific Ocean via Fullerton Creek and the San Gabriel River), it is anticipated that the USACE would assert jurisdiction over this drainage as nonwetland waters of the U.S. Therefore, no wetlands were identified within the project site. No impact would occur in this regard. Refer to Section 2.4.2, *Wetlands and Other Waters*, for further detail.

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?	☐	☐	☒	☐

The surrounding area west and south of the BSA is highly developed; however, the surrounding area east and north of the BSA is connected to a large, undeveloped area associated with the Puente/Chino Hills. Due to the high level of disturbance and substantial portion of the BSA that is developed, the site does not appear to function as a wildlife movement corridor. Impacts are less than significant. Refer to Section 2.4.1, *Natural Communities*, for further detail.

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

The proposed project would be consistent with local policies and ordinances protecting biological resources. The proposed project incorporates best management practices, ESA fencing, and existing landscaping would be replaced to maintain the existing character. Impacts are considered less than significant. Refer to Section 2.4, *Biological Environment*, for further detail.

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?	☐	☐	☐	☒

There are no adopted habitat conservation plans (HCPs) or natural community conservation plans (NCCPs) that cover the proposed project. No impacts would occur as a result of the proposed project. Refer to Section 2.4.1, *Natural Communities*, for further detail.

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐

Archival research identified one historic built-environment resource that extends into the northern portion of the Area of Potential Effects (APE) on SR-57, and the eastern portion of the APE on Lambert Road. This resource, 30-177012, is known as the Brea-Olinda Oil Field. No remnants of the oil field were observed or identified within the proposed project's APE during the field visit. According to the California Department of Conservation Online Mapping System, no oil wells have been recorded within the proposed project's APE. There are no resources within 0.5 mile of the APE that are listed in the

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

National Register, the California Register, California Historical Landmarks, or as a California Point of Historical Interest. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find. Additional surveys would be required if the proposed project changes to include areas not previously surveyed. Therefore, impacts are considered less than significant. Refer to Section 2.2.7, *Cultural Resources*, for further detail.

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

No prehistoric archaeological resources were identified within 0.5 mile of the APE during the archival research, Native American consultation, and field survey. Two historic archaeological sites were identified within a 0.5-mile radius of the APE, 30-001624 and 30-001625. These are both included in the boundaries of the Brea-Olinda Oil Field and are likely associated with historic oil development in the area. No surface evidence of the oil field was observed during the field survey. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find. Additional surveys would be required if the proposed project changes to include areas not previously surveyed. Therefore, impacts are considered less than significant. Refer to Section 2.2.7, *Cultural Resources*, for further detail.

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

The Natural Museum of Los Angeles County (LACM) has no records of vertebrate fossil localities within the Area of Project Disturbance (APD). No paleontological resources were observed during the field survey in December 2011. No paleontological localities are known to exist within the boundaries of the APD; however, all units that the proposed project crosses have the potential to contain significant paleontological remains. Since the Alluvial Fan Deposits, the La Habra Formation, and the Fernando Formation all have the potential to contain paleontological resources and have a high paleontological sensitivity rating with potential for significant resources. With implementation of mitigation measure PALEO-1, effects to paleontological resources are less than significant. Refer to Section 2.2.7, *Cultural Resources*, for further detail.

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

No known cemeteries are located within the proposed project APE. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA 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) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains would contact the City of Brea and Caltrans District 12 Environmental Branch 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. Therefore, impacts are considered less than significant. Refer to Section 2.2.7, *Cultural Resources*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

The proposed project is not located within an Alquist-Priolo Fault Zone. The potential earthquake hazards are prevalent throughout California and is not unique to the study area. Conformance with the California Building Code (CBC), as well as adherence to standard engineering practices would result in less than significant impacts in this regard. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

The Whittier-Elsinore fault is located to the north of the proposed project site. The Puente Hills (Coyote Hills) fault is located to the south of the proposed project site. Geologic and seismic hazards are prevalent throughout California and are not unique to the study area. Conformance with the California Building Code (CBC), as well as adherence to standard engineering practices would reduce the effects of seismic ground shaking. Impacts are less than significant. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

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

The proposed project is not located within a liquefaction hazard area. No unusual water extractions or other practices would occur that are typically associated with subsidence/liquefaction effects. In addition, the minor amounts of surface material, which would be removed, and the soils being disrupted/displaced would be compacted during proposed project construction. Adherence to the CBC and standard Caltrans design criteria would continue to be required. Impacts are less than significant. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

iv) Landslides?	☐	☐	☒	☐

The proposed project is not located within, or near, a landslide hazard area. The proposed project area consists of gently sloping topography and surrounding areas are gently sloping with no unusual geographic features. Impacts associated with landslides or mudslides are not anticipated. Measures such as soil compaction requirements set forth within the Geotechnical Investigation prepared for this proposed project, as well as standard Department and City design parameters, would reduce any potential impacts associated with slope stability. In addition, Caltrans' and City's standard design practices would be applied to retaining walls included in the Build Alternatives. Impacts are less than significant. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

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

Construction activities, such as grading and trenching, would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. The impact of the construction activities would be short-term. The City and Caltrans would be required to comply with standard engineering practices for erosion control and a qualified soils engineer would monitor soil compaction during construction. Implementation of the required Storm Water Pollution Prevention Plan (SWPPP) would

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

minimize potential soil erosion impacts. In addition, implementation of erosion control measures and adherence to all requirements set forth in the National Pollutant Discharge Elimination System (NPDES) permit required for construction activities would reduce construction-related erosion and siltation impacts (refer to Section 2.3.2, *Water Quality and Storm Water Runoff*). . Impacts are less than significant. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

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?	☐	☐	☒	☐

Refer to item VI.a, above. The proposed project is not located within, or near, a landslide hazard area. The proposed project is not located within a liquefaction hazard area. There are soils within the proposed project area, specifically the Myford Soil series that are known for their shrink-swell potential. As with seismic ground shaking, conformance with the CBC as well as adherence to standard engineering practices would reduce the potential effects of expansive soils. Impacts are less than significant. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

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?	☐	☐	☒	☐

Refer to item VI.c, above. There are soils within the proposed project area, specifically the Myford Soil series that are known for their shrink-swell potential. As with seismic ground shaking, conformance with the CBC as well as adherence to standard engineering practices would reduce the potential effects of expansive soils. Impacts are less than significant. Refer to Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

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

The proposed project would construct improvements to the SR-57/Lambert Road interchange. No septic tanks or alternative waste water disposal systems would be constructed as a result of this project. Therefore, no impact would occur in this regard.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.			
VIII. 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?	☐	☐	☒	☐

SR-57 and Lambert Road are located within the project site. Current routes for transporting hazardous materials include SR-57 for regional transport and Lambert Road for local transport. The Build Alternatives would continue existing exposure to transport of hazardous materials and hazardous waste associated with vehicles use of SR-57 and Lambert Road. No new permanent hazardous materials or hazardous waste impacts (direct or indirect) are anticipated beyond existing conditions. Impacts are less than significant. Refer to Section 2.3.5, *Hazardous Waste/Materials*, for further detail.

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?	☐	☐	☒	☐

During proposed project construction, there is a possibility of accidental release of hazardous substances. The level of risk associated with an accidental release of hazardous substances is not considered significant because the volume of hazardous materials utilized during construction is small and their concentrations are low. The contractor would be required to use standard construction controls and safety procedures, which would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law. Avoidance and minimization measures would be implemented (i.e., requiring disposal of construction waste at appropriate, permitted disposal facilities and consultation with appropriate agencies if unknown hazards are encountered). Impacts are less than significant. Refer to Section 2.3.5, *Hazardous Waste/Materials*, for further detail.

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

Brea Olinda High School is located near the northeastern boundary of the proposed project. The level of risk associated with an accidental release of hazardous substances is not considered significant because the volume of hazardous materials utilized during construction is small and their concentrations are low. The contractor would be required to use standard construction controls and safety procedures, which would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are

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

appropriately contained and remediated as required by local, state, and federal law. Avoidance and minimization measures would be implemented (i.e., requiring disposal of construction waste at appropriate, permitted disposal facilities and consultation with appropriate agencies if unknown hazards are encountered). Impacts are less than significant. Refer to Section 2.3.5, *Hazardous Waste/Materials*, for further detail.

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?	☐	☐	☒	☐

Build Alternative 9 would not impact a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No impact would result from Build Alternative 9. Refer to Section 2.3.5, *Hazardous Waste/Materials*, for further detail.

The Brea Car Wash & Detail Center (1700 East Lambert Road) is located within the proposed project boundaries and is listed within the UST and HAZNET databases. Soil samples from seven soil boring locations were obtained from the site. There were no detections of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylene (BTEX), or fuel oxygenates in any of the samples. There was a single detection of TPH as diesel (TPHd) above the laboratory method reporting limits (MRLs) at 20 feet below ground surface; however, the soil sample taken at the same boring location at 25 feet below ground surface did not identify a THPd level above the laboratory MRLs. Therefore, based on the field observations and laboratory results, no hydrocarbon impacts were observed and no additional investigations are considered necessary for the site. Prior to any construction activity at the Brea Car Wash & Detail Center, the underground storage tanks would be removed and properly disposed of at an approved landfill facility under the purview of the appropriate lead agency. Consultation with appropriate regulatory agencies shall be conducted prior to and during UST removal, soil sampling and post-soil sampling. Therefore, impacts would be less than significant as a result of Build Alternative 7A. Refer to Section 2.3.5, *Hazardous Waste/Materials*, for further detail.

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

The proposed project is not located within the vicinity of a public airport, nor is it within an airport land use plan. The proposed project would not result in a safety hazard for people residing or working in the project area. No impacts would occur as a result of the proposed project.

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?	☐	☐	☐	☒

The proposed project is not located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area. No impacts would occur as a result of the proposed project.

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

As a result of the short-term road closures, temporary delays in emergency response times may occur during construction of the proposed project due to temporary lane closures and/or traffic detours. Alternative routes are available for use by public service vehicles during short periods of lane closures. These impacts would be minimized with the implementation of a Traffic Management Plan (TMP), which would reduce the disruption of emergency services. The project would have a less than significant

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

impact on emergency response plans or emergency evacuation plans during construction. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

Emergency response times for fire, police, and ambulance providers are anticipated to improve as a result of the proposed project. These improvements would result in the improved operations at the majority of the study intersection from an unacceptable level of services (LOS) to an acceptable LOS. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

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?	☐	☐	☒	☐

The proposed project would improve the operation of the existing SR-57/Lambert Road interchange. The proposed project would not expose people or structure to a significant risk or loss, injury or death involving wildland fires, beyond existing risks. No new permanent wildland fie risks are anticipated beyond existing conditions. Impacts are less than significant. Refer to Section 2.2.3, *Community Impacts*, Section 2.2.4, *Utilities/Emergency Services*, Section 2.3.5, *Hazardous Waste/Materials*, and Section 2.4, *Biological Environment*, for further detail.

IX. HYDROLOGY AND WATER QUALITY: Would the project:

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

As discussed in Item VI.b, construction activities would involve the use of some hazardous materials, such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum based products, although these materials are commonly used during construction activities and would not be disposed of on the project site. Under the Construction General Permit, the proposed project is required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and implement erosion and sediment control BMPs detailed in the SWPPP to be implemented during construction. In addition, the proposed project would comply with the requirements of the Clean Water Act, the Santa Ana RWQCB, the Orange County Drainage Area Management Plan (DAMP), and appropriate, Caltrans approved, non-structural and structural treatment control BMPs. Additionally, for the operation of the proposed project, the County of Orange's NPDES Permit requires street, road, highway, or above ground lined drainage facilities to comply with the US EPA guidance "Managing Wet Weather with Green Infrastructure: Green Streets". The objective of the guidance is to reduce the discharge of pollutants and the effects of changes to runoff patterns caused by land use modifications. As prescribed by the NPDES Permit, Low Impact Development (LID) BMPs would be considered first and then traditional structural and non-structural BMPs. Impacts would be less than significant. Refer to Section 2.3.2, *Water Quality*, for further detail.

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)?	☐	☐	☐	☒

The proposed project would construct improvements to the SR-57/Lambert Road interchange. The proposed project would not result in the depletion of groundwater supplies. The proposed project is not sited in a location used by the Orange County Water District or any other local water district for aquifer recharge. Groundwater beneath the proposed project area is not expected to be encountered within 10 feet below ground surface. The proposed project would not create a systems would be constructed as a

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

result of this project. No impacts would occur as a result of the proposed project. Refer to Section 2.3.1, *Hydrology and Floodplain*, and Section 2.3.2, *Water Quality*, for further detail.

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

The proposed project would not change the existing drainage patterns. The primary concentration of flow would remain in the local storm drain, outlet into the Loftus Diversion Channel, and ultimately reach the San Gabriel River via Coyote Creek. The proposed project would not change the sediment at the bottom of the Loftus Diversion Channel, nor would it increase erosion or accretion patterns. As discussed in item VI.b, construction activities would increase sediment exposure due to activities such as reconfiguring roadways, excavation and grading, and constructing the new roadway segments and bridge abutments. The County of Orange's NPDES Permit requires street, road, highway, or above ground lined drainage facilities to comply with the US EPA guidance "Managing Wet Weather with Green Infrastructure: Green Streets". The objective of the guidance is to reduce the discharge of pollutants and the effects of changes to runoff patterns caused by land use modifications. As prescribed by the NPDES Permit, Low Impact Development (LID) BMPs would be considered first and then traditional structural and non-structural BMPs. Impact would be less than significant. Refer to item IX.a, above. Refer to Section 2.3.1, *Hydrology and Floodplain*, and Section 2.3.2, *Water Quality*, for further detail.

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?	☐	☐	☒	☐

The proposed project would not change the existing drainage patterns. The primary concentration of run-off would remain in the local storm drain, outlet into the Loftus Diversion Channel, and ultimately reach the San Gabriel River via Coyote Creek. Standard best management practices (BMPs) would be required in order to reduce any runoff during construction activities, thus ensuring no flooding impacts to the site or the surrounding area. The County of Orange's NPDES Permit requires street, road, highway, or above ground lined drainage facilities to comply with the US EPA guidance "Managing Wet Weather with Green Infrastructure: Green Streets". The objective of the guidance is to reduce the discharge of pollutants and the effects of changes to runoff patterns caused by land use modifications. As prescribed by the NPDES Permit, Low Impact Development (LID) BMPs would be considered first and then traditional structural and non-structural BMPs. Impacts are less than significant. Refer to Section 2.3.1, *Hydrology and Floodplain*, and Section 2.3.2, *Water Quality*, for further detail.

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?	☐	☐	☒	☐

Refer to items IX.a through IX.d, above. During construction, the NPDES permit and required SWPPP would be implemented. The addition of new impervious area would marginally increase the flow rates and discharge volumes at the individual on-site pipes. Regionally, the Loftus Diversion Channel Hydrology uses a fully developed condition for the state ROW, and therefore already accounts for these improvements in the channel design. Changes to flow depths in the local on-site systems would marginally increase by approximately 0.1 to 0.2 feet; however, this would remain within the pipes or within the provided freeboard of the improved channels. Loftus Diversion Channel depths would not be measurably altered by the proposed project. No seasonal changes would occur as a result of the proposed project. Impacts are less than significant. Refer to Section 2.3.1, *Hydrology and Floodplain*, and Section 2.3.2, *Water Quality*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐

Refer to items IX.a through IX.e, above. Compliance with the requirements of the Clean Water Act, the Santa Ana RWQCB, the Orange County Drainage Area Management Plan (DAMP), and appropriate, Caltrans approved, non-structural and structural treatment control BMPs to address potential short- (during construction) and long-term (post construction/maintenance) impacts are required for the proposed project. Impacts are less than significant. Refer to Section 2.3.1, *Hydrology and Floodplain*, and Section 2.3.2, *Water Quality*, for further detail.

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?	☐	☐	☐	☒

The proposed project is outside the 100-year floodplain. No impacts would occur because the proposed project is outside of the 100-year floodplain. Refer to Section 2.3.1, *Hydrology and Floodplain*, for further detail.

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

The proposed project is outside the 100-year floodplain. Therefore, the proposed project would not introduce structures that would impede or redirect flood flows. No impacts would occur as a result of the proposed project. Refer to Section 2.3.1, *Hydrology and Floodplain*, for further detail.

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?	☐	☐	☒	☐

The proposed project is outside the 100-year floodplain; however, the southern portion of the proposed project is located within the Orange County Reservoir inundation pathway, if dam failure occurs. The proposed project would not include habitable structures and would not increase the current vehicle use of the portion of SR-57 located within the inundation pathway. Conformance with the California Building Code (CBC), as well as adherence to standard Caltrans and City engineering practices would reduce any effects resulting from dam failure. Impacts are less than significant. Refer to Section 2.3.1, *Hydrology and Floodplain*, for further detail.

j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

The proposed project is not located within, or near, an ocean or other large body of water; therefore, the proposed project is not located in a seiche or tsunami hazard area. The proposed project is not located within, or near, a landslide hazard area. The proposed project is not located within a liquefaction hazard area. Therefore, the proposed project is not located in a mudflow hazard area. The proposed project would not contribute to inundation by seiche, tsunami, or mudflow. No impacts would occur as a result of the proposed project. Refer to Section 2.3.1, *Hydrology and Floodplain*, Section 2.3.2, *Water Quality*, and Section 2.3.3, *Geology/Soils/Seismic/Topography*, for further detail.

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☒	☐

SR-57 is a multi-lane freeway and Lambert Road is a six-lane arterial road. The project area is, therefore, already divided by SR-57 and Lambert Road. The proposed project would not further divide existing communities in the vicinity of the interchange. Impacts are less than significant. Refer to Section 2.2.3, *Community Impacts*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

The proposed project would be consistent with the surrounding residential, commercial, industrial, and other uses in the surrounding area. Both alternatives would be consistent with the applicable City of Brea General Plan goals and policies. The proposed project is listed in the 2008, RTP, 2012 RTP, and 2011 FTIP; thus the proposed project is consistent with the regional and federal Transportation Plans. Implementation of either Build Alternative 7A or Build Alternative 9 would not result in major changes to existing land use patterns in the vicinity of the SR-57/Lambert Road Interchange, since the interchange is an existing facility and is located in a highly developed area. Impacts are considered less than significant in this regard. Refer to Section 2.2.1.2, *Consistency with State, Regional, and Local Plans and Programs*, for further detail.

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

There are no adopted habitat conservation plans (HCPs) or natural community conservation plans (NCCPs) that cover the proposed project. No impacts would occur as a result of the proposed project. Refer to Section 2.4.1, *Natural Communities*, for further detail.

XI. 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?	☐	☐	☐	☒

No oil or gas wells are located within the proposed project boundaries. The Olinda Oil Field is located north and east of the proposed project and the nearest wells, which are outside the project limits, have been capped. One historic site, the Brea-Olinda Oil Field, was identified during the record searches; however, no remnants of the oil field were observed or identified within the project site. No known mineral resources are located within the project site. No impacts would occur as a result of the proposed project. Refer to Section 2.2.7, *Cultural Resources*, Section 2.3.4, *Paleontology*, Section 2.3.5, *Hazardous Waste/Materials*, and Section 2.3.8, *Energy*, for further detail.

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

No known mineral resources are located within the project site. There are known oil fields within 10 miles of the proposed project. The proposed project would improve the SR-57/Lambert Road interchange and would not interfere with existing mineral resource production. No impacts would occur as a result of the proposed project. Refer to Section 2.2.7, *Cultural Resources*, Section 2.3.4, *Paleontology*, Section 2.3.5, *Hazardous Waste/Materials*, and Section 2.3.8, *Energy*, for further detail.

XII. 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?	☐	☐	☒	☐

The closest sensitive receptor locations are located within 50 feet from the proposed project construction areas. Therefore, these receptor locations may be subject to short-term noise levels reaching

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

90 dBA L_{max} generated by construction activities within the proposed project area for both Build Alternatives 7A and 9. These impacts are short-term in nature and would cease upon construction completion. Construction noise is regulated by Caltrans' Standard Specifications in Section 14-8.02, "Noise Control". The nighttime noise level from the contractor's operations, between the hours of 9:00 PM and 6:00 AM, shall not exceed 86 dBA at a distance of 50 feet. The contractor should use an alternative warning method instead of a sound signal unless required by safety laws. In addition, the contractor shall equip all internal combustion engines with the manufacturer-recommended mufflers and shall not operate any internal combustion engine on the job site without the appropriate muffler. Construction impacts would be less than significant. Refer to Section 2.3.7, *Noise*, for further detail.

The predicted noise level at the R-65 would decrease by 0.1 dBA. A change of 3 dBA would barely be perceptible to the human ear. Thus, at R-65, the noise level perception would remain the same. The remaining 129 receptors would not result in a noise level change of 3 dBA. Therefore, no significant noise impacts would occur as a result of the proposed project, and no mitigation is required. Refer to Section 2.3.7, *Noise*, for further detail.

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

Groundborne vibration or noise levels may occur as a result of construction activities and use of construction equipment. Construction noise is regulated by Caltrans' Standard Specifications in Section 14-8.02, "Noise Control". Noise control shall conform to the provisions in Section 14-8.02. The nighttime noise level from the contractor's operations, between the hours of 9:00 PM and 6:00 AM, shall not exceed 86 dBA at a distance of 50 feet. The proposed project would comply with the construction hours specified in Caltrans' Standard Specifications and would be required to minimize construction noise impacts, including groundborne vibration or noise levels, on sensitive land uses adjacent to the project site. Impacts would less than significant. Refer to Section 2.3.7, *Noise*, for further detail.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Refer to item XII.a, above. Impacts would be less than significant. Refer to Section 2.3.7, *Noise*, for further detail.

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

Refer to item XII.a, above. Construction impacts would be less than significant. Refer to Section 2.3.7, *Noise*, for further detail.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The proposed project is not located within the vicinity of a public airport, nor is it within an airport land use plan. The proposed project would not result in the exposing people residing or working in the project area to excessive noise levels. No impacts would occur as a result of the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The proposed project is not located within the vicinity of a private airstrip and would not result in the exposing people residing or working in the project area to excessive noise levels. No impacts would occur as a result of the proposed project.

XIII. 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)?	☐	☐	☒	☐

The proposed project would not include habitable structures; therefore the proposed project would not result in direct population growth.

While the proposed project would result in reconstruction of an existing interchange, it would not provide new transportation facilities or create new access points to areas previously not accessible. Therefore, the proposed project would not result in changes in accessibility to the existing transportation system in the area. The proposed project is consistent with the transportation goals and policies of the City of Brea General Plan. Future growth in the City of Brea is expected to occur with or without construction of the proposed project because the interchange project on its own cannot affect variables such as economic opportunities, employment, or housing availability, which directly affect local and regional growth. The proposed project meets the stated purpose and need (refer to Chapter 1, *Proposed Project*) and does not add capacity. The proposed project would help to accommodate existing, approved, and planned growth in the area; however, because the proposed project would only improve the existing interchange and would not increase roadway or freeway capacity, it would not influence the amount, timing, or location of growth in the area. The proposed project would not provide new transportation facilities in an area where such facilities do not currently exist and, therefore, would not influence the amount, timing, or location of growth in the city. Impacts would be less than significant. Refer to Section 2.2.2, *Growth*, for further detail.

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

Build Alternative 9 would result in partial acquisitions of 13 nonresidential parcels. None of these acquisitions under Build Alternative 9 would result in the displacement of businesses or residential relocations. Therefore, no residents or employees would be displaced under this alternative. Refer to Section 2.2.3.2, *Relocations and Real Property Acquisition*, for further detail.

Build Alternative 7A would result in the full acquisition of one business (Brea Auto Spa) and 13 partial acquisitions, including two buildings from the Country Woods Apartment Homes. Equivalent business properties, approximately seven, were available for the relocated business (car wash) in the adjacent cities of Anaheim, Placentia, and Fullerton at the time of the property survey. There is a possibility that the car wash business (Brea Auto Spa) could reestablish itself within the study area and keep its current employees. Approximately 17 residential units at the Country Woods Apartment Homes would be displaced. As of January 2012, several apartments for rent are available within the Country Woods apartment complex. Given the Census Tract 218.14 demographic characteristics such as high household income, high education levels, low transit dependency, relatively short residency, and availability of replacement properties, it is expected that residential relocation impacts occurring under Build Alternative 7A would be less than significant. Refer to Section 2.2.3.2, *Relocations and Real Property Acquisition*, for further detail.

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

As discussed in item XIII.b, above, Build Alternative 9 would not result in the displacement of businesses or residential relocations. . Therefore, no residents or employees would be displaced under this alternative. Refer to Section 2.2.3.2, *Relocations and Real Property Acquisition*, for further detail.

Build Alternative 7A would result in the displacement of approximately 20-49 employees at the Brea Car Wash & Detail Center and approximately 47 residents at the Country Woods apartment complex. There is a possibility that the car wash business (Brea Auto Spa) could reestablish itself within the study area and keep its current employees. Given the Census Tract 218.14 demographic characteristics such as high household income, high education levels, low transit dependency, relatively short residency, and availability of replacement properties, it is expected that residential relocation impacts occurring under Build Alternative 7A would be less than significant. Refer to Section 2.2.3.2, *Relocations and Real Property Acquisition*, for further detail.

XIV. PUBLIC SERVICES:

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:				
Fire protection?	☐	☐	☒	☐

As a result of the short-term road closures, temporary delays in emergency fire response times may occur during construction of the proposed project due to temporary lane closures and/or traffic detours. Alternative routes are available for use by public service vehicles during short periods of lane closures. These impacts would be minimized with the implementation of a Traffic Management Plan (TMP), which would reduce the disruption of emergency fire services. Impacts would be less than significant. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

Emergency response times for fire, police, and ambulance providers are anticipated to improve as a result of the proposed project. These improvements would result in the improved operations at the majority of the study intersection from an unacceptable level of services (LOS) to an acceptable LOS. Because of the improved LOS at the majority of the study area intersections, fire and police response times would improve over the existing and No Build Alternative conditions. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

Police protection?	☐	☐	☒	☐

As a result of the short-term road closures, temporary delays in emergency police response times may occur during construction of the proposed project due to temporary lane closures and/or traffic detours. Alternative routes are available for use by public service vehicles during short periods of lane closures. These impacts would be minimized with the implementation of a Traffic Management Plan (TMP), which would reduce the disruption of emergency police services. Impacts would be less than significant. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

Emergency response times for fire, police, and ambulance providers are anticipated to improve as a result of the proposed project. These improvements would result in the improved operations at the majority of the study intersection from an unacceptable level of services (LOS) to an acceptable LOS. Because of the improved LOS at the majority of the study area intersections, fire and police response

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

times would improve over the existing and No Build Alternative conditions. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

Schools?	☐	☐	☐	☒

The proposed project would improve the SR-57/Lambert Road interchange. The proposed project would not result in an increase in population such that new schools would be warranted. The proposed project would not result in physical impacts to existing schools, as there are no schools within the project site. The nearest school is the Brea Olinda High School, which is outside of the project boundaries. No impacts would occur as a result of the proposed project.

Parks?	☐	☐	☐	☒

There are no designated parks, trails, or other recreational facilities within the project boundaries. No park facilities would be constructed as a result of the proposed project. The proposed project would not increase the population of the area, therefore the proposed project would not result in the need for new or expanded park facilities. No impacts would occur as a result of the proposed project.

Other public facilities?	☐	☐	☒	☐

The proposed project would impact various underground and overhead utilities, which would require protection in place, removal, replacement, or relocation. Replacement and relocation of utilities would be conducted in cooperation with utility owners. It is expected that all utilities that require relocation would be relocated within the proposed project limits. An updated utility search would be required during the Final Design phase of the proposed project to determine all utility conflicts that require positive location and/or relocation. The proposed project would not increase the need for domestic water services, wastewater facilities, or solid waste disposal, since the proposed project would not result in an increase in land uses that require these services. Utility services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists. Impacts would be less than significant. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

XV. 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?	☐	☐	☐	☒

There are no designated parks, trails, or other recreational facilities within the project boundaries. The proposed project would not increase the use of existing facilities such that substantial physical deterioration of the facility would occur or accelerate. No impacts would occur as a result of the proposed project.

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

The proposed project would improve the SR-57/Lambert Road interchange. No recreational facilities would be constructed as a result of the proposed project. The proposed project would not increase the population of the area, therefore the proposed project would not result in the need for new or expanded recreational facilities. No impacts would occur as a result of the proposed project.

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

The proposed project is listed in the 2012 financially constrained Regional Transportation Plan which was found to conform by the State Implementation Plan (SIP) by FHWA and FTA on June 4, 2012 (RTP IDs 2M0724 and ORA000107). The project is also included in the SCAG financially constrained 2013 Federal Transportation Improvement Program (FTIP) (RTP ORA120320). The proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The proposed project would improve LOS at the majority of the study area intersections and would maintain bicycle and pedestrian access through the project site. There are no existing bike lanes designated on Lambert Road within the proposed project limits, therefore, the proposed project would not result in impacts to designated bike lanes. Build Alternatives 7A and 9 would provide standard shoulders to establish a Class III bikeway through the interchange in the future. The proposed project would maintain existing ramp metering system, coordinate intersection signals, provide an auxiliary lane on southbound SR-57, and provide eight-foot, Americans with Disabilities Act (ADA)-compliant sidewalks along Lambert Road. Temporary disruptions could occur during construction; however, a TMP would be prepared for the proposed project. Impacts would be less than significant. Refer to Section 2.2.5, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for further detail.

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

The proposed project is listed in the 2012 financially constrained Regional Transportation Plan which was found to conform by the State Implementation Plan (SIP) by FHWA and FTA on June 4, 2012 (RTP IDs 2M0724 and ORA000107). The project is also included in the SCAG financially constrained 2013 Federal Transportation Improvement Program (FTIP) (RTP ORA120320). Under both Build Alternatives, all ramps would operate at acceptable LOS (V/C less than or equal to 1.0), the ramp intersections would operate with improved LOS. Three intersection locations would continue to operate at an LOS below the acceptable criteria; however, the capacity utilization measures would decrease, resulting in slightly less delay as compared to a No Build Alternative. This is considered a beneficial effect of both Build Alternatives. Therefore, the proposed project would reduce the current congestion and better accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards. Impacts would be less than significant. Refer to Section 2.2.5, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for further detail.

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

The proposed project is not located within the vicinity of a private airstrip or public airport. The proposed project would provide congestion relief to improve the traffic flow within an existing interchange.

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

Therefore, the proposed project would not result in a change in air traffic patterns. No impacts would occur as a result of the proposed project.

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

The proposed project would improve an existing interchange within an urban setting. The proposed project would be compatible with the surrounding residential, commercial, industrial, and other uses in the surrounding area. The proposed project would be designed to better accommodate anticipated traffic increases, thereby minimizing delays and potential safety hazards. Impacts would be less than significant. Refer to Section 2.2.5, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for further detail.

e) Result in inadequate emergency access?	☐	☐	☒	☐

Access to properties adjacent to the proposed project would remain open during construction. As a result of the short-term road closures, temporary delays in emergency response times may occur during construction of the proposed project due to temporary lane closures and/or traffic detours. Alternative routes are available for use by public service vehicles during short periods of lane closures. These impacts would be minimized with the implementation of a Traffic Management Plan (TMP), which would reduce the disruption of emergency services. Impacts would be less than significant. Refer to items VIII.g and XIV.a, above, as well as Section 2.2.4, *Utilities/Emergency Services*, for further detail.

Emergency response times for fire, police, and ambulance providers are anticipated to improve as a result of the proposed project. These improvements would result in the improved operations at the majority of the study intersection from an unacceptable level of services (LOS) to an acceptable LOS. Because of the improved LOS at the majority of the study area intersections, fire and police response times would improve over the existing and No Build Alternative conditions. Refer to items VIII.g and XIV.a, above, as well as Section 2.2.4, *Utilities/Emergency Services*, for further detail.

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

Both Build Alternatives 7A and 9 would result in a sliver acquisition from the park-and-ride facility. The parking spaces would be reconfigured with no loss of parking spaces and the access driveway to the park-and-ride lot would be relocated. The impacts to the park-and-ride lot would not affect local and regional travelers beyond what is identified during construction. Access would remain and no parking would be lost as a result of either Build Alternative. There are no existing bike lanes designated on Lambert Road within the proposed project limits, therefore, the proposed project would not result in impacts to designated bike lanes. Build Alternatives 7A and 9 would provide standard shoulders to establish a Class III bikeway through the interchange in the future. The proposed project would maintain existing ramp metering system, coordinate intersection signals, provide an auxiliary lane on southbound SR-57, and provide eight-foot, Americans with Disabilities Act (ADA)-compliant sidewalks along Lambert Road. Temporary disruptions could occur during construction; however, a TMP would be prepared for the proposed project. Impacts would be less than significant. Refer to Section 2.2.5, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

The proposed project would not increase the need for wastewater facilities and would not exceed wastewater treatment requirements because the proposed project would not result in an increase in land uses that require these services. Services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists. No impacts would occur as a result of the proposed project. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

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?	☐	☐	☐	☒

The proposed project would not increase the need for domestic water or wastewater facilities because the proposed project would not result in an increase in land uses that require these services. Services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists. No impacts would occur as a result of the proposed project. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Surface water/runoff for the proposed project is within the gutters of Lambert Road, which is collected by the City of Brea drainage network and connects to the Loftus Diversion Channel. The proposed project would not change the existing drainage patterns. The primary concentration of flow would remain in the local storm drain, outlet into the Loftus Diversion Channel, and ultimately reach the San Gabriel River via Coyote Creek. There would be a small differential increase in flow rates and discharge volumes when compared to the existing condition. The addition of new impervious area would marginally increase the flow rates and discharge volumes at the individual on-site pipes. Regionally, the Loftus Diversion Channel Hydrology uses a fully developed condition for the state right-of-way (ROW), and therefore already accounts for these improvements in the channel design. The proposed project would not result in the need to construct a new storm water drainage facility, nor would it require the expansion of an existing facility. Impacts would be less than significant. Refer to items IXa through IXf, above, for further detail. Refer to Section 2.3.1, *Hydrology and Floodplain*, and Section 2.2.4, *Utilities/Emergency Services*, for further detail.

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

The proposed project would not increase the need for domestic water services because the proposed project would not result in an increase in land uses that require these services. Services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists. No impacts would occur as a result of the proposed project. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

The proposed project would not increase the need for wastewater facilities because the proposed project would not result in an increase in land uses that require these services. Services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists. No impacts would occur as a result of the proposed project. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

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

The construction of the proposed project would general solid waste as the result of the construction of the interchange improvements, which would include replacing pavement and widening bridge structures. Build Alternative 7A would also generate solid waste as a result of the demolition of business and residential structures. Construction activities would not generate solid waste amounts that would exceed the capacity of a landfill. In addition, upon construction completion, the proposed project would not increase the need for solid waste disposal, since the proposed project would not result in an increase in land uses that require these services. Utility services would remain similar to existing conditions upon completion of the proposed project, because the proposed project would not result in an increased need for utility services beyond what currently exists. Impacts would be less than significant. Refer to Section 2.2.4, *Utilities/Emergency Services*, for further detail.

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

The proposed project would comply with the federal, state, and local statutes and regulations regarding solid waste. Any construction debris identified to contain hazardous materials would be disposed of properly at the appropriate, permitted disposal facility. Impacts would be less than significant. Refer to Section 2.3.5, *Hazardous Waste/Materials*, for further detail.

XVIII. 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Refer to items IV.a through IV.f regarding biological resources. The BSA does not contain suitable habitat to support any of the special-interest plant species. The BSA supports suitable habitat for special-status wildlife species. USFWS-designated critical habitat for the CAGN is located within the northern portion of the proposed project site. Mitigation Measures would be incorporated into the proposed project to ensure impacts are less than significant. Refer to Section 2.4, *Biological Environment*, specifically Sections 2.4.3, *Plant Species*, 2.4.4, *Animal Species*, and 2.4.5, *Threatened and Endangered Species*, for further detail.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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)?	☐	☒	☐	☐

Specific project related impacts are discussed above in items I through XVII. Specific measures to minimize harm are identified in Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*, of the Initial Study/Environmental Assessment (IS/EA) for each environmental concern analyzed. These measures address project-specific and cumulative short-term and permanent impacts. The proposed project, in conjunction with the cumulative project, would have a less than significant cumulative impact with the incorporation of project-related mitigation measures. Refer to Section 2.5, *Cumulative Impacts*, for further detail.

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

Specific project related impacts are discussed above in items I through XVII. The proposed project would comply with appropriate laws and regulations. The proposed project would have a less than significant impact on human beings with the incorporation of resource-specific mitigation measures, as discussed above. Refer to Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*, for further detail.

Appendix B

Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
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Flex your power!
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March 16, 2012

NON-DISCRIMINATION 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, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Mario Solis, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14th Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353, TTY 711, fax (916) 324-1869, or via email: *mario_solis@dot.ca.gov*.

MALCOLM DOUGHERTY
Acting Director

Appendix C

Environmental Commitment Record

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
DESIGN KICK-OFF		Proj Mgmt & Proj Dev	Beginning of 1 phase							
ENVIRONMENTAL PS&E REVIEW		Proj Mgmt & Environmental	District PS&E Circ							
PRECONSTRUCTION MEETING		Proj Mgmt	Contract Award							
Transfer Resident Engineer Book		Proj Eng	Preconst Meeting							
PREJOB MEETING		Proj Mgmt & Const	Const							
ENVIRONMENTAL COMPLIANCE REVIEW		Proj Mgmt & Const	Safety Review							
DESIGN FEATURES MEMORANDUM		Proj Mgmt & Const	Post Const							
Community Impacts		.								
During final design, a community outreach program will be developed, in consultation with the City of Brea and Caltrans, to inform the community about proposed project construction activities, as well as the changes to access. This community outreach program will also provide a point of contact for nearby residences and businesses that will be adjacent to the project site. The community outreach program will maintain a hotline to take messages and to provide updates on construction scheduling and any lane closures and detours.	COMM-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
During construction, the contractor will be required to coordinate all temporary ramp closures and detour plans with the City of Brea School District, as well as with applicable fire, emergency, medical, and law enforcement providers to minimize temporary delays in school trips and provider response times. This coordination will follow the guidance provided in the community outreach program and the traffic management plan.	COMM-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
During construction, the contractor shall be required to notify the City of Brea Police and Fire Departments, medical service providers, and the City of Brea School District and shall supply such entities with construction plans prior to the commencement of construction, as applicable. Such information shall include traffic management plans referring to the temporary ramp closures and detour plans and any other restrictions that may be necessary during the construction phase in order to minimize temporary delays in school trips and provider response times.	COMM-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
During final design, the project shall develop and implement a construction (traffic) management program that maintains access to and from the proposed project area through signage, detours, flagmen, etc. during all construction activities. Provisions within the traffic management program shall include, but are not limited to, providing signage identifying construction schedule and detours, providing detours around the construction area, and implementing a public awareness program.	COMM-4	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
During construction, the contractor will temporarily restripe parking stalls within the Orange County Transportation Authority Park-and-Ride lot, to maintain full parking capacity. Upon construction completion, the contractor will permanently restripe the OCTA Park-and-Ride lot, with the original number of spaces to ensure no net loss in parking.	COMM-5	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
During final design, property owners located within the acquisition area shall be notified of their rights and benefits during the acquisition period. The City of Brea acquisition guidelines shall be followed to determine a fair market value of properties affected in accordance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act (Uniform Act) of 1970 (Public Law 91-646, 84 stat. 1984). The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) (Public Law 91-646, 84 Statutes 1894) mandates that certain relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced by its projects. The Uniform Act provides for uniform and equitable treatment by federal or federally assisted programs of persons displaced from their homes, businesses, or farms and establishes uniform and equitable land acquisition policies. The City will provide all affected property owners with a copy of the Uniform Act. The City will comply with the Uniform Act. The compensation awarded to the property owner shall adequately offset the loss of the property value. The Uniform Act will also require compensation for any relocation costs associated with Temporary Construction Easements (TCE).	REL-1	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design	NO						
During final design, where acquisition and relocation occur, 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), will be followed. An independent appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.	REL-2	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design	NO						
The Uniform Act requires that comparable, decent, safe, and sanitary replacement housing that is within a person's financial means be made available before that person will be displaced. In the event that such replacement housing is not available for persons displaced by the proposed project within the statutory limits for replacement housing payments, last resort housing will be provided in a number of prescribed ways.	REL-3	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design	NO						
Utilities/Emergency Services										
Prior to commencement of construction, the City will coordinate with all affected utility providers to establish exact procedures and specifications for all facilities to be relocated during construction. Additionally, the Project Engineer will notify other service purveyors in the vicinity of the improvements to verify that the proposed activities would not disrupt services to the community.	UES-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Prior to and during construction, the project will coordinate with the California Highway Patrol, City of Brea Police and Fire Department, local public and private ambulance and paramedic providers, and the public school districts in the vicinity of the proposed project to provide information on construction schedule, duration of any lane closures, alternate routes during lane closures, as well as throughout the construction period, and to provide contact information in case of changing construction activities and schedule. This coordination will follow the guidance provided in the community outreach program and the traffic management plan.	UES-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
At least 48 hours prior to commencement of excavation work, the City will contact Underground Service Alert (USA) to verify the nature and location of other existing underground utilities, and to avoid the unplanned disruption of pipes or service lines during construction activities.	UES-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
Prior to commencement of construction, the City will prepare a Traffic Management Plan (TMP) in coordination with the California Department of Transportation (Caltrans). The TMP will consist of prior notices, adequate sign-posting, detours, phased construction, and temporary driveways. The TMP will specify implementation timing of each plan element (prior notices, sign-posting, detours, etc.) as determined appropriate by Caltrans. Adequate local and emergency access will be provided at all times to adjacent uses. Proper detours and warning signs will be established to ensure public safety. The TMP will be devised so that construction will not interfere with any emergency response or evacuation plans. Construction activities will proceed in a timely manner to reduce impacts.	UES-4	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Traffic and Transportation/Pedestrian and Bicycle Facilities										
Prior to the start of construction, the project shall establish a community outreach program to inform the community about the proposed project construction activities, as well as changes to access. This community outreach program will also provide a point of contact for nearby residences and businesses that will be adjacent to the proposed project site. The community outreach program will maintain a hotline to take messages and to provide updates on construction scheduling and any lane closures and detours.	T-1	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer	Final Design Construction	NO						
During construction, temporary signage will be installed notifying the public of closures or detours and the expected duration of the closure. This applies not only to the roadways, but also pedestrian and bicycle facilities. The timing of the temporary signage installation will be in accordance with the traffic management plan.	T-2	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer	Final Design Construction	NO						
Prior to the start of construction, coordination with the California Highway Patrol, City of Brea Police and Fire Department, the City of Brea Fire Department, local public and private ambulance and paramedic providers, and the public school districts will be initiated to provide information on the construction schedule, duration of any lane closures, details regarding the schedule of the movement of equipment to and from the project site, alternate routes at the time of the equipment movement, and to provide contact information in case of changing construction activities. This coordination will follow the guidance provided in the community outreach program and the traffic management plan.	T-3	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer	Final Design Construction	NO						
Prior to construction, the City will prepare a Traffic Management Plan (TMP) in coordination with the California Department of Transportation (Caltrans). This TMP will consist of prior notices, adequate sign-posting, and temporary driveways. The TMP will specify implementation timing of each plan element (prior noticing, sign-posting) as determined appropriate by Caltrans. Adequate local and emergency access will be provided at all times to adjacent uses. Proper detours and warning signs will be established to ensure public safety. The TMP will be devised so that construction will not interfere with any emergency response or evacuation plans. Construction activities will proceed in a timely manner to reduce impacts.	T-4	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer	Final Design Construction	NO						
Visual/Aesthetics										
To minimize visual quality loss and to minimize the visual disruption from the elements of the highway construction, architectural treatments shall be applied to the relocated walls in general conformance with the proposed treatments installed as part of the SR-57 Northbound Widening Project. All architectural treatments shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be approved by the District Landscape Architect during the Plans, Specifications, and Estimates (PS&E) phase.	VIS-1	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
To maintain the context of the proposed project area (color, form, and texture), the proposed project shall install landscaping that is compatible with the existing landscape in the area and new landscaping installed as part of the SR-57 Northbound Widening Project along the portion of SR-57 in the proposed project vicinity. Landscaping shall include trees and/or shrub/groundcover mass planting, and landscape treatment along walls to soften the hardscape features and glare and radiant heat from the walls. The landscape concept, plan, and plant palette shall be determined in consultation with, and approved by, the District Landscape Architect during the Plans, Specifications, and Estimates (PS&E) phase. The planting plan shall be reviewed and approved by the Department Biologist to avoid the use of invasive plant species. Replacement planting implementation shall be under a separate contract within a two-year period following the completion of construction in accordance with Department policies. Trees in the interchange, in conflict with the roadway improvement design, shall be transplanted in the proposed project area in a location in conformance with the planting policy requirements of Caltrans. The District Landscape Architect shall make the determination and the approval of the tree transplantation.	VIS-2	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design Construction	YES						
The proposed project shall install either an opaque perimeter wall (similar to the existing cinderblock wall) or appropriate landscaping (landscaped berms or trees) sufficient to screen direct views from the Country Woods Apartment Homes to the proposed project. This architectural feature shall conform to the Master Plan of Freeway and Transit Corridor Enhancement: Creating a Quality Environment along Orange County's Transportation Network and be reviewed and approved by the District Landscape Architect during the Plans, Specifications, and Estimates (PS&E) phase.	VIS-3	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design Construction	NO						
Construction lighting types, plans, and placement shall be reviewed at the discretion of the District Landscape Architect, during the Plans, Specifications, and Estimates (PS&E) phase.	VIS-4	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design Construction	YES						
The proposed project shall consider implementation of a transparent soundwall, per the Caltrans TNAP, in order to maintain distant views from the outdoor patio of the El Torito Grill Restaurant. The soundwall design and long-term maintenance shall be approved by the Caltrans Landscape Architect and Caltrans Maintenance staff during the PS&E Phase.	VIS-5	F/ETCA: Project Engineer Caltrans: Project Engineer F/ET CA: Resident Engineer Caltrans: Resident Engineer	Final Design Construction	NO						
Cultural Resources										
If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. At this time, the person who discovered the remains will contact the City of Brea and the Caltrans District 12 Environmental Branch so that they may coordinate on an appropriate plan of action. If the find is determined by archaeologists to require further treatment, the area of discovery will be protected from disturbance while qualified archaeologists and appropriate officials, in consultation with the State Historic Preservation Officer (SHPO), determine an appropriate treatment plan. An additional archaeological survey will be required if the proposed project limits are extended beyond the present Area of Potential Effects (APE).	CULT-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor Caltrans: Environmental	Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA 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 Descendent (MLD). At this time, the person who discovered the remains will contact the City of Brea and the Caltrans District 12 Environmental Branch 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.	CULT-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor Caltrans: Environmental	Construction	NO						
Water Quality and Stormwater Runoff										
The project will comply with the provisions of the Caltrans Statewide NPDES Permit (Order Number 2012-0011-DWQ, NPDES Number CAS000003) and the NPDES General Permit, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activities (Order Number 2009-0009-DWQ, NPDES Number CAS000002) and any subsequent permit in effect at the time of construction.	WQ-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	YES						
A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP shall identify the sources of pollutants that may affect the quality of stormwater and include the construction site best management practices (BMPs) to control pollutants such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All construction site BMPs shall follow the latest edition of the Storm Water Quality Handbooks: Construction Site Best Management Practices (BMPs) Manual (Caltrans, 2003) to control and minimize the impacts of construction related activities, material and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.	WQ-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer	Final Design Construction	NO						
Construction site dewatering will comply with the Santa Ana Regional Water Quality Control Board's (RWQCB's) Order R8-2009-0003, NPDES Permit Number CAG998001, for discharges to surface waters that pose an insignificant (de minimus) threat to water quality. If dewatering occurs during construction of the project, it will comply with this permit including, but not limited to, the specific reporting and notification requirements.	WQ-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Caltrans approved treatment Best Management Practices (BMPs) will be implemented consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Stormwater Permit, and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans) Properties, Facilities, and Activities (Order Number 2012-0011-DWQ, NPDES Number CAS000003) and any subsequent permits. Treatment BMPs include, but are not limited to, biofiltration strips/swales, infiltration basins, detention devices, dry weather flow diversion, Gross Solids Removal Devices (GSRDs), media filters, and wet basins.	WQ-4	F/ETCA: Project Engineer F/ET CA: Resident Engineer	Final Design Construction	NO						

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Design Pollution Prevention Best Management Practices (BMPs) shall be implemented. These include, but are not limited to, preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes and swales, overside drains, flared end sections, and outlet protection/velocity dissipation devices. This includes, but is not limited to: a. All equipment maintenance staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated disturbed/developed areas. They will be located such that runoff from the designated areas will not enter gnatcatcher-designated critical habitat.	WQ-5	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Geology/Soils/Seismic/ Topography	-									
The project will be constructed in accordance with the California Building Code (CBC) and all applicable Caltrans standards and regulations. All construction activities shall adhere to current engineering practices. If fills must be borrowed from, or disposed of offsite, the construction contractor will identify any necessary borrow and disposal sites and provide this information to the City and Caltrans for review. Caltrans will review borrow and disposal site information and submit the information to the Carlsbad USFWS Office. If borrow or disposal activities may affect a listed species or critical habitat, Caltrans will reinitiate Section 7 consultation.	GEO-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
During final design, appropriate foundation types and depths will be designated (including foundation modifications in the case of existing structures) so that ground movements will not adversely affect the structure.	GEO-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Appropriate erosion-control measures and siltation controls will be incorporated into the construction documents and implemented during site preparation, grading, and construction. These measures will be installed prior to the onset of vegetation clearing and be maintained in good repair until the completion of project construction. These measures include, but are not limited to, protecting exposed slope areas, control of surface flows over exposed soils, use of wetting or sealing agents and/or sedimentation ponds, and limiting soil excavation in high winds. Erosion and sediment control devices used for the project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.	GEO-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Paleontology										
Prior to final design, a monitoring program (Paleontological Mitigation Plan) will be developed by a qualified paleontologist for the excavation in the Alluvial Fan Deposits, the La Habra Formation, and the Fernando Formation to minimize effects on nonrenewable paleontological resources. It is possible that as details of the proposed project, such as proposed excavation depths, are better refined, it will be determined that areas identified as having high sensitivity will in fact not require monitoring during excavation, as the ground disturbance will not extend deep enough below the surface to encounter paleontological resources. The monitoring program will include, but is not limited to, the following: • A pre-construction, one-hour Paleontological Awareness Training will be conducted in which a qualified principal paleontologist (MS or PhD in paleontology or geology familiar with paleontological procedures and techniques) will identify areas subject to monitoring and explain procedures necessary to protect and safely avoid impacts to potentially significant fossil materials for study and curation. This one-hour Paleontological Awareness Training will be given to all construction field staff prior to the initiation of any ground disturbing activities. • During construction excavation, a qualified vertebrate paleontological monitor will initially be present on a full-time basis whenever excavation occurs within the sediments that have a high paleontological sensitivity rating, and on a spot-	PALEO-1	F/ETCA: Project Engineer Caltrans: Project Engineer F/ETCA: Resident Engineer Caltrans: Resident Engineer F/ETCA: Environmental Caltrans: Environmental	Design Construction Post - Construction	NO						

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check basis for excavation in sediments that have a low sensitivity rating. Monitoring may be reduced to a part-time basis if no resources are being discovered in sediments with a high sensitivity rating (monitoring reductions, when they occur, will be determined by the qualified Principal Paleontologist). The monitor will inspect fresh cuts and/or spoils piles to recover paleontological resources. The monitor will be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor will be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, Caltrans will consider using heavy equipment on site to assist in the removal and collection of large materials. • Localized concentrations of small (or micro-) vertebrates may be found in all native sediments. Therefore, these sediments will occasionally be spot-screened on site through 1/8- to 1/20-inch mesh screens to determine whether microfossils are present. If microfossils are encountered, sediment samples (up to 3 cubic yards, or 6,000 pounds) will be collected and processed through 1/20-inch mesh screens to recover additional fossils. • If fossil remains are found, the recovered specimens will be prepared to the point of identification and permanent preservation. This includes the sorting of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens. • If fossil remains are found, the recovered specimens will be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution will be a local museum or university with a curator who can retrieve the specimens on request. A draft curation agreement will be in place with an approved curation facility prior to the initiation of any paleontological monitoring or mitigation activities. • The methods employed during monitoring and/or recovery of fossil specimens will be documented in a Paleontological Mitigation Report.										
Hazardous Waste/Materials										
A Phase II/Site Characterization Specialist shall conduct sampling, during the Design Phase of the project, along the project site in order to determine whether or not contamination exists in association with aerially deposited lead from SR-57 and Lambert Road. Results of the sampling will indicate the level of remediation efforts required. Any special handling, treatment, or disposal provisions associated with aerially deposited lead will be included in the construction document. If soluble levels are above 5 milligrams per liter (mg/L), then soils are considered hazardous waste and shall be handled according to CCR Title 22, the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC) variance for lead-contaminated soils. Per the Department aerially deposited lead soil management guidelines, soil from the 0.5-foot depth is classified as Type Y-1. If excavation soil from the 0.5-foot depth is reused at the site, it shall be placed a minimum of five feet above the maximum water table elevation and covered with at least one foot of non-hazardous material. If there is surplus material, then the soil is classified as Type A-2 and shall be disposed of at a regulated Class I landfill. Soils from the remaining depth layers (1.5, 3, and 4 feet) are considered non-hazardous (Type X) and can be reused at the site without any restrictions.	HAZ-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer	Final Design	NO						
Any transformer to be relocated/removed during site construction/demolition shall be conducted under the purview of the local purveyor to identify proper handling procedures regarding PCBs.	HAZ-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						

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If construction activities result in demolition or renovation of the structures at APN 320-101-10 (Country Woods Apartment Homes located at 315 Associated Road) and the bridge structures (Lambert Road undercrossing and Brea overhead), pursuant to South Coast Air Quality Management District (SCAQMD) regulations, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Occupational Safety and Health Administration (Cal/OSHA) certified building inspector to determine the levels of asbestos in the on-site structure, prior to demolition. Compliance with District Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) shall be required for any demolition or renovation work involving asbestos containing materials (ACMs).	HAZ-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	YES						
If construction activities result in demolition or renovation of the structures at APN 320-101-10 (Country Woods Apartment Homes located at 315 Associated Road), the on-site bridge structures (Lambert Road undercrossing and Brea overhead), as well as the on-site roadways containing yellow traffic striping (Lambert Road and SR-57), the generated waste shall be disposed of at an appropriate, permitted disposal facility as determined by a lead specialist.	HAZ-4	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	YES						
The following note shall appear on all final maps and grading plans: "If during grading or construction, any plugged and abandoned unrecorded wells are uncovered or damaged, the Department of Oil, Gas and Geothermal Resources (DOGGR) will be contacted to inspect and approve any remediation required."	HAZ-5	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
If during grading or soil excavation, evidence of petroleum products is discovered and appears to continue below the ground surface, construction activities shall stop immediately and sampling shall be performed to characterize the extent of contamination. If applicable, remediation shall include removal of soil and proper disposal at an approved facility.	HAZ-6	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
If suspect materials or wastes of unknown origin are discovered during construction on the proposed project site, which is thought to include hazardous waste materials the following shall occur: • All work shall immediately stop in the vicinity of the suspected contaminant; • Project engineer of the implementing agency shall be notified; • Area(s) shall be secured as directed by the Project Engineer; • Notification shall be made to the appropriated agency's Hazardous Waste/Materials Coordinator.	HAZ-7	F/ETCA: Project Engineer F/ET CA: Resident Engineer	Final Design Pre-Construction	NO						
Build Alternative 7A: Prior to any construction activities at APN 320-101-17 (Brea Car Wash & Detail Center, 1700 East Lambert Road), the underground storage tanks (USTs) will be removed and properly disposed of at an approved landfill facility under the purview of the appropriate lead agency (i.e., Orange County Department of Environmental Health, or appointee). Once the USTs are removed, sampling shall be conducted by a Phase II/Site Characterization Specialist. Results of sampling will indicate the level of remediation efforts required. Based on Phase II results at APN 320-101-17, remediation includes, but is not limited to, placing soil a minimum of five feet above the maximum water table elevation and covering with a minimum of one foot of non-hazardous material, or disposing soil at a regulated Class I landfill. Consultation with appropriate regulatory agencies shall be conducted prior to and during UST removal, soil sampling and post-soil sampling.	HAZ-8	F/ETCA: Project Engineer F/ET CA: Resident Engineer	Final Design Pre-Construction	NO						

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Air Quality	-									
A Dust Control Plan shall be prepared prior to the start of construction, which shall cover all construction activities as well as all temporary construction easements. During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the SCAQMD Rule 403, as well as other State and Federal regulations. • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. • The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust. • These control techniques shall be indicated in project specifications. Compliance with this measure shall be subject to periodic site inspections by the city. • Visible dust beyond the property line emanating from the project shall be prevented to the maximum extent feasible.	AQ-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.	AQ-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
The contractor shall adhere to Caltrans Standard Specifications for Construction (Sections 14-9 [Air Quality]).	AQ-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Noise										
To minimize the construction noise impacts for sensitive land uses adjacent to the proposed project site, compliance with Caltrans' Standard Specifications Section 14-8.02 "Noise Control" will be required.	N-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Contractor	Final Design Construction	NO						
Each internal combustion engine used for any purpose on the construction of the proposed project or related to the proposed project will be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine will be operated on the proposed project site without such a muffler.	N-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator	Final Design Construction	NO						
To minimize operation impacts for both Build Alternatives 7A and 9, noise barrier number 1 (NB No. 1) will be considered in the project design at the designated location. Preliminary noise barrier dimensions on the physical locations, lengths, and range of heights of the noise barrier will be provided in the analysis. Final heights and lengths for NB No. 1 shall be determined during final design and public review. If pertinent parameters change substantially during the final project design, preliminary noise barrier designs may be modified, added, or eliminated from the final project.	N-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator	Final Design Construction	NO						

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Energy										
Prior to the issuance of a grading permit, a construction efficiency plan will be prepared, which may include the following: • Select disposal sites in close proximity to the SR-57/Lambert Road Interchange project area to minimize haul distances and excavation-related fuel consumption • Reuse existing rail, steel, and lumber, such as for falsework, shoring, and other applications during the construction process • Recycle asphalt taken up from roadways • Use newer, more energy-efficient equipment and maintain older construction equipment in good working order • Schedule construction operations to result in the most efficient use of construction equipment possible • Promote employee carpooling The construction efficiency plan will incorporate relevant city, county, state, and federal energy requirements and shall be reviewed and approved by the Public Works Departments for each of the local jurisdictions that are within the project area.	E-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator	Final Design Construction	NO						
Prior to the opening of the project, a maintenance efficiency plan will be prepared, which may include the following: • Maintain maintenance equipment in good working order • Schedule maintenance operations to result in the most efficient use of maintenance equipment possible	E-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator	Final Design Construction	NO						
Prior to issuance of a grading permit, an area lighting plan shall be prepared to identify lighting fixtures that are energy efficient and to identify placement of individual lighting fixtures used for roadway lighting that will provide safety lights for pedestrians and motorists. The area lighting plan will incorporate relevant city, county, state, and federal energy code requirements and shall be reviewed and approved by the California Department of Transportation (Caltrans) and the City of Brea Public Works Department.	E-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator	Final Design Construction	NO						
Biology										
During construction, when work is conducted during the fire season (as identified by the Orange County Fire Authority) adjacent to the sage scrub-grassland vegetation, appropriate firefighting equipment (e.g., extinguishers, shovels and water tankers) will be available on site during all phases of proposed project construction. Shields, protective mats, and/or other fire preventive methods will be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventive actions, and responses to fires will advise the construction contractors regarding fire risk from all construction-related activities.	NC-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						
Prior to the start of any construction activities, temporary construction fencing will be erected outside the jurisdictional limits of Drainage Feature H and no vehicles or construction materials will be permitted inside the environmentally sensitive area (ESA) fencing.	WET-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						

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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. In the event that vegetation clearing is necessary during the nesting season (i.e., February 15 to August 31), a qualified biologist shall conduct a pre-construction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.	AN-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						
To prevent proposed project effects to bridge and crevice-nesting birds (i.e., swifts and swallows), all work on existing bridges with potential habitat conducted between February 15 and October 31 will include inspection for, and removal of, all bird nests prior to construction under the guidance and observation of a qualified biologist prior to February 1 of that year, before the nesting colony returns to the nesting site. Removal of nests that are under construction must be repeated as frequently as necessary to prevent nest completion or until a nest exclusion device is installed (such as netting or a similar mechanism that keeps birds from building nests). Nest removal and exclusion device installation will be monitored by a qualified biologist. Such exclusion efforts must be continued to keep the structures free of swallows until September or completion of construction. All nest exclusion techniques will be coordinated among the Department's District Biologist and the resource agencies.	AN-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						
The following habitat replacement and maintenance shall be provided consistent with USFWS standards. a. The City, with Caltrans Approval, will fund the enhancement of coastal CAGN habitat through off-site restoration and/or preservation of conservation lands. Permanent impacts to 0.15 acre of habitat suitable for the CAGN will be offset through the restoration and permanent conservation of 1.5 acres of coastal sage scrub habitat within designated CAGN critical habitat at Puente Hills Habitat Preservation Authority (Authority), or another location approved by the Carlsbad USFWS Office. Documentation that the habitat has been conserved will be provided to the Carlsbad USFWS Office prior to the commencement of vegetation removal and project construction. b. The City will submit final upland restoration plans to the Carlsbad USFWS Office for review and approval at least 30 days prior to initiating project impacts. The final plan will include the following information and conditions: 1. All habitat restoration/enhancement sites will be prepared for planting in a way that mimics natural habitat to the maximum extent practicable. All plantings will be installed in a way that mimics natural plant distribution and not in rows; 2. Planting palettes (plant species, size, and number/acre) and seed mix (plant species and pounds/acre). The plant palettes proposed in the draft plan will include native species specifically associated with the habitat type(s). Unless otherwise approved by the Carlsbad USFWS Office, only locally native species (no cultivars) obtained from the Chino/Puente Hills or other source within 15 miles of the Chino/Puente Hills will be used, unless otherwise approved by the Carlsbad USFWS Office. Native grass seed, which is wind pollinated, may be collected from anywhere in Southern California. The specific source location of all plant material and seed will be provided to the Carlsbad USFWS Office prior to use in restoration activities. 3. Container plant survival will be 60 percent of the initial plantings for the first five (5) years. At the first and second anniversary of plant installation, all dead plants will be replaced unless their function has been replaced by plants from seed or natural recruitment.	TE-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						

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4. A final implementation schedule will indicate when all impacts, as well as restoration plating and irrigation will begin and end. Offsite restoration planting and irrigation will be completed during the concurrent or next planting season (i.e., late fall to early spring) after initiating project impacts. 5. The final restoration plan will include five (5) years of success criteria for restoration areas including: percent cover, evidence of natural recruitment of multiple species for all habitat types, zero (0) percent coverage will be maintained for woody California Invasive Plant Council's (Cal-IPAC's) "Invasive Plant Inventory" species, and no more than 15 percent coverage for other exotic/weed species. 6. A minimum of five (5) years of maintenance and monitoring of restoration areas, unless success criteria are met earlier and all artificial water supplies have been off for at least two (2) years. 7. A qualitative and quantitative vegetation monitoring plan with a map of proposed sampling locations. Photo points will be used for qualitative monitoring and stratified-random sampling will be used for all quantitative monitoring. 8. Contingency measures in the event of creation/restoration/enhancement failure. 9. Annual mitigation maintenance and monitoring reports will be submitted to the Carlsbad USFWS Office no later than December 1 of each year. 10. If maintenance of a coastal sage scrub restoration area is necessary between February 15 and August 31, a biologist with knowledge of the biology and ecology of CAGN and approved by the Carlsbad USFWS Office will survey for CAGN within the restoration area, access paths to it, and other areas susceptible to disturbances by site maintenance. Surveys will consist of three visits separated by two (2) weeks, starting March 1 of each maintenance/monitoring year. Work will be allowed to continue on the site during the survey period. However, if CAGN are found during any of the visits, the City and Caltrans will notify and coordinate with the Carlsbad USFWS Office to identify measures to avoid and/or minimize effects to the CAGN (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work). c. The City will prepare and implement perpetual management, maintenance, and monitoring plans for the 1.5 acre conservation area, with consideration of the fact that the Puente Hills Habitat Preservation Authority (Authority) property is already managed pursuant to the Authority's conservation mission. The City will also establish a non-wasting endowment for an amount approved by the Puente Hills Habitat Preservation Authority (Authority) based on Property Analysis Records (PAR) or similar cost estimation methods, to ensure that there is sufficient funding for perpetual management, maintenance and monitoring of the property. The City will submit draft long-term management plans for the property to the Carlsbad USFWS Office for review and approval. The long-term management plans will include, but not be limited to, the following: 1) the PAR or other cost estimation results for the non-wasting endowment; 2) the proposed land manger's name, qualifications, business address, and contact information; and 3) the method of protecting the resources in perpetuity (e.g., conservation easement), monitoring schedule, measures to prevent human and exotic species encroachment, funding mechanism, and contingency measures should problems occur. The long-term management plan will be provided and the endowment will be established prior to initiation of vegetation removal and construction activities for the project. d. A perpetual biological conservation easement or other conservation mechanism acceptable to the Carlsbad USFWS Office will be recorded over the 1.5-acre conservation area. The conservation mechanisms will specify that no easements or activities (e.g., fuel modification zones, public trails, drainage facilitates, walls, maintenance access roads, utility easements) that will result in soil disturbance and/or native vegetation removal will be allowed within the biological conservation easement areas. The draft conservation mechanism will be provided to the Carlsbad USFWS Office for review and approval prior to										

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initiation of vegetation removal and construction activities for the project. The City will also submit the final conservation mechanism to the Carlsbad USFWS Office. e. All areas of temporary impact, totaling 1.4 acres, will be revegetated and restored with native species. These areas will be returned to original grade, as feasible. Prior to initiating project impacts, a restoration plan will be developed for the temporary impact areas. The plan will be submitted to the Carlsbad USFWS Office for review and approval. This plan will include a detailed description of restoration methods, slope stabilization, and erosion control, criteria for restoration to be considered successful, and monitoring protocol(s). Following the completion of construction activities within each area of impact, the restoration plan will be implemented for a minimum of five (5) years, unless success criteria are met earlier and all artificial water has been off for at least two (2) years. Temporary impact areas will be planted as soon as possible following re-grading after completion of construction to prevent encroachment by nonnative plants.										
All lighting used during any nighttime construction (e.g., staging areas, equipment storage sites, roadway) adjacent to the sage scrub-grassland within California gnatcatcher-designated critical habitat will be directed toward the construction site and away from gnatcatcher-designated critical habitat to avoid and minimize artificial night lighting effects. Construction lighting will be the lowest illumination necessary for safety, and light glare shields will be used to reduce the extent of illumination into gnatcatcher-designated critical habitat. Permanent lighting will be of the lowest illumination necessary for safety and will be directed toward the road and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. The City and Caltrans will review the permanent lighting plants for the project and then submit them to the Carlsbad USFWS Office for review and approval.	TE-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						
Prior to any construction related activities, and under the supervision of the Project Biologist, the limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment) will be installed around designated critical habitat (with constituent elements) adjacent to the proposed project footprint; these areas will be designated as Environmentally Sensitive Areas (ESAs) to be preserved. No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of cut or fill material in areas where vegetation is adjacent to planned grading activities.	TE-3	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						
During construction, a qualified biologist (for this measure the Project Biologist shall be experienced in CAGN biology and ecology) approved by the Carlsbad USFWS Office will be onsite during: 1) initial clearing and grubbing; and 2) weekly during project construction within 200 feet of CAGN habitat to ensure compliance with all conservation measures. The Project Biologist will be familiar with the habitats, plants, and wildlife in the project area to ensure that issues relating to biological resources are appropriately and lawfully managed. The City and/or Caltrans will submit the biologists' name, address, telephone number, and work schedule on the project to the Carlsbad USFWS Office prior to initiating project impacts. The biologist will be provided with a copy of this consultation. a. Under the supervision of the Project Biologist, the limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment. If work occurs beyond the fenced or demarcated limits of impact, all work will	TE-4	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
cease until the problem has been remedied to the satisfaction of the Carlsbad USFWS Office. Temporary construction fencing and markers will be maintained in good repair until the completion of project construction and removed upon project completion. b. The Project Biologist will submit a final report to the Carlsbad USFWS Office within 120 days of project completion including photographs of impact areas and adjacent habitat, documentation that authorized impacts were not exceeded, and documentation that general compliance with all conservation measures was achieved. The report will specify numbers, locations, and sex of CAGN (if observed), observed CAGN behavior (especially in relation to project activities), and remedial measures employed to avoid and minimize impacts to CAGN and their critical habitat. Raw field notes should be available upon request by the Carlsbad USFWS Office. c. During construction the employee education program (training/awareness program) will be developed and implemented by the Project Biologist. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program prior to working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. The training/awareness program will include, at minimum, the following: occurrence of the listed and sensitive species in the area (including photographs), their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area. d. To avoid attracting predators of the CAGN the project site will be kept as clean of debris as possible. Food-related trash items will be kept in enclosed containers and regularly removed from the site. e. Project personnel will be prohibited from bringing domestic pets to the construction site to ensure that domestic pets do not disturb or depredate wildlife in the adjacent native habitat.										
Implement Measures WQ-5, GEO-1, GEO-3, AQ-1, AN-1, AN-2, INV-1, and INV-2 as follows: a. Implement Measure WQ-5. All equipment maintenance staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated disturbed/developed areas. They will be located such that runoff from the designated areas will not enter gnatcatcher-designated critical habitat. b. Implement Measure GEO-1. If fills must be borrowed from, or disposed of offsite, the construction contractor will identify any necessary borrow and disposal sites and provide this information to the City and Caltrans for review. Caltrans will review borrow and disposal site information and submit the information to the Carlsbad USFWS Office. If borrow or disposal activities may affect a listed species or critical habitat, Caltrans will reinitiate Section 7 consultation. c. Implement Measure GEO-3. Appropriate erosion and siltation controls will be installed prior to the onset of vegetation clearing and be maintained in good repair until the completion of project construction. Erosion and sediment control devices used for the project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard. d. Implement Measure AQ-1. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures. e. Implement Measures AN-1 and AN-2. The clearing and grubbing of native habitats for the project will be conducted between September 1 and February 14 to avoid the CAGN breeding season (or sooner than September 1 if the Project Biologist demonstrates to the satisfaction of the Carlsbad USFWS Office that all nesting is complete). If vegetation clearing must be conducted during breeding season, Caltrans will re-initiate consultation with the Carlsbad USFWS Office to address unanticipated effects to this species.	TE-5	F/ETCA: Project Engineer F/ET CA: Resident Engineer Project Coordinator Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
f. Implement Measure INV-1. If invasive weed species are already growing within the project area, special care will be taken during transport, use, and disposal of soils containing invasive weed seeds to ensure that invasive weeds are not spread into new areas by the project. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds. Eradication strategies will be implemented should an invasion of nonnative plant species be observed in the project work area by the Project Biologist. g. Implement Measure INV-2. No invasive species listed in the National Invasive Species Management Plan, State of California Noxious Weed List, or Cal-IPC Invasive Plant Inventory list will be included in the landscaping plans for the proposed project. Landscaping will not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas, and water runoff from landscaped areas will be directed away from adjacent native habitats and contained and/or treated within the development footprint. Caltrans will review the landscaping plans for the project and then submit them to the Carlsbad USFWS Office for review and approval.										
Prior to the start of any construction activities, a weed abatement program will be developed to minimize the importation of nonnative plant material during and after construction. If invasive weed species are already growing within the project area, special care will be taken during transport, use, and disposal of soils containing invasive weed seeds to ensure that invasive weeds are not spread into new areas by the project. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds. Eradication strategies will be employed should an invasion occur. This weed abatement program will be approved by the City and Caltrans District 12 Environmental Branch.	INV-1	F/ETCA: Project Engineer F/ET CA: Resident Engineer Environmental Planning/Biologist Landscape / Landscape Architecture	Design Construction	NO						
No invasive species listed in the National Invasive Species Management Plan, State of California Noxious Weed List, or Cal-IPC Invasive Plant Inventory list will be included in the landscaping plans for the proposed project. Landscaping will not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas, and water runoff from landscaped areas will be directed away from adjacent native habitats and contained and/or treated within the development footprint. Caltrans will review the landscaping plans for the project and then submit them to the Carlsbad USFWS Office for review and approval. In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the proposed project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. During construction protective measures will be taken to ensure that invasive species are not introduced or spread, including: • During construction, the construction contractor will inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another. • During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible. • During construction, the construction contractor will ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust. • During construction, the construction contractor will ensure that all material stockpiled is sufficiently watered or covered to prevent excessive amounts of dust. • During construction, soil/gravel/rock will be obtained from weed-free sources. • Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.	INV-2	F/ETCA: Project Engineer F/ET CA: Resident Engineer Landscape / Landscape Architecture	Design Construction	NO						

Task and Brief Description	Ref. Measure Number	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
• After construction, affected areas adjacent to native vegetation will be revegetated with plant species approved by the Department's District Biologist that are native to the vicinity. • After construction, all revegetated areas will avoid the use of species listed in the California Invasive Plant Council (Cal-IPC's) California Invasive Plant Inventory that have a high or moderate rating.										

Appendix D

Acronyms

Appendix D: List of Acronyms

AB	Assembly Bill
ACM	Asbestos Containing Materials
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADT	Average daily trips
AHERA	Asbestos Hazard Emergency Response Act
amsl	Above mean sea level
AN	Animal Species
APD	Area of Project Disturbance
APE	Area of Potential Effect
AQ	Air Quality
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASR	Archaeological Survey Report
AST	Aboveground storage tank
BA	Biological Assessment
BMP	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAGN	California gnatcatcher
California Register	California Register of Historical Resources
Cal-IPC	California Invasive Plant Council
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CSS	Coastal sage scrub
CDFW	California Department of Fish and Wildlife
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CIA	Community Impact Assessment

CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
COC	Chemicals of Concern
CPSC	Consumer Product Safety Commission
CULT	Cultural Resources
CWA	Clean Water Act
D/C	Demand to capacity ratio
DAMP	Drainage Area Management Plan
dB	Decibel
dBA	A-Weighted Decibels
DEH	Department of Environmental Health
Department	California Department of Transportation
DOGGR	(California) Department of Oil, Gas, and Geothermal Resources
DRRP	Diesel Risk Reduction Plan
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substance Control
E.O.	Executive Order
EA	Environmental Assessment
EDR	Environmental Data Resources
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FTA	Federal Transit Authority
FTIP	Federal Transportation Improvement Program
GEO	Geology, Soils, Seismic, and Topography
GHG	Greenhouse Gas
GIS	Geographic Information System
H_2S	Hydrogen sulfide
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HEI	Health Effect Institute
HFC	Hydrofluorocarbon
HOV	High Occupancy Vehicle
HPSR	Historic Property Survey Report

ICU	Intersection capacity utilization
IPAC	Information, Planning and Conservation System
IPCC	Intergovernmental Panel on Climate Change
IRIS	Integrated Risk Information System
IS	Initial Study
ISA	Phase I Initial Site Assessment
JD	Jurisdictional Delineation
LA	Los Angeles
LACM	Natural History Museum of Los Angeles County
LBP	Lead-based paint
Ldn	Day-Night Average Sound Level
LEDPA	Least environmentally damaging practicable alternative
Leq	Equivalent continuous sound level
LID	Low impact development
Lmax	Maximum sound level
LOS	Level of service
LSA	LSA Associates, Inc.
LU	Land Use
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MPAH	Master Plan of Arterial Highways
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Sources Air Toxics
MTBE	Methyl Tert-Butyl Ether
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decisions Report
NAHC	Native American Heritage Commission
NALMA	North American Land Mammal Age
National Register	National Register of Historic Places
NCCP	Natural Communities Conservation Plan
NCHRB	National Cooperative Highway Research Board
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NLEV	National low emissions vehicle
NO_2	Nitrogen Dioxide
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration

NO_x	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
O_3	Ozone
OCTA	Orange County Transportation Authority
OHP	State Office of Historic Preservation
OHWM	Ordinary high watermark
OPR	Office of Planning Research
OSHA	Occupational Safety and Health Act
PA	Programmatic Agreement
PALEO	Paleontology
Pb	Lead
pc/mi/ln	Passenger cars per mile per lane
PCB	Polychlorinated Biphenyls
PCE	Primary constituent element
pCi/L	Picocuries per liter
PDT	Project Development Team
PEs	Permanent easements
PID	Project Initiation Document
PIR/PER	Paleontological Resources Identification and Evaluation Report
PM	Postmile
PM_{10}	Particulate matter 10 microns in diameter of less
$PM_{2.5}$	Particulate matter 2.5 microns in diameter or less
POAQC	Projects of Air Quality Concern
PQS	Professionally Qualified Staff
PRC	Public Resources Code
proposed project	State Route 57/Lambert Road Interchange Improvement Project
RAP	Relocation Assistance Program
RBF	RBF Consulting
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act of 1976
REC	Recognized Environmental Condition
RFG	Reformulated gasoline
ROG	Reactive Organic Gases
ROW	Right-of-Way
RPW	Relatively permanent water
RSA	Resource Study Area
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin

SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SER	Standard Environmental Reference
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SR	State Route
SRA	Source Receptor Area
SWDR	Storm Water Data Report
SWMP	(Statewide) Storm Water Management Plan
SWPPP	Storm Water Pollutant Prevention Plan
SWRCB	State Water Resources Control Board
TCE	Temporary construction easement
TCWG	Transportation Conformity Working Group
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
TNM	Traffic noise model
TNW	Traditional navigable waters
TSCA	Toxic Substances Control Act
UBC	Universal (Uniform) Building Code
US EPA	United State Environmental Protection Agency
USA	Underground Service Alert
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
v/c	Volume to capacity ratio
VHT	Vehicle Hours Traveled
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
vph	Volume per hour
WDRs	Water discharge requirements
WPCP	Water Pollution Control Plan
WQAR	Water Quality Assessment Report

Appendix E

Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program
RELOCATION ASSISTANCE ADVISORY SERVICES

DECLARATION OF POLICY

"The purpose of this title is to establish a ***uniform policy for fair and equitable treatment*** of persons displaced as a result of federal and federally assisted programs in order that such persons ***shall not suffer disproportionate injuries*** as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall…be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations (CFR) Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

FAIR HOUSING

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This Act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to 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. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe and sanitary." Nonresidential displacees will receive information on comparable properties

for lease or purchase (for business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

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 first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe and sanitary" replacement dwelling, available on the market, is offered to them by Caltrans.

RESIDENTIAL RELOCATION PAYMENTS

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

<u>Moving Costs</u>
Any displaced person, who lawfully occupied 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 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property in order to be eligible for relocation payments.

<u>Purchase Differential</u>
In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment 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. The maximum combination of these three supplemental payments that the owner-occupant can receive is $31,000. If the total entitlement (without the moving payments) is in excess of $31,000, the Last Resort Housing Program will be used (see the explanation of the Last Resort Housing Program below).

Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant 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 limitations noted under the *Down Payment* section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is $7,200. If the total entitlement for rent supplement exceeds $7,200, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the date the Department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment

The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans' initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of $7,200. 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) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the $31,000 and $7,200 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced;
- Specific arrangements needed to accommodate any family member(s) with special needs;
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family;
- Preferences in area of relocation;
- Location of employment or school.

NONRESIDENTIAL RELOCATION ASSISTANCE

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current

lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses
Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

Reestablishment Expenses
Reestablishment expenses related to the operation of the business at the new location, up to $10,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment
A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses which meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $40,000.

ADDITIONAL INFORMATION

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, *except* for any federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization which has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a pubic project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Your Rights and Benefits as a Displacee Under the Uniform Relocation Assistance Program (Residential)

California Department of Transportation

Introduction

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.

Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 As Amended "The Uniform Act"

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

> To ensure that persons displaced as a direct result of federal or federally-assisted projects 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.

While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.

Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

Comparable Replacement: means a dwelling which is:

(1) Decent, safe, and sanitary. (See definition below)

(2) Functionally equivalent to the displaced dwelling.

(3) Adequate in size to accommodate the family being relocated.

(4) In an area not subject to unreasonable adverse environmental conditions.

(5) In a location generally not less desirable than the location of your displacement dwelling with respect to public utilities and commercial and public facilities, and reasonably accessible to the place of-employment.

(6) On land that is typical in size for residential development with typical improvements.

Decent, Safe and Sanitary (DS&S): Replacement housing must be decent, safe, and sanitary - which

means it meets all of the minimum requirements established by federal regulations and conforms to applicable housing and occupancy codes. The dwelling shall:

(1) Be structurally sound, weather tight, and in good repair.

(2) Contain a safe electrical wiring system adequate for lighting and other devices.

(3) Contain a heating system capable of sustaining a healthful temperature (of approximately 70 degrees) for a displaced person, except in those areas where local climatic conditions do not require such a system.

(4) Be adequate in size with respect to the number of rooms and area of living space needed to accommodate the displaced person. The Caltrans policy is that there will be no more than 2 persons per room unless

the room is of adequate size to accommodate the normal bedroom furnishings for the occupants.

(5) Have a separate, well-lighted and ventilated bathroom that provides privacy to the user and contains a sink, bathtub or shower stall, and a toilet, all in good working order and properly connected to appropriate sources of water and to a sewage drainage system.

Note: In the case of a housekeeping dwelling, there shall be a kitchen area that contains a fully usable sink, properly connected to potable hot and cold water and to a sewage drainage system, and adequate space and utility service connections for a stove and refrigerator.

(6) Contains unobstructed egress to safe, open space at ground level. If the replacement dwelling unit is on the second story or above, with access directly from or through a common corridor, the common corridor must have at least two means of egress.

(7) For a displaced person who is handicapped, be free of any barriers which would preclude reasonable ingress, egress, or use of the dwelling by *such displaced person.*

Displaced Person or Displacee: Any person who moves from real property or moves personal property from real property as a result of the acquisition of the real property, in whole or in part, or as the result of a written notice from the agency to vacate the real property needed for a transportation project. In the case of a partial acquisition, Caltrans shall determine if a person is displaced as a direct result of the acquisition.

Relocation benefits will vary, depending upon the type and length of occupancy. As a residential displacee, you will be classified as either a:

- An owner occupant of a residential property (includes mobile homes)

- A tenant occupant of a residential property (includes mobile homes and sleeping rooms)

Dwelling: The place of permanent or customary and usual residence of a person, according to local custom or law, including a single family house; a single family unit in a two-family, multi-family, or multi-purpose property; a unit of a condominium or cooperative housing project; a non-housekeeping unit; a mobile home; or any other residential unit.

Owner: A person is considered to have met the requirement to own a dwelling if the person purchases or holds any of the following interests in real property:

(1) Fee title, a life estate, a land contract, a 99-year lease, oral lease including any options for extension with at least 50 years to run from the date of acquisition; or

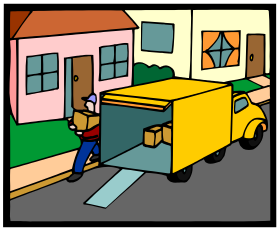
(2) An interest in a cooperative housing project which includes the right to occupy a dwelling; or

(3) A contract to purchase any interests or estates; or

(4) Any other interests, including a partial interest, which in the judgment of the agency warrants consideration as ownership.

Tenant: A person who has the temporary use and occupancy of real property owned by another.

Moving Expenses



If you qualify as a displaced person, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. The methods of moving and the various types of moving cost payments are explained below.

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. However, to ensure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

You Can Choose Either:

Actual Reasonable Moving Costs - You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses may

include:

- Transportation
- Packing and unpacking personal property.
- Disconnecting and reconnecting household appliances.
- Temporary storage of personal property.
- Insurance while property is in storage or transit.

OR

Fixed Moving Cost Schedule - You may be paid on the basis of a fixed moving cost schedule. Under this option, you will not be eligible for reimbursement of related expenses listed above. The fixed schedule is designed to cover such expenses.

Examples (Year 2014 Rate):
4 Rooms - $ 1,295
7 Rooms - $ 2,090

The Fixed Move Schedule for a furnished unit (e.g. you are a tenant of an apartment that is furnished by your landlord) is based on Schedule B.

Example (Year 2014 Rate):
1 Room - $450

A dormitory style room under the 2014 Schedule B rate would receive $125.

Under the Fixed Move Schedule, you will not receive any additional payments for temporary storage, lodging, transportation or utility hook-ups.

Replacement Housing Payments

The type of Replacement Housing Payment (RHP) depends on whether you are an owner or a tenant, and the length of occupancy in the property being acquired.

If you are a qualified **owner occupant** of more than 90 days prior to the initiation of negotiations for the acquisition of your property, you may be entitled to a RHP that consists of:

Price Differential, and

Mortgage Differential, and

Incidental Expenses;

OR

Rent Differential

If you are a qualified **tenant occupant** of at least 90 days, you may be entitled to a RHP as follows:

Rent Differential

OR

Down payment Option

Length of occupancy simply means counting the number of days that you actually occupied a dwelling before the date of initiation of negotiations by Caltrans for the purchase of the property. The term "initiation of negotiations" means the date Caltrans makes the first personal contact with the owner of real property, or his/ her representative, to give him/her a written offer for the property to be acquired.

Note: If you have been in occupancy less than 90 days before the initiation of negotiations and the property is subsequently acquired, or if you move onto the property after the initiation of negotiations and you are still in occupancy on the date of acquisition, you may or may not be eligible for a Replacement Housing Payment. Check with your Relocation Agent before you make any decision to vacate your property.

For Owner Occupants of 90 Days or More

If you qualify as a 90-day owner occupant, you may be eligible - in addition to the fair market value of your property - for a Replacement Housing Payment that consists of a Price Differential, Mortgage Differential and Incidental Expenses.

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

The **Mortgage Differential** payment will reimburse you for any increased mortgage interest costs you might incur because the interest rate on your new mortgage exceeds the interest rate on the property acquired by Caltrans. The payment computation is complex as it is based on prevailing rates, your existing loan <u>and</u> 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.

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 will not be reimbursed for any recurring costs such as prepaid real estate taxes and property insurance.

EXAMPLES OF PRICE DIFFERENTIAL PAYMENT COMPUTATION:

Assume that Caltrans purchases your property for $98,000. After a thorough study of available, decent, safe and sanitary dwellings on the open market, Caltrans determines that a comparable replacement property will cost you $100,000. If your purchase price is $100,000, you will receive $2,000 *(see Example A).*

If your actual purchase price is more than $100,000, you pay the difference (see *Example B).* If your purchase price is less than $100,000, the differential payment will be based on actual costs *(see Example C).*

How much of a differential payment you receive depends on how much you actually spend on a replacement dwelling as shown in these examples:

Caltrans' Computation

Comparable Replacement Property	$100,000
Acquisition Price of Your Property	-$ 98,000
Maximum Price Differential	$ 2,000

Example A

Purchase Price of Replacement	$100,000
Comparable Replacement Property	$100,000
Acquisition Price of Your Property	-$ 98,000
Maximum Price Differential	$ 2,000

Example B

Purchase Price of Replacement Property	$105,000
Comparable Replacement Property	$100,000
Acquisition Price of Your Property	$ 98,000
Maximum Price Differential	$ 2,000

You Must Pay the Additional $5,000

Example C

Comparable Replacement Property	$100,000
Purchase Price of Replacement	$ 99,000
Acquisition Price of Your Property	$ 98,000
Price Differential	$ 1,000

In Example C you will only receive $1,000 - not the full amount of the Caltrans "Comparable Replacement Property" because the requirements to spend were not met.

IN ORDER FOR A "90 DAY OWNER OCCUPANT" TO RECEIVE THE FULL AMOUNT OF THEIR REPLACEMENT HOUSING *PAYMENT* *(Price Differential, Mortgage Differential and Incidental Expenses)***, you must:**

A) Purchase and occupy a DS&S replacement dwelling within one year after the later of:

(1) The date you first receive a notification of an available replacement house, **OR**

(2) The date that Caltrans has paid the acquisition cost of your current dwelling (usually the closing of escrow on State's acquisition),

AND

B) Spend at least the amount of the Caltrans "Comparable Replacement Property" for a replacement property,

AND

C) File a claim for relocation payments within 18 months of the later:

(1) The date you vacate the property acquired by Caltrans, **OR**

(2) The date that Caltrans has paid the acquisition cost of your current dwelling (usually the close of escrow on State's acquisition)

You will not be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. Also, you will also receive at least 90 days' written notice before you must move.

For Tenants of 90 Days or More

If you qualify as a 90-day occupant, you may be eligible for a Replacement Housing Payment in the form of a 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.

Utility costs are those expenses you incur for heat, lights, water and sewer - regardless of the source (e.g. electricity, propane, and septic system). It does not include garbage, cable, telephone, or security. The utilities at your property are the average costs over the last 12 months. The utilities at the comparable replacement property are the estimated costs for the last 12 months for the type of dwelling

and area used in the calculation.

This difference is multiplied by 42 months and may be paid to you in a lump sum payment or in periodic installments in accordance with policy and regulations.

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.

Example of Rent Differential Payment Computation:

After a thorough study of comparable, decent, safe and sanitary dwellings that are available for rent, Caltrans determines that a comparable replacement property will rent for $325.00 per month.

Caltrans Computation (rates are per month)

Rental Rate for Comparable Replacement Property:	$ 325
PLUS average estimated utilities costs:	+ 100
TOTAL Cost to Rent Comparable Replacement Property:	= $ 425

Rental Rate for Your Current Property:	$ 300
PLUS average utilities costs:	+ 90
TOTAL Cost you pay to rent your current property:	= $ 390
Comparable Replacement Property including utilities:	$ 425
Cost you pay to rent your property including utilities:	+ 390
Difference:	=$ 35

Multiplied by 42 months = $1,470 Rent Differential

Example A:

Rental Rate for a Replacement Property, including estimated average utilities costs:	$ 525
Comparable Replacement Property including utilities:	$ 425
Cost you pay to rent your property including utilities:	$ 390

Since $425 is less than $525, the Rent Differential is based on the difference between $390 and $425.

Rent Differential ($35 x 42 months = $1,470)

In this case you spent "at least" the amount of the Comparable Replacement Property on the replacement property and will receive the full amount.

Example B:

Rental Rate for a Replacement Property, including estimated average utilities costs:	$ 400
Comparable Replacement Property including utilities:	$ 425
Cost you pay to rent your property including utilities:	$ 390

Since $400 is less than $525, the Rent Differential is based on the difference between $400 and $390.

<u>Rent Differential ($10 x 42 months = $420)</u>

In this case you spent "less than" the amount of the Comparable Replacement Property on the replacement property and will not receive the full amount.

You will not be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. And, you will also receive at least 90 days' written notice before you must move.

Down Payment Option

The Rent Differential payment may - with certain limitations - be converted to a **Down Payment Option** to assist you in purchasing a replacement property. The down payment option is a direct conversion of the Rent Differential payment.

If the Caltrans calculated Rent Differential is between $0 and $7,200, your down payment option will be $7,200, which can be used towards the purchase of a replacement decent, safe and sanitary dwelling.

If the Rent Differential is over $7,200, 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 acquisition of the replacement dwelling, plus any eligible incidental expenses (see “90-day Owner Occupants 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.

If any portion of the Rent Differential was used prior to the decision to convert to a down payment option, those advance payments will be deducted from the entire benefit.

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 $7,200 and $31,000 in order to make available housing affordable.

Relocation Advisory Assistance

Any individual, family, business or farm displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your housing needs and desires will be determined as well as your need for assistance. You cannot be required to move unless at least one comparable replacement dwelling is made available to you.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Explain the relocation benefits and eligibility requirements.
- Provide the amount of the replacement housing payments in writing.
- Assure the availability of a comparable property before you move.
- Inspect possible replacement residential units for DS&S compliance.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits
- Interest rates and terms
- Typical down payments
- VA and FHA loan requirements
- Real property taxes.
- Consumer education literature on housing

If you desire, your Relocation Agent will give you current listings of other available replacement housing. Transportation will be provided to inspect available housing, especially if you are elderly or

handicapped. You may obtain the services of a real estate broker to assist in finding a replacement dwelling but, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local housing programs offering assistance to displaced persons. If you have special problems, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans may establish a temporary Relocation Field Office on or near the project. Project relocation offices would be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions and be sure you fully understand all of your rights and available benefits.

YOUR RIGHTS AS A DISPLACEE

All eligible displacees have a freedom of choice in the selection of replacement housing, and Caltrans will not require any displaced person to accept a replacement dwelling provided by Caltrans. If you decide not to accept the replacement housing offered by Caltrans, you may secure a replacement dwelling of your choice, providing it meets DS&S housing standards. Caltrans will not pay more than your calculated benefits on any replacement property.

The most important thing to remember is that the replacement dwelling you select must meet the basic "decent, safe, and sanitary" standards. Do not execute a purchase agreement or a rental agreement until a representative from Caltrans has inspected and certified in writing that the dwelling you propose to occupy meets the basic standards. **DO NOT jeopardize** your right to receive a replacement

housing payment by moving into a substandard dwelling.

It is important to remember that your relocation benefits will not have an adverse affect on your:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Whenever possible, minority persons shall be given reasonable opportunities to relocate to decent, safe, and sanitary replacement dwellings, not located in an area of minority concentration, and that is within their financial means. This policy, however, does not require Caltrans to provide a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible agency if that person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

Americans with Disabilities Act (ADA) Notice:

This document is available in alternative formats for people with physical disabilities. Please call (916) 654-5413, or write to 'Department of Transportation - Right of Way, MS-37, 1120 N Street, Sacramento, CA 95814,' for information.

NOTES

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Residential

Effective October 1, 2014 (2nd Printing)

Sus Derechos y Beneficios Como Una Persona Desplazada Bajo el Programa Uniforme De Asistencia Para Reubicación (Residencial)

California Department of Transportation

Introducción

En la construcción de un sistema moderno de transportación, el desplazamiento de un pequeño porcentaje de la población es a menudo necesario. Sin embargo, la política de Caltrans es que las personas desalojadas no tengan que sufrir innecesariamente como resultado de los programas diseñados para el beneficio del público en general.

Los individuos y familias desplazadas pueden ser elegibles para recibir servicios de asesoramiento y pagos de reubicación.

Este folleto provee información acerca de los servicios y pagos de reubicación disponibles. Si usted es requerido a mudarse como resultado de un proyecto de transportación, un Agente de Reubicación se comunicará con usted. El Agente de Reubicación le contestará preguntas específicas y le proveerá información adicional.

Ley de Procedimiento Uniforme de Asistencia para Rubicación y Adquisición de Bienes Raíces de 1970, Enmendada “La Ley Uniforme”

El propósito de esta Ley es proveer tratamiento igual y uniforme para las personas que son desplazadas de sus hogares, negocios, u operaciones agrícolas por programas federales o programas que son asistidos con fondos federales y para establecer uniformidad e igualdad en la política de adquisición de tierras por programas federales y programas asistidos con fondos federales.

La ley trata de asegurar que las personas desplazadas directamente como resultado de proyectos federales o proyectos asistidos con fondos federales sean tratados con igualdad, consistencia y equidad para que esas personas no sufran daños desproporcionados como resultado de proyectos designados para el beneficio del público en general.

Aunque se ha hecho un esfuerzo para asegurar la precisión de este folleto, debe de ser entendido que no tiene la fuerza o efectos de la ley, regla, o

regulación que gobierna el pago de los beneficios. Si hay diferencias o error, la ley tomará precedencia.

Algunas Definiciones Importantes…

Sus beneficios de reubicación pueden ser entendidos mejor si usted entiende los siguientes términos:

Vivienda de Restitución comparable: significa una propiedad que es:

(1) Decente, segura y sanitaria. (Vea la definición abajo.)
(2) Equivalente funcionalmente a la propiedad desplazada.
(3) Adecuada en tamaño para acomodar a la familia que esta siendo reubicada.
(4) En un área que no esté sujeta a condiciones irrazonablemente adversas.
(5) En una localidad generalmente no menos deseable que la localidad de su propiedad desplazada con respecto a servicios públicos, y acceso razonable al lugar de empleo.
(6) En una parcela de tamaño típico para el desarrollo de una residencia de tamaño normal.

Decente, Segura y Sanitaria (DS&S): La vivienda de restitución debe de ser decente, segura y

sanitaria … que significa que llena todos los requisítos mínimos establecidos por las regulaciones federales y conforme a los códigos de ocupación de viviendas aplicables. La propiedad será:

(1) Buena estructuralmente, cerrada a las condiciones climáticas y en buen estado de reparación.

(2) Contiene un sistema eléctrico adecuado para iluminación y otros aparatos.

(3) Contiene un sistema de calefacción capáz de mantener una temperatura saludable (de aproximadamente 70 grados) para la persona desplazada, con excepción en aquellas áreas donde las condiciones climáticas no requieren dicho sistema.

(4) Debe de ser adecuada en tamaño con respecto al número de cuartos y áreas para vivir necesarias para acomodar a las personas desplazadas. Es política de Caltrans que más

de dos personas no deben de estar en un solo cuarto, a menos que que el tamaño del cuarto sea suficientemente adecuado para acomodar los muebles de dormitorios necesarios de los ocupantes.

(5) Tener un baño separado, bien iluminado y ventilado que sea privado a los usuarios y que contenga un lavamanos, una tina o regadera, y un excusado, todos en buenas condiciones y apropiadamente conectados a los sistemas de aguas negras y aguas potables.

Nota: En el caso de una "housekeeping dwelling," debe de haber una área de cocina que contenga un lavatrastos usable, propiamente conectado a agua caliente y agua fría, y al sistema de drenaje, y con espacio adecuado para utilizar los servicios y connecciones para una estufa y un refrigerador.

(6) Contiene la salida sin obstrucciones a la caja fuerte, espacio abierto a nivel del suelo. Si la unidad de vivienda de reemplazo está en el segundo piso o por encima, con acceso directamente desde oa través de un pasillo común, el corredor común debe tener por lo menos dos medios de egreso.

(7) Si la persona desplazada es incapacitada físicamente, debe de ser libre de cualquier barrera que le impidan la entrada o salida, o uso razonable de la propiedad por dicha persona incapacitada.

Persona Desplazada: Cualquier individuo o familia que se mueva de una propiedad o mueva sus bienes personales de una propiedad como resultado de la adquisición de bienes raíces, en todo o en parte, o como resultado de una notificación escrita de una agencia pidiéndole que desocupe la propiedad que se necesita para un proyecto de transportación. En el caso de una adquisición parcial, Caltrans debe de determinar si la persona es desplazada directamente como resultado de esta adquisición.

Los beneficios de reubicación van a variar dependiendo del tipo y tiempo de ocupación. Como una persona desplazada de una unidad residencial usted puede ser clasificado como:

- Un dueño ocupante de una propiedad residencial (incluyendo casas movibles)
- Un inquilino ocupante de una propiedad residencial (incluyendo casas movibles y cuartos para dormir)

Vivienda: El lugar de permanencia o residencia regular y usual de una persona, de acuerdo a las costumbres locales o la ley, incluyendo una unidad familiar, una unidad familiar en un complejo doble o multi-familiar, o una propiedad de uso múltiple, una unidad de condominio o proyecto de vivienda en cooperativa, una unidad libre de mantenimiento doméstico, una casa movible, o cualquier otra unidad residencial.

Dueño: Una persona es considerada que llena los requisitos de dueño de una casa, si esta persona compra, tiene título o tiene algunos de los siguientes intereses en una propiedad:

(1) Una escritura de propiedad, un interés de por vida en una propiedad, un contrato de renta por 99 años, un contrato oral de renta incluyendo una opción para extensión con al menos 50 años que queden después de la fecha de adquisición; o

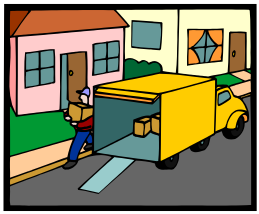
(2) El interés en un proyecto de vivienda en cooperativa que incluya el derecho de ocupar una vivienda; o

(3) Un contrato de compra de interés, o bienes raíces.

(4) Algún otro interés, incluyendo intereses parciales, qua a juicio de la agencia garanticen los pagos como dueño.

Inquilino: Una persona que tiene el uso y la ocupación temporal de una propiedad de la que otro es dueño.

Gastos de Mudanza



Si usted califica como persona desplazada, usted tiene derecho a reembolso de sus gastos de mudanza y a ciertos gastos relacionados incurridos durante el traslado. Los métodos de traslado y los distintos tipos de pagos para gastos de mudanza son explicados abajo.

Los individuos y familias desplazadas pueden escoger un pago basado en los gastos reales, razonables y los gastos relacionados, o de acuerdo a una lista de costos fijos de mudanza. Sin embargo, para asegurar su elegibilidad y el pago rápido de sus gastos de mudanza, usted debe de ponerse en contacto con su Agente de Reubicación antes de mudarse.

Usted Puede Elegir Entre:

Los Gastos Razonables de Mudanza – A usted se le puede pagar por los gastos razonables de mudanza y gastos relacionados cuando una

compañia comercial de mudanza hace la mudanza. Los reembolsos deberán ser limitados a una mudanza de 50 millas o menos. Los gastos relacionados pueden incluir:

- Transportación.
- Empaque y desempaque de propiedades personales.
- Desconexión y reconexión de aparatos eléctricos.
- Almacenaje temporal de propiedades personales.
- Seguros cuando la propiedad está almacenada o en tránsito.

Ó

Lista de Costos Fijos de Mudanza – A usted se le puede pagar basado en una lista de costos fijos de mudanza. Bajo esta opción, usted no puede ser elegible para reembolsos de gastos relacionados incluídos en la lista de arriba. Esta lista de gastos fijos está designada a cubrir todos esos gastos.

Por ejemplo (Tarifa para el año 2014)

4 Cuartos - $1,295
7 Cuartos - $2,090

Los costos fijos de mudanza para una unidad (ejemplo, usted es inquilino en un apartmento donde los muebles pertenecen al dueño de la vivienda) estan basados en la Tabla de Honorarios B.

Por ejemplo (Tarifa para el año 2014)
1 Cuartos - $450

Una habitación de estilo dormitorio debajo de la tasa de la Tabla de B - $125 (2014).

Bajo la lista de Pago Fijos de Mudanza, usted no puede recibir ningun pago adicional por almacenamiento temporario, vivienda temporaria, transportación o conexiones de servicios públicos.

Pagos Para Vivienda de Restitución

El tipo de Pago Para Vivienda de Restitución (RHP) depende de si usted es dueño o un inquilino, y en el tiempo de ocupación que tiene de la propiedad que será adquirida.

Si usted es calificado **como dueño ocupante** de más de 90 días antes de la iniciación de negociaciones para la adquisición de su propiedad, usted puede tener derecho a recibir RHP que consiste en:

Diferencia de Precio, y

Diferencia para Hipoteca, y

Gastos Incidentales

O

Diferencia Para Rentar

Si usted es un inquilino ocupante cualificada de al menos 90 días, usted puede tener derecho a un RHP de la siguiente manera:

Diferencia Para Rentar

U

Opción para Enganche

Tiempo de ocupación simplemente significa contar el número de días que usted actualmente ocupó la vivienda antes de la fecha de iniciación de negociaciones por Caltrans para la compra de la propiedad. El término “iniciación de negociaciones” significa la fecha que Caltrans hizo el primer contacto personal con el dueño de bienes raíces, o su representante, para darle a el/ella una oferta escrita para la adquisición de la propiedad.

Nota: Si usted ocupó una vivienda por <u>menos de 90 días</u> antes de la iniciación de negociaciones y la propiedad es posteriormente adquirida, o si usted se mudó a la propiedad después de la iniciación de negociaciones y usted todavía ocupaba la propiedad a la fecha de adquisición, usted puede ser elegible para un RHP, basado en una guía de elegibilidad establecida. Consulte con

su Agente de Reubicación antes de que haga cualquier decisión de mudarse de su propiedad.

Para Ocupantes de 90 Días o Más

Si usted califica como dueño ocupante de 90 días, puede ser elegible – además del valor equitativo en el mercado de su propiedad – para un RHP que consiste en un pago de Diferencia de Precio y/o Gastos Incidentales.

El Pago de **Diferencia de Precio** es la cantidad por la que el costo de una vivienda de restitución excede el costo de adquisición de la vivienda desplazada. Este pago le asistirá en la compra de una vivienda decente, segura, y sanitaria (DS&S). Caltrans computará el pago máximo que usted puede ser elegible para recibir.

Para recibir la cantidad total de la diferencia de precio calculadas, usted debe de gastar al menos la cantidad calculada por Caltrans en la propiedad de restitución.

El pago de **Diferencia de Hipoteca** le será reembolsado por cualquier aumento del costo de interés en la hipoteca que usted haya incurrido porque la taza de interés en su nueva hipoteca excede la taza de interés de la propiedad

adquirida por Caltrans. La computación del pago es complicada ya que está basada en las tazas típicas entre su préstamo anterior y su préstamo nuevo. También, una parte de los pagos pueden ser prorrateado como reembolso por una porción de los honorarios de su préstamo y los puntos (intereses) de la hipoteca.

Para ser elegible para recibir este pago, la propiedad adquirida debe de ser hipotecada con una hipoteca de buena fé, la cual fue un crédito válido de por lo menos 180 días antes de la iniciación de negociaciones.

Usted también puede ser reembolsado por cualquier **Gasto Incidental** actual y necesario que usted incurra en relación con la compra de su propiedad de restitución. Estos gastos pueden ser los costos por búsqueda de título, honorarios de copia en el Registro, reporte de crédito, reporte de evaluación, y ciertos otros gastos de cierre de escritura. Usted no puede ser reembolsado por ningún gasto frequente como pre-pagos de impuesto de bienes raíces y seguro de propiedad.

EJEMPLO DE COMO SE CALCULA LA DIFERENCIA DE PAGO:

Suponga que Caltrans compra su propiedad por $98,000. Después de un estudio completo de viviendas disponibles en el mercado, que sean decentes, seguras y sanitarias, Caltrans determina que la propiedad de restitución comparable en el mercado abierto le costará $100,000. Si su precio de compra es $100,000 usted recibirá $2,000 (Vea el Ejemplo A)

Si su precio de compra es de más de $100,000, usted paga la diferencia (vea el Ejemplo B). Si su precio de compra es menos de $100,000, el pago se basará en los costos actuales (vea el Ejemplo C).

La cantidad que usted recibe en un pago diferencial dependerá de cuanto usted realmente gasta en una vivienda de restitución, como se muestra en estos ejemplos.

Computación de Caltrans

Precio Comparable de la Propiedad de Restitución	$100,000
Precio de Adquisición de su Propiedad	-$ 98,000
Diferencia Máxima de Precio	$ 2,000

Ejemplo A

Precio de Compra de Restitución	$100,000
Propiedad Comparable de Restitución	$100,000
Precio de Adquisición de su Propiedad	-$ 98,000
Diferencia Máxima de Precio	$ 2,000

Ejemplo B

Precio de Compra de Restitución	$105,000
Propiedad Comparable de Restitución	$100,000
Precio de Adquisición de su Propiedad	$ 98,000
Diferencia Máxima de Precio	$ 2,000

Usted Debe de Pagar el Precio Adicional de $5,000.

Ejemplo C

Propiedad Comparable de Restitución	$100,000
Precio de Compra de Restitución	$ 99,000
Precio de Adquisición de su Propiedad	$ 98,000
Diferencia de Precio	$ 1,000

En el ejemplo C usted solo recibirá $1,000 – no la cantidad completa de "La propiedad Comparable de Restitución" por los requisítos de "Gastar para Obtener" de Caltrans.

PARA QUE UN "DUENO OCUPANTE DE 90 DÍAS" RECIBA LA CANTIDAD TOTAL DE SUS BENEFICIOS DE PAGOS PARA VIVIENDA (Diferencia de Precio, Diferencia de Hipoteca y Gastos Incidentales), usted debe:

A) Comprar y ocupar una vivienda de restitución que sea DS&S dentro de al menos un año desde la fecha más tarde de:

(1) La fecha en que recibió la primera notificación de una casa de restitución, **O**

(2) La fecha que Caltrans pagó los costos de adquisición de su vivienda actual (usualmente

los gastos de cierre de escritura en la adquisición del Estado.)

Y

B) Haber gastado al menos la cantidad que Caltrans estableció para “La Propiedad Comparable de Restitución” para la propiedad de restitución.

Y

C) Reportar un reclamo para pago para reubicación dentro de los 18 meses de la fecha más tarde de:

(1) La fecha en que se mudó de la propiedad adquirida por Caltrans, **O**

(2) La fecha en que Caltrans le pagó los costos de adquisición de su vivienda actual (usualmente al cierre de escritura en la adquisición del Estado.)

Usted no será elegible para recibir ningún pago de reubicación hasta que el Estado haya hecho la primera oferta por escrito de la compra de la propiedad. Usted también recibirá una notificación escrita por lo menos 90 días antes de tener que mudarse.

Para Inquilinos de 90 Días o Más

Si usted califica como un ocupante de 90 días, usted puede ser elegible para un Pago de Vivienda de Restitución en la forma de Diferencia para Rentar.

El pago de la **Diferencia para Rentar** es designado para asistirle en la renta de una vivienda comparable que sea decente, segura y sanitaria. El pago será basado en la diferencia entre la renta básica mensual por la propiedad adquirida por Caltrans (incluyendo el promedio del costo mensual de servicios públicos) y el menor de:

a) La renta mensual y el promedio del costo mensual estimado de los servicios públicos para una vivienda comparable de restitución determinada por Caltrans, **O**

b) La renta mensual y el promedio del costo mensual estimado de los servicios públicos para una vivienda decente, segura y sanitaria que usted rente como vivienda de restitución.

Gastos de servicios públicos son esos gastos que usted incurre por calefacción, luz, agua, y aguas negras – sin importar quien los provea (ejemplo,

electricidad, gas propano, y sistema séptico.) No incluye cable de televisión, teléfono, o seguridad. Los servicios públicos en su propiedad de restitución será el estimado del promedio de costos por los 3 últimos meses para el tipo de vivienda y área usados en los cálculos.

Esta diferencia es multiplicada por 42 meses y le puede ser pagado en una sola suma o en pagos periódicos de acuerdo con la política y regulaciones.

Para recibir la cantidad calculada total de la diferencia para rentar, usted debe gastar al menos la cantidad calculada por Caltrans en la propiedad de restitución.

Este pago puede – con ciertas limitaciones – ser convertido en una **Opción para Enganche** para asistirle en la compra de una propiedad de restitución.

EJEMPLO DE LA COMPUTACIÓN DEL PAGO DE LA DIFERENCIA PARA RENTAR:

Después de hacer un estudio completo de viviendas comparables, decentes, seguras y sanitarias que estén disponibles para rentar, Caltrans determina que una propiedad comparable de restitución podría ser rentada por $325 al mes.

Computación de Caltrans

Renta por una Propiedad Comparable de Restitución	$ 325
MÁS: estimado de costos de servicios Públicos	+100
TOTAL Costo de renta por una Propiedad Comparable de Restitución	=$425

Renta por su Propiedad Actual	$ 300
MÁS: costos de servicios públicos	+ 90
TOTAL Costo para pagar la renta de su propiedad actual	=$390

Propiedad Comparable de Restitución incluyendo servicios públicos $ 425

Costo para pagar la renta de su propiedad incluyendo servicios públicos + 390

Diferencia = $ 35

Multiplicado por 42 meses = $1,470 Diferencia para Rentar.

Ejemplo A:

Renta para una Propiedad de Restitución, incluyendo los costos estimados de servicios públicos $525

Propiedad Comparable de Restitución incluyendo servicios públicos $425

Costos de pago de la renta de su propiedad incluyendo servicios públicos $390

Ya que $425 es menos que $525, la diferencia para rentar está basada en la diferencia entre $390 y $425.

Diferencia para Rentar ($35 x 42 meses = $1,470)

En este caso usted gasta "al menos" la cantidad de la Propiedad de Restitución Comparable en la propiedad de restitución y así recibirá la cantidad total.

Ejemplo B:

Renta por una Propiedad de Restitución, incluyendo los costos estimados de servicios públicos	$400
Propiedad Comparable de Restitución incluyendo servicios públicos	$425
Costos de pago de la renta de su propiedad incluyendo servicios públicos	$390

Ya que $400 es menos que $525, la diferencia para rentar está basada en la diferencia entre $400 y $390.

Diferencia para Rentar ($10x 42 meses = $420)

En este caso usted va a gastar “menos que” la cantidad de Propiedad de Restitución Comparable en la restitución de la vivienda y usted no recibirá la cantidad total.

Usted no será elegible para recibir ningún pago de reubicación hasta que haya hecho la primera oferta escrita para comprar la propiedad. Además, usted recibirá al menos una noticia por escrito 90 días antes de tener que mudarse.

OPCIÓN PARA ENGANCHE

El pago de Diferencia para Rentar puede – con ciertas limitaciones – ser convertido en una **Opción para Enganche** para asistirle en la compra de una propiedad de restitución. La Opción para Enganche es una conversión directa del pago de la diferencia para rentar.

Si la diferencia para rentar es calculada entre $0 y $7,200, su Opción Para Enganche será de $7,200 la cual puede ser usada para la compra de una vivienda de restitución decente, segura y sanitaria.

Si la diferencia para rentar es más de $7,200 usted podrá convertir la cantidad completa de diferencia para rentar a una Opción Para Enganche.

La Opción Para Enganche debe de ser usada para el enganche requerido, la cual usualmente es un porcentage del precio total de compra, más cualquier gasto incidental elegible (vea, “Gastos Incidentales para Dueños Ocupantes de 90 días”) relacionado con la compra de la propiedad. Usted debe trabajar junto con su Agente de Reubicación para asegurarse de que puede utilizar la cantidad total de su Opción Para Enganche en su compra.

Si alguna porción de la diferencia para rentar fue usada antes de su decisión de convertirla a una Opción Para Enganche, los pagos avanzados serán deducidos de los beneficios completos.

CASA DEL ÚLTIMO RECURSO

En la mayoría de los proyectos de Caltrans, existe una cantidad adecuada de viviendas de venta y alquiler, y los beneficios serán suficientes para que usted pueda reubicarse a una vivienda comparable. Sin embargo, en ciertas localidades pueden haber proyectos donde el número de viviendas disponibles no son suficientes para proveer viviendas a todas las personas desplazadas. En estos casos, Caltrans utiliza un método llamado Casa del Último Recurso. La Casa del Último Recurso permite a Caltrans construir, rehabilitar, o modificar viviendas para cumplir con las necesidades de las personas desplazadas por un proyecto. Caltrans puede también pagar arriba de los límites legales de $7,200 y $31,000 para hacer posible viviendas con precios razonables.

Asistencia de Consulta Para Reubicación

A cualquier individuo, familia, negocio u operación agrícola desplazada por Caltrans deberá ofrecérsele servicios de asistencia con el propósito de localizar una propiedad de restitución. Los servicios de reubicación son proveídos por empleados calificados de Caltrans. Es la meta de ellos y el deseo de estos empleados de servirle y asistirle de cualquier manera posible para ayudarle a reubicarse exitosamente.

Un Agente de Reubicación de Caltrans se pondrá en contacto con usted personalmente. Los servicios de reubicación y pagos se le explicarán de acuerdo con su elegibilidad. Durante la entrevista inicial, sus necesidades de vivienda y deseos se determinarán así como sus necesidades de asistencia. No se le puede pedir

que se mude a menos que una vivienda comparable de restitución le sea disponible.

Usted puede esperar recibir los siguientes servicios, consejos y asistencia de su Agente de Reubicación quien le:

- Explicará los beneficios de reubicación y los requisitos de elegibilidad.
- Proveerá por escrito la cantidad de pago por su vivienda de restitución.
- Asegurará la disposición de una propiedad comparable antes de que se mude.
- Inspeccionará las posibles unidades residenciales de restitución para el cumplimiento de DS&S.
- Proveerá información y aconsejará como puede obtener ayuda para minimizar las adversidades en ajustarse a su nueva localidad.
- Ayudará en completar los documentos de préstamos, aplicaciones de rentas o las Formas de Reclamo para Reubicación.

Y proveerle información de:

- Seguro de Depósitos
- Taza de intereses y términos
- Pagos típicos de enganches

- Requisitos de préstamos de la Administración de Veteranos (VA) y la Administración de Vivienda Federal (FHA)
- Impuestos sobre bienes raíces
- Literatura de educación en viviendas para el consumidor

Si usted lo desea, el Agente de Reubicación le dará una lista actual de otras viviendas de restitución disponibles.

Se proveerá transportación para inspeccionar viviendas disponibles, especialmente si usted es mayor de edad o con impedimiento físico. Aunque usted puede utilizar los servicios de un agente de bienes raíces, Caltrans no lo podrá referir.

Su Agente de Reubicación está familiarizado con los servicios proveídos por otras agencias de su comunidad y le proveerá información de otros programas de viviendas federales, estatales y locales que ofrecen programas de asistencia para personas desplazadas. Si usted tiene algun problema especial, su Agente de Reubicación hará su mejor esfuerzo para asegurarle los servicios de esas agencias con personal capacitado y con experiencia que le ayudarán.

Si el proyecto de transportación requiere un número considerable de personas que sean reubicados, Caltrans establecerá una Oficina Temporal de Reubicación en, o cerca del proyecto. Las oficinas de proyectos de reubicación deberán de abrirse durante horas convenientes y en horas tempranas de la noche, si es necesario.

Además de estos servicios, Caltrans es requirido que coordine las actividades de otras agencias que causen desplazamientos para asegurar que todas esas personas desplazadas reciban beneficios de reubicación equitativos y consistentes.

Recuerde – SU AGENTE DE REUBICACIÓN está para aconsejarle y asistirle. No vacile en hacer preguntas, y asegúrese de que entiende completamente sus derechos y beneficios de reubicación disponibles.

SUS DERECHOS COMO UNA PERSONA DESPLAZADA

Todas las personas elegibles como personas desplazadas tienen la libertad de escoger dentro de la selección de viviendas de restitución, y Caltrans no requerirá a ninguna persona que sea desplazada que acepte una vivienda de restitución proveída por Caltrans. Si usted decide no aceptar la vivienda de restitución ofrecida por Caltrans, usted puede elegir una vivienda de restitución de su propia selección, mientras que cumple con los requisítos de DS&S. Caltrans no pagará más que los beneficios calculados por una vivienda de restitución.

Lo más importante que usted debe de recordar es que la vivienda de restitución que usted seleccione debe de llenar los requisítos básicos de “decente, segura y sanitaria”. No ejecute los documentos de compra o el contrato de renta hasta que un representante de Caltrans haya inspeccionado y certificado por escrito que la vivienda que usted se propone ocupar cumple con los requisítos básicos. **NO ARRIESGUE** su derecho de recibir los pagos de vivienda de restitución por mudarse a una vivienda que no sea “decente, segura y sanitaria.”

Es importante recordar que sus beneficios de reubicación no van a tener ningún efecto adverso en su:

- Elegibilidad para Seguro Social
- Elegibilidad para Asistencia Social
- Impuestos sobre ingresos

Además, el Título VIII de los Derechos Civiles, Ley de 1968 y luego otras leyes y enmiendas hacen discriminatoria la práctica de compra y renta de unidades de vivienda si es basada ilegalmente en la raza, color, religión, sexo u origen nacional.

Cuando sea posible, a personas de minorías se les debe de dar oportunidades razonables para reubicarse a viviendas de restitución que sean decentes, seguras y sanitarias, no localizadas en áreas de concentración de minorías, y que estén dentro de sus recursos económicos. Esta política, sin embargo, no requiere que Caltrans provea a una persona pagos más grandes de lo que sean necesarios para permitir que la persona sea reubicada a una vivienda de restitución comparable.

La política No-Discriminatoria de Caltrans asegura que todos los servicios y/o los beneficios deben de ser administrados al público en general sin importar la raza, color, origen nacional, o sexo en cumplimiento con el Título VI de la Ley de Derechos Civiles de 1964 (42 USC 2000 d. et seq.)

Usted siempre tendrá el Derecho de Apelar cualquier decisión hecha por Caltrans relacionada a los beneficios de reubicación y elegibilidad.

Su Derecho de Apelar está garantizado en la "Ley Uniforme" la cual establece que una persona puede apelar al jefe de la agencia responsable, si ella cree que la agencia ha fallado en determinar correctamente su elegibilidad, o la cifra del pago autorizado por la Ley.

Si usted indica su disatisfacción, ya sea verbalmente o por escrito, Caltrans le asistirá en hacer su demanda de apelación y le explicará el procedimiento que debe de seguir. Usted tiene derecho de ser representado por un asesor legal u otro representante en conexión con su apelación (pero solamente por su propia cuenta.)

Caltrans considerará toda justificación y materia pertinente que usted entregue u otra información disponible, necesaria para asegurar una audiencia equitativa. Caltrans le proveerá una determinación por escrito del resultado de su apelación, con una explicación sobre la base de la decisión. Si usted aún no está satisfecho con la decisión otorgada, Caltrans le aconsejará que usted puede pedir una audiencia judicial.

Noticiero de la Ley para Americanos con Incapacidades Físicas (ADA):

Para personas con incapacidades físicas, este documento es disponible en formatos alternativos. Para información llame al número (916) 654-5413, o escriba a 'Department of Transportation - Right of Way, MS-37, 1120 N Street, Sacramento, CA 95814.'

NOTAS

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Residential (Spanish)
Effective October 1, 2014

Your Rights and Benefits as a Displaced Business, Farm, or Nonprofit Organization Under the California Department of Transportation Relocation Assistance Program

California Department of Transportation

Introduction

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.

Displaced businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as Amended
"The Uniform Act"

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their business, farm or non-profit organization, by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

> To ensure that persons displaced as a direct result of federal or federally-assisted projects 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.

While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.

Relocation Services

The California Department of Transportation has two programs to aid businesses, farms and nonprofit organizations which must relocate.

These are:

1. The Relocation Advisory Assistance Program, which is to aid you in locating a suitable replacement property, and

2. The Relocation Payments Program, which is to reimburse you for certain costs involved in relocating. These payments are classified as:

   - Moving and Related Expenses (costs to move personal property not acquired).
   - Reestablishment Expenses (expenses related to the replacement property).
   - In-Lieu Payment (a fixed payment in lieu of moving and related expenses, and reestablishment expenses).

   Note: Payment for loss of goodwill is considered an acquisition cost. California law and the federal regulations mandate that relocation payments cannot duplicate other payments such as goodwill.

You will **not** be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. You will also receive at least 90 days' written notice before you must move.

Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

Business: Any lawful activity, with the exception of a farm operation, conducted primarily for the purchase, sale, lease and rental of personal or real property, or for the manufacture, processing, and/or marketing of products, commodities, or any other personal property, or for the sale of services to the public, or solely for the purpose of this Act, and outdoor advertising display or displays, when the display(s) must be moved as a result of the project.

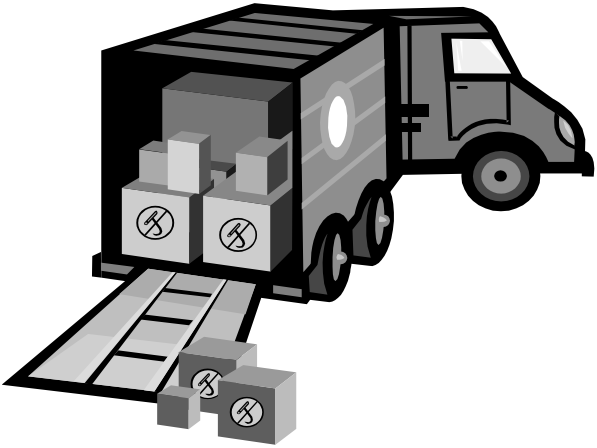
Small Business: A business having not more than 500 employees working at the site being acquired or displaced by a program or project.

Contributes Materially: A business or farm operation must have had average annual gross receipts of at least $5,000 or average annual net earnings of at least $1,000, in order to qualify as a bona-fide operation.

Farm Operation: Any activity conducted solely or primarily for the production of one or more agricultural products or commodities, including timber, for sale and home use, and customarily producing such products or commodities in sufficient quantity to be capable of contributing materially to the operator's support.

Nonprofit Organization: A public or private entity that has established its nonprofit status under applicable law.

MOVING EXPENSES



If you qualify as a displaced business, farm or nonprofit organization, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. To qualify you must legally occupy the property as the owner or lessee/tenant when Caltrans initiates negotiations for the acquisition of the property **OR** at the time Caltrans acquires title or takes possession of the property. However, to assure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

You Can Choose Either:

Actual Reasonable Moving Costs - You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses, with limitations, may include:

- Transportation.
- Packing and unpacking personal property.
- Disconnecting and reconnecting personal property related to the operation.
- Temporary storage of personal property.
- Insurance while property is in storage or transit, or the loss and damage of personal property if insurance is not reasonably available.
- Expenses in finding a replacement location ($2,500 limit).
- Professional services to plan and monitor the move of the personal property to the new location.
- Licenses, permits and fees required at the replacement location.

OR

Self-Move Agreement - You may be paid to

move your own personal property based on the lower of two acceptable bids obtained by Caltrans.

Under this option, you will still be eligible for reimbursement of related expenses listed above that were not included in the bids.

OR

In-Lieu Payment – A small business may be eligible to accept a fixed payment between $1,000 and $40,000, based on your annual earnings IN LIEU OF the moving cost and related expenses. Consult your Relocation Agent for more information about this option.

Actual Reasonable Moving Costs

You may be paid the actual reasonable and necessary costs of your move when a professional mover performs the move. All of your moving costs must be supported by paid receipts or other evidence of expenses incurred. In addition to the transportation costs of your personal property, certain other expenses may also be reimbursable, such as packing, crating, unpacking and uncrating, and the disconnecting, dismantling, removing, reassembling, and

reinstalling relocated machinery, equipment, and other personal property.

Other expenses such as professional services necessary for planning and carrying out the move, temporary storage costs, and the cost of licenses, permits and certifications may also be reimbursable. This is not intended to be an all-inclusive list of moving related expenses. Your Relocation Agent can provide you with a complete explanation of reimbursable expenses.

Self-Move Agreement

If you agree to take full responsibility for all or part of the move of your business, farm, or nonprofit organization, the Department may approve a payment not to exceed the lower of two acceptable bids obtained by the Department from qualified moving firms or a qualified Department staff employee. A low-cost or uncomplicated move may be based on a single bid or estimate at the Department's discretion. The advantage of this moving option is the fact that it relieves the displaced business, farm, or nonprofit organization operator from documenting all moving expenses. The Department may make the payment without additional documentation as long as the payment is limited to the amount of

the lowest acceptable bid or estimate. Other expenses, such as professional services for planning, storage costs, and the cost of licenses, permits, and certifications may also be reimbursable if determined to be necessary. These latter expenses must be pre approved by the Relocation Agent.

Requirements:

Before you move, you must provide Caltrans with the:

- Certified inventory of all personal property to be moved.
- Date you intend to vacate the property.
- Address of the replacement property.
- Opportunity to monitor and inspect the move from the acquired property to the replacement property.

Related Expenses

1. Searching Expenses for Replacement Property: Displaced businesses, farms, and nonprofit organizations are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property, not to exceed $2,500. Expenses may include transportation, meals, and lodging when away from home; the reasonable value of the time spent during the search; fees paid to the real estate agents, brokers or consultants; and other expenses determined to be reasonable and necessary by the Department.

2. Direct Loss of Tangible Personal Property: Displaced businesses, farms, and nonprofit organizations may be eligible for a payment for the actual direct loss of tangible personal property which is incurred as a result of the move or discontinuance of the operation. This payment will be based upon the lesser of:

a) The fair market value of the item for continued use at the displacement site minus the proceeds from its sale.

OR

b) The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE:
You determine that the "document shredder" cannot be moved to the new location because of its condition, and you will not replace it at the new location.

Fair Market Value of the Document Shredder based on its use at the current location		$ 1,500
Proceeds: Price received from selling the Document Shredder	-	$ 500
Net Value		$ 1,000

OR

Estimated cost to move	$ 1,050

Based on the "lessor of", the amount of the "Loss of Tangible Personal Property" =	**$ 1,000**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

3. Purchase of Substitute Personal Property:
If an item of personal property, which is used as part of the business, farm, or nonprofit organization, is not moved but is promptly replaced with a substitute item that performs a

comparable function at the replacement site, the displacee is entitled to payment of the lesser of:

a) The cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item;

OR

b) The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE A:

You determine that the copying machine cannot be moved to the new location because it is now obsolete and you will replace it.

Cost of a substitute *Copying Machine* including installation costs at the replacement site.		$ 3,000
Trade-in Allowance	-	$ 2,500
Net Value		$ 500

OR

Estimated cost to move	$ 550

Based on the "lesser of", the amount of the "Substitute Personal Property" =	**$ 500**

EXAMPLE B:
You determine that the chairs will not be used at the new location because they no longer match the décor and you will replace them.

Cost of substitute chairs		$ 1,000
Proceeds: From selling the Chairs	-	$ 100
Net Value		$ 900

OR

Estimated cost to move	$	200

Based on the "lesser of", the amount of the "Substitute Personal Property" =	**$**	**200**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

4. Disconnecting and Reinstallation: You will be reimbursed for your actual and reasonable costs to disconnect, dismantle, remove, reassemble and reinstall any machinery, equipment or other personal property in relation to its move to the new location. This includes connection to utilities available nearby and any modifications to the personalty that is necessary to adapt it to utilities at the replacement site.

5. Physical changes at the new location: You may be reimbursed for certain physical changes to the replacement property if the changes are necessary to permit the reinstallation of machinery or equipment necessary for the continued operation of the business. ***Note:*** *The changes cannot increase the value of the building*

for general purposes, nor can they increase the mechanical capability of the buildings beyond its normal requirements.

6. The cost of installing utilities from the right of way line to the structure(s) or improvements on the replacement site.

7. Marketing studies, feasibility surveys and soil testing.

8. One-time assessments or impact fees for anticipated heavy utility usage.

Reestablishment Expenses

A small business, farm or nonprofit organization may be eligible for a payment, not to exceed $25,000, for expenses actually incurred in relocating and reestablishing the enterprise at a replacement site.

Reestablishment expenses may include, but are not limited to, the following:

1. Repairs or improvements to the replacement real property required by Federal, State or local laws, codes or ordinances.

2. Modifications to the replacement of real property to make the structure(s) suitable for the business operation.

3. Construction and installation of exterior signing to advertise the business.

4. Redecoration or replacement such as painting, wallpapering, paneling or carpeting when required by the condition of the replacement site or for aesthetic purposes.

5. Advertising the new business location.

6. The estimated increased costs of operation at the replacement site during the first two years, for items such as:

   a) Lease or rental charges
   b) Personal or real property taxes
   c) Insurance premiums, and
   d) Utility charges (excluding impact fees).

7. Other items that the Department considers essential for the reestablishment of the business or farm.

In-Lieu Payment (Fixed)

Displaced businesses, farms, and nonprofit organizations may be eligible for a fixed payment in lieu of (in place of) actual moving expenses, personal property losses, searching expense, and reestablishment expenses. The fixed payment may not be less than $1,000 or more than $40,000.

For a business to be eligible for a fixed payment, the Department must determine the following:

1. The business owns or rents personal property that must be moved due to the displacement.

2. The business cannot be relocated without a substantial loss of existing patronage.

3. The business is not part of a commercial enterprise having more than three other businesses engaged in the same or similar activity, which are under the same ownership and are not being displaced by the department.

4. The business contributed materially to the income of the displaced business operator during the two taxable years prior to displacement.

Any business operation that is engaged solely in the rental of space to others is not eligible for a fixed payment. This includes the rental of space for residential or business purposes.

Eligibility requirements for farms and nonprofit organizations are slightly different than business requirements. If you are being displaced from a farm or you represent a nonprofit organization and are interested in a fixed payment, please consult your relocation counselor for additional information.

Note: A nonprofit organization must substantiate that it cannot be relocated without a substantial loss of existing patronage (membership or clientele). The payment is based on the average of two years annual gross revenues less administrative expenses.

The Computation of Your In-Lieu Payment:

The fixed payment for a displaced business or farm is based upon the average annual net earnings of the operation for the two taxable

years immediately preceding the taxable year in which it was displaced. Caltrans can use a different two year period if it is determined that the last two taxable years do not accurately reflect the earnings of the operation.

EXAMPLE: Caltrans acquires your property and you move in 2013:

2011 Annual Net Earnings	$ 10,500
2012 Annual Net Earnings	$ 12,500
TOTAL	$ 23,000
Average over two years	**$ 11,500**

This would be the amount of your in-lieu payment. Remember - this is in-lieu of all other moving benefits. You must provide the Department with proof of net earnings to support your claim.

Proof of net earnings can be documented by income tax returns, certified financial statements, or other reasonable evidence of net earnings acceptable to the Department.

Note: The computation for nonprofit organizations differs in that the payment is computed on the basis of average annual gross revenues less administrative expenses for the two-year period specified above.

Before You Move:

A. Complete a "Request for Determination of Entitlement" form available from your Relocation Agent, and return it promptly.

B. Include a written statement of the reasons the business cannot be relocated without a substantial loss in net earnings.

C. Provide certified copies of tax returns for the two tax years immediately preceding the tax year in which you move. (If you move anytime in the year 2013, regardless of when negotiations began or the State took title to the property, the taxable years would be 2011 and 2012).

D. You will be notified of the amount you are entitled to after the application is received and approved.

E. You cannot receive the payment until after you vacate the property, AND submit a claim for the payment within 18 months of the date of your move.

Relocation Advisory Assistance

Any business, farm or non-profit organization, displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your needs and desires will be determined as well as your need for assistance.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Determine your needs and preferences.
- Explain the relocation benefits and eligibility.
- Provide information on replacement properties for your consideration.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits.
- Interest rates and terms.
- Typical down payments.
- Permits, fees and local planning ordinances.
- SBA loan requirements.
- Real property taxes.
- Consumer education literature.

If you desire, your Relocation Agent will give you current listings of other available replacement property. Transportation will be provided to inspect available property, especially if you are elderly or handicapped. Though you may use the services of a real estate broker, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local programs offering assistance to displaced persons. If you have special needs, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans will establish a temporary Relocation Field Office on or near the project. Project relocation offices will be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions. And be sure you fully understand all of your rights and available benefits.

YOUR RIGHTS AS A DISPLACEE

It is important to remember that your relocation benefits will not have an adverse effect on your:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you always have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible

agency if that person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

Americans with Disabilities Act (ADA) Notice:

This document is available in alternative formats for people with physical disabilities. Please call (916) 654-5413, or write to 'Department of Transportation - Right of Way, MS-37, 1120 N Street, Sacramento, CA 95814,' for information.

NOTES:

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Non-Residential (2nd Printing)
Effective October 1, 2014

Sus Derechos y Beneficios Como Negocio, Operación Agrícola o Organización No Lucrativa Desplazada Bajo el Departamento de Transportación de California, Programa para Asistencia de Reubicación

California Department of Transportation

Introducción

Cuando se está construyendo un sistema de transporte moderno, el desplazamiento de un pequeño porcentaje de la población es a veces necesario. Sin embargo, es el procedimiento de Caltrans que las personas desplazadas no deben de sufrir innecesariamente como resultado de los programas diseñados para el beneficio del público en general.

Los negocios, operaciones agrícolas, y organizaciones no-lucrativas desplazadas pueden ser elegibles para servicios de reubicación y pagos.

Este libreto le provee información acerca de los servicios y pagos de reubicación disponibles. Si usted tiene que mudarse como resultado de un proyecto de transportación de Caltrans, un Agente de Reubicación lo contactará. El Agente

de Reubicación estará disponible para responderle preguntas específicas y darle información adicional.

Acta de Procedimiento Uniforme de Asistencia para Reubicación y Adquisición de Bienes Raíces de 1970, Emendada "El Acta Uniforme"

El propósito de esta Acta es de proveer uniformidad e igualdad de tratamiento a personas desplazadas de sus negocios, operaciones agrícolas, u organización no-lucrativa, por programas federales o programas asistidos con fondos federales, y de establecer uniformidad e igualdad en los procedimientos para adquisición de tierras para los programas federales y programas asistidos con fondos federales.

El Código de Regulaciones Federales 49, Parte 24 implementa el “Acta Uniforme” de acuerdo a los siguientes objetivos de asistencia de relocalización:

> Para asegurar que las personas desplazados como resultado directo de proyectos federales o proyectos asistidos con fondos federales sean tratados con justicia, consistencia e igualdad de tal manera que esas personas no sufran daños desproporcionados como resultado de los proyectos diseñados para el beneficio del público en general.

Mientras se ha hecho todo esfuerzo para asegurar la veracidad de este folleto, debe entenderse que no tiene la fuerza ni efecto de la ley, regla o regulaciones que gobiernan el pago de los beneficios. Si alguna diferencia o error resulta, la ley tomará precedencia.

Servicio de Reubicación

El Departamento de Transportación tiene dos programas para de ayudar a negocios, granjas y organizaciones no-lucrativas que tienen que reubicarse.

Estas son:

1. El Programa de Consejos de Asistencia de Reubicación, que es para ayudarle en localizar una propiedad de reemplazo conveniente, y

2. El Programa de Pagos para Reubicación, que le reembolsará de ciertos costos envueltos en la reubicación. Estos pagos están clasificados como:

    - Gastos Relacionados a Mudanza (costos de mover propiedad personal no adquirida).

    - Gastos de Restablecimiento (gastos relacionados a la propiedad de reemplazo).

    - Pagos Fijos (pago fijo en vez de los gastos de mudanzas y otros gastos relacionados, y gastos de restablecimiento).

Nota: *Pagos por pérdida de clientela es considerado un costo de adquisición. La ley de*

California y las regulaciones federales mandan que los pagos de reubicación no pueden duplicar otros pagos, como los pagos de pérdida de clientela.

Usted **no** puede ser elegible a recibir ningún pago de reubicación hasta que el Estado haya hecho la primera oferta escrita para comprar su propiedad. Usted también recibirá un aviso escrito por lo menos 90 días antes que se tenga que mover.

Alguna Definiciones Importantes...

Sus beneficios de relocalización pueden ser entendidos mejor si usted se familiariza con los siguientes términos:

Negocio: Cualquier actividad legal, con la excepción de operaciones agrícolas, conducida principalmente para la compra, venta, arrendamiento, y alquiler de bienes personales o bienes raíces, o para la fabricación, elaboración y/o mercadotecnia de productos, mercancías, u otros bienes personales, o solamente para el propósíto de ésta Acta, un rótulo con anuncio o anuncios, cuando el rótulo(s) tenga(n) que ser movido(s) como resultado del proyecto.

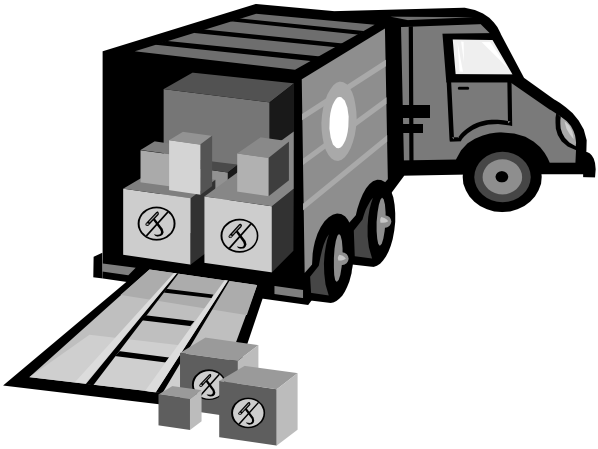
Negocio Pequeños: Un negocio que tenga no más de 500 empleados trabajando en el lugar que esta siendo adquirido o desplazado por un programa o proyecto.

Contribuye Materialmente: Un negocio u operación agrícola debe de haber tenido un ingreso bruto en recibos de al menos $5,000 o un promedio anual de ingreso netos de al menos $1,000, para poder calificar como una operación de buena fé.

Operación Agrícola: Cualquier actividad conducida sola o principalmente para la producción de uno o más productos de agricultura o mercancías, incluyendo venta de madera, para la venta y uso en casa, y producción ordinaria de tales productos o mercancía en cantidades suficientes para tener la capacidad de contribuir materialmente al soporte del operario.

Organización No-lucrativa: Una entidad pública o privada que haya establecido su estado de organización no-lucrativa bajo leyes aplicables.

GASTOS DE MUDANZA



Si usted califica como un negocio, operación agrícola, u organización no-lucrativa desplazada, usted puede recibir reembolso de los gastos de mudanza y ciertos gastos relacionados incurridos en la mudanza. Para calificar, usted tiene que ocupar la propiedad legalmente como dueño o inquilino cuando Caltrans inicie negociaciones para la adquisición de la propiedad, O al tiempo que Caltrans adquiera título, o tome posesión de la propiedad. Sin embargo, para asegurar su elegibilidad y el pronto pago de los gastos de mudanza, usted tiene que haber contactado a su Agente de Reubicación antes de que se mude.

Usted Puede Escoger Entre:

Gastos Razonables de Mudanza Actual – Usted tiene que haber pagado por sus gastos de mudanza razonables y gastos relacionados cuando una compañia comercial hace la mudanza.

El reembolso será limitado a mudanza de 50 millas o menos. Los gastos relacionados, con limitaciones, ***pueden*** incluir:

- Transportación.
- Embalaje y desembalaje propiedad personal
- Desconexión y reconexión relacionada a la operación de la propiedad personal.
- Almacenamiento temporal de la propiedad personal.
- Seguros mientras la propiedad está en almacenamiento o en tránsito, o la propiedad personal es perdida y dañada, si los seguros no son razonablemente disponible.
- Gastos en encontrar un lugar de reemplazamiento ($2500 máxima).

- Servicios profesionales para planificar y supervisar la mudanza de la propiedad personal al nuevo lugar.
- Licencias, permisos y honorarios requeridos en el lugar de reemplazamiento.
- El costo de instalación de servicios públicos desde la línea del derecho de vía a la estructura(s) o mejoramientos en el sitio de reemplazamiento.
- Estudios de mercado, estudios de factibilidad y exámen de suelo.

O

Contrato de Mudanza Propia – Usted puede ser pagado por mover su propia propiedad personal basado en la más baja de dos ofertas aceptables obtenidas por Caltrans. Bajo esta opción, usted todavía será elegible para el reembolso de los gastos relacionados arriba mencionados, que no fueron incluidos en las ofertas.

O

Pago Fijo – Usted puede aceptar un pago fijo entre $1,000 y $40,0000 basado en sus ganancias anuales EN VEZ de los costos y gastos relacionados de la mudanza.

Costos Actuales Razonables de Mudanza

Pueden pagársele los gastos actuales razonables y necesarios de su mudanza si lo transporta con una compañía comercial de muebles y mudanzas. Todos sus gastos deben de ser respaldados con recibos u otra evidencia de gastos incurridos. Además de los gastos de transportación de su propiedad personal, ciertos otros gastos también pueden ser reembolsados, tales como empaque, embalaje, desempaque y desembalaje, desconexión, desmantelación, removimiento, reensamblamiento, y reinstalción de maquinaria relocalizada, equipos y otras propiedades personales. Otros gastos necesarios tales como servicios profesionales para planificar y supervisar la mudanza, almacenaje temporal y el costo para licencias, permisos y certificados también pueden ser reembolsables. Esta no es la intención de ser una lista inclusiva de todos los gastos relacionados de mudanza. Su Agente de Reubicación puede proveerle una explicación completa de los gastos reembolsables.

Contrato de Mudanza Propia

Si usted elige tomar la responsabilidad total o parcial para la mudanza de su negocio,

operación agrícola, u organización no-lucrativa, Caltrans puede aprobar un pago sin exceder el presupuesto más bajo de dos ofertas aceptables de una compañía comercial de muebles y mudanzas o por el Agente de Reubicación. Una mudanza a costo bajo o sin complicaciones puede ser basada en una sola oferta o estimado. En realidad, la ventaja de esta opción es que releva de la obligación al operador del negocio, operación agrícola u organización no-lucrativa desplazadas de documentar todos los gastos de mudanza. Caltrans puede hacer el pago sin documentación adicional siempre y cuando el pago sea limitado a la cantidad más baja aceptable de la oferta o del estimado. Otros gastos tales como servicios profesionales para planificar, costos de almacenaje y el costo de licencias, permisos, y certificados también pueden ser reembolsables si son necesarios. Estos gastos tienen que ser aprobados de ante mano por el Agente de Reubicación.

Requisitos:

Antes de que se mueva, usted tiene que proveer a Caltrans con:

- El inventario certificado de toda la propiedad personal que va a mover.

- La fecha que usted intenta desalojar la propiedad.

- La dirección de la propiedad de reemplazamiento.

- La oportunidad de supervisar e inspeccionar la mudanza desde la propiedad adquirida a la propiedad de reemplazo.

Gastos Relacionados

1. Gastos Para la Búsqueda de una Propiedad de Reemplazo – Negocios, operaciones agrícolas, y organizaciones no-lucrativas tienen derecho a un reembolso por gastos actuales razonables, incurridos en la búsqueda de una propiedad de reemplazo, sin exceder $2,500. Los gastos pueden incluir transportación, alimento y alojamiento cuando esté lejos de su casa; el valor razonable del tiempo que ha gastado buscando una propiedad de reemplazo; los honorarios pagados a agentes de bienes raíces o asesores; y otros gastos determinados por Caltrans como razonables y necesarios.

2. Pérdidas Directas de Bienes Personales Tangibles: Los negocios, operaciones agrícolas, y organizaciones no-lucrativas desplazada pueden ser elegibles para un pago por pérdidas directas de bienes personales tangibles incurrido como resultado de la mudanza o descontinuación de la operación. Este pago deberá ser basado en el menor de:

a) El valor de mercado de un producto para uso continuo en el sitio de desplazamiento menos la ganancia por su venta.

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b) El costo estimado de mudanza y reinstalación de los objetos reemplazados es basado en la oferta mas baja o el estimado obtenido por Caltrans para mudanza elegible y costos relacionados, incluyendo desmantelamiento y reensamblaje, pero sin pago por almacenamiento.

POR EJEMPLO:
Usted determina que el “contador de documentos” no puede ser movido a la nueva localidad por su condición, y usted no lo va a reemplazar en la nueva localidad.

El Valor de Mercado del Cortador de Documentos basado en su uso actual en La Localidad actual es de	$1,500
Ganancia: Precio recibido por la venta Del Cortador de Documentos	-$ 500
Valor Neto	$1,000
O	
El costo estimado de moverlo	$1,050
Basado en el “menor de,” la cantidad de la “Perdida de Propiedad Personal Tangible”	= **$1,000**

Nota: *Usted también tiene derecho a todos los costos razonables incurrido en su esfuerzo por vender el cortado de documentos (por ejemplo, anuncio comercial)*

3. Compra de Substitución de la Propiedad Personal: Si un objeto de propiedad personal, el cual es usado como parte del negocio, la operación agrícola, o la organización no-lucrativa, no es movido pero es prontamente reemplazado con un objeto substituto que hace una función comparable en el sitio de reemplazo, el desplazado tiene derecho al menor de:

a) El costo de un objeto sustituto, incluyendo los costos de instalación en el sitio de reemplazamiento, menos cualquier ganacia por la venta o intercambio del objeto reemplazado.

O

b) El costo estimado de mudanza y reinstalación del objeto de reemplazo, basado en la oferta mas baja aceptable o el estimado obtenido por Caltrans para una mudanza elegible y gastos relacionados, incluyendo el desmantelamiento y reensamblaje, pero sin pago por almacenamiento

EJEMPLO A:

Usted puede determinar que la máquina copiadora no puede ser movida a la nueva localidad porque es ahora obsoleta y la va a reemplazar.

Costo de substituir una Máquina Copiadora incluyendo costos de instalación en el sitio de reemplazamiento.	$3,000
Pago por el intercambio	-$2,500
Valor Neto	$ 500

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Costo estimado de la mudanza	$ 550
Basado en el “menor de” la cantidad de “La Propiedad Personal Substituida.”	**$ 500**

EJEMPLO B:

Usted determina que las sillas no van a ser usadas en la nueva localidad, porque ya no combinan con la decoración, y usted las quiere reemplazar.

Costo de la sillas substitutas	$1,000
Ganancias: Por la venta de las Sillas	-$ 100
Valor Neto	$ 900

O

Costo estimado de la mudanza	$ 200
Basado en el “menor de,” la cantidad de “La Propiedad Personal de Substitución	**$ 200**

Nota: *Usted también tiene derecho a todos los gastos razonables incurridos en su esfuerzo por vender la copiadora (Ejemplo A) o las sillas (Ejemplo B).*

4. Desconección y Reinstalación: Usted va a ser reembolsado por los costos actuales y razonables de desconección, desmantelamiento, mudanza, reensamblaje, e reinstalación de cualquier maquinaria, equipo u otra propiedad personal en relación a la mudanza a su nuevo local. Esto incluye conección a los servicios públicos disponibles en el lugar y a cualquier modificación de los objetos personales que sean necesario para adaptar a los servicios públicos en el sitio de reemplazamiento.

5. Cambios Físicos en el nuevo local: Usted puede ser reembolsado por cierto cambios físicos de la propiedad de reemplazamiento si los cambios son necesarios para permitir la reinstalación de la maquinaria o equipo necesario para la continua operación del negocio.

> ***Nota:*** *Los cambios no pueden incrementar el valor del edificio para propósitos generales, tampoco pueden incrementar la capacidad mecánica de los edificios más alla de los requerimientos normales.*

6. El costo de instalación de los servicios públicos desde la derecha de la línea de camino a las estructuras o mejoras en el lugar de reemplazo.

7. Los estudios de marketing, encuestas de viabilidad y análisis de suelos.

8. Evaluaciones de una sola vez o tarifas de impacto para uso pesado utilidad esperada.

Gastos De Restablecimiento

Un pequeño negocio, operación agrícola, u organización no-lucrativa puede ser elegible para un pago, que no exceda $25,000, para los gastos actuales incurridos en la reubicación y el reestablecimiento en el sitio de reemplazo.

Gastos de reestablecimiento pueden incluir, pero no están limitado a, lo siguiente:

1. Reparación y mejoramiento de la propiedad de reemplazamiento requerido por las leyes, códigos, u ordenanzas federales, estatales o locales.
2. Modificaciones de la propiedad de reemplazamiento para hacer la estructura(s) apropiado para la operación del negocio.
3. Construcción e instalación de los letreros exteriores para anunciar el negocio.

4. Redecoración o reemplazamiento como pintura, tapizado de pared, paneles, o carpetas cuando sean requeridas por la condición del sitio de reemplazo o con propósitos estéticos.

5. Anunciar la localidad del nuevo negocio.

6. El aumento del costo estimado de operación en el lugar de reemplazo durante los primeros dos años, por objetos como:

    a. Cargas de rentas.

    b. Impuestos de propiedad personal o propiedad real

    c. Prima de seguros, y

    d. Carga de servicios públicos (excluyendo honorarios de impacto).

7. Otros objetos que el Departamento considere esenciales para el restablecimiento del negocio ú operación agrícola.

Pago De Una Vez (O Pago Fijo)

Negocios que han sido desplazados, operaciones agrícolas, y organizaciones no-lucrativas podrían ser elegibles para un pago fijo (en vez de) por los gastos actuales de mudanza, pérdida de propiedad personal, gastos de búsqueda, y gastos de restablecimiento. Los pagos fijos no podrán ser menos de $1,000 o más de $40,000.

Para que un negocio sea elegible por un pago fijo, Caltrans debe de determinar lo siguiente:

1. El negocio posee o renta propiedad personal que debe de ser movida debido al desplazamiento.
2. El negocia no puede ser relocalizado sin una pérdida substancial de la clientela existente.
3. El negocio no es parte de un empresa comercial que tiene más de tres otros negocios conectados en una misma o actividad similar, las cuales están bajo el mismo dueño y no estan siendo desplazadas por el Departamento.
4. El negocio contribuyó materialmente a las ganancias del operador del negocio desplazado durante los do años anteriores al desplazamiento.

Cualquier operación del negocio que está conectado solamente en la renta del espacio de otros, no es elegible para un pago fijo. Esto incluye la renta de espacio con propósitos residenciales o de negocios.

Los requerimientos de elegibilidad para las operaciones agrícolas y organizaciones no-lucrativas son un poco diferentes a los requerimientos para negocios. Si usted está siendo desplazado de una finca o usted representa una organización no-lucrativa y está interesado en un pago fijo, por favor consulte con su consejero de reubicación para información adicional.

Nota: Una organización sin fines de lucro debe corroborar que no puede ser reubicado sin una pérdida sustancial de patrocinio existente (membresía o clientela). El pago se basa en el promedio de dos años los ingresos brutos menos los gastos administrativos anuales.

La computación de Su Pago Fijo

El pago fijo para un negocio desplazado o una operación agrícola es basado en el promedio anual neto de ganancias de la operación por los dos años inmediatamente precedentes al año en el cual fue desplazado. Caltrans puede usar un período de dos años diferentes, si se determina que los dos últimos años no reflejan con certeza las ganacias de la operación.

Ejemplo: Caltrans adquiere su propiedad y usted se mueve en el 2013:

2011 Ganancias Netas Anuales	$10,500
2012 Ganancias Netas Anuales	$12,500
TOTAL	$23,000
Promedio de los años	**$11,500**

Este podría ser la cantidad de su pago fijo. Recuerde – esto es “en vez de” todos los otros beneficios de mudanza, incluyendo restablecimiento. Usted tendrá que proveer Caltrans pruebas de las ganancias netas para verificar su reclamo.

Prueba de las ganancias netas pueden ser documentas con sus declaraciones de impuestos, cartas financieras certificadas, u otra evidencia razonable de las ganancias netas aceptables por Caltrans.

Nota: La computación de las organizaciones no-lucrativas difiere en que los pagos son computados en la base del promedio anual grueso de las ganancias menos los gastos administrativos por el período de los dos años especificados arriba.

Antes de que se Mueva

A. Completar una "Solicitud de Determinación de Titularidad" forma disponible de su agente de reubicación, y volver de inmediato.

B. Somete una declaración escrita de las razones por las cuales su negocio no puede ser reubicado sin una pérdida substancial en la ganancia neta.

C. Provea una copia certificada de su declaración de impuestos de los dos años inmediatamente precedentes al año en el que se va a mover. (Si usted se mueve en cualquier momento en el año 2013, sin importar de cuando comenzaron las negociaciones o cuando el Estado tomó título de su propiedad, los años serán el de 2011 y el 2012.

D. Usted deberá ser notificado de la cantidad a la que tiene derecho después que la aplicación es recibida y aprobada.

E. Usted no puede recibir un pago hasta que se haya movido de la propiedad, Y que haya entregado un reclamo de pago dentro de los 18 meses de la fecha de mudanza.

Asistencia de Asesoría de Reubicación

A cualquier negocio, operación agrícola, u organización no-lucrativa, desplazado por Caltrans debe de ofreceria los servicios de asistencia de reubicación con el propósito de localizar una propiedad de reemplazamiento. Los servicios de reubicación deben de ser proveídos por un empleado de Caltrans. Es la meta y el deseo de nosotros de servirle y asistirle en cualquier manera posible para ayudarle a reubicarse exitosamente.

Un Agente de Reubicación de Caltrans se comunicará con usted personalmente, Los servicios de reubicación y los pagos deberán ser explicados a usted de acuerdo con su

elegibilidad. Durante la entrevista inicial con usted, sus necesidades y deseos deberán determinarse así como su necesidad de asistencia.

Usted puede esperar recibir los siguientes servicios, consejos, y asistencia de su Agente de Reubicación quien le:

- Determinará sus necesidades y preferencias.

- Explicará los beneficios de reubicación y su elegibilidad.

- Proveerá información en las propiedades de reemplazo para su consideración.

- Proveerá información en aconsejarle como puede obtener ayuda para minimizar la adversidad en ajustarse a su nuevo local.

- Asistirá en completar los documentos de préstamos, aplicaciones de rentas o Formas de Reclamos de Reubicación.

Y puede proveerle información en:

- Depósitos de seguridad.

- Taza de intereses y términos.

- Pagos típicos de enganches.
- Permisos, honorarios, y ordenanzas locales.
- Requerimientos de préstamos SBA.
- Impuestos de bienes raíces.
- Literatura de educación al consumidor.

Si usted desea, su Agente de Reubicación le dará una lista actual de otras propiedades de reemplazamiento que esten disponibles. Se la proveerá transportación para inspeccionar la propiedad disponible, especialmente si usted es anciano o deshabilitado. Aunque usted puede usar los servicios de un vendedor de bienes raíces, Caltrans no lo puede referir a un agente específico.

Su Agente de Reubicación está familiarizado con los servicios proveído por otros en su comunidad y le proveerá información de otros programas federales, estatales y locales que ofrecen asistencia a las personas desplazadas. Si usted tiene necesidades especiales, su Agente de Reubicación hará un esfuerzo para asegurar los servicios del personal entrenado de estas agencias que tienen la experiencia para ayudarle.

Si el proyecto de carreteras requiere que un número considerable de personas sean reubicadas, Caltrans establecerá Oficinas temporales de Reubicación en o cerca del proyecto. Las oficinas de projectos de reubicación serán abiertas durante las horas convenientes y hasta horas de la noche si es necesario.

Además de estos servicios, Caltrans será requerido a coordinar las actividades de reubicación con otras agencias causantes de desplazamiento para asegurar que todas las personas desplazadas reciban beneficions de reubicación iguales y consistentes.

Recuerde – Su Agente Reubicación está ahí para ofrecer consejos y asistencia. No tenga dudas en preguntar. Y esté seguro que usted entiende completamente todos los derechos y beneficios disponibles.

SUS DERECHOS COMO UNA PERSONA DESPLAZADA

Es importante que recuerde que los beneficios de reubicación no tendrán un efecto adverso en su:

- Elegibilidad para Seguro Social
- Elegibilidad para Asistencia Social
- Declaración de Impuestos

Además, el **Título VIII del Acta de Derechos Civiles de 1968**, y las actas anteriores y sus enmiendas hacen ilegal las prácticas en la venta y renta de las unidades residenciales que estén basadas en la raza, color, religión, sexo, u origen nacional.

Los Procedimientos No-Discriminatorios de Caltrans aseguran que todos los servicios y/o beneficios sean administrados al público en general sin diferencia de raza, color, origen nacional, o sexo en cumplimiento con el Título VI del Acta de Derechos Civiles de 1964. (42 USC 2000 (d.) et seq.).

Y usted siempre tiene el **Derecho de Apelar** una decisión de Caltrans en relación a sus beneficios de reubicación y elegibilidad.

Su Derecho de Apelación es garantizado en la “Ley Uniforme” que establece que una persona puede apelar con el responsable de las agencia si esta persona cree que la agencia ha fallado en determinar apropiadamente la elegibilidad de la persona o la cantidad de un pago autorizado por la Ley.

Si usted indica su disatisfacción, ya sea verbalmente o por escrito, Caltrans puede asistirle en entregar su caso y explicar los procedimientos a seguir. A usted le darán la oportunidad de ser oído pronta y totalmente. Usted tiene el derecho de ser representado por un consejero legal u otro representante en conección con la apelación (pero solamente a su propio costo).

Caltrans puede considerar todas las justificaciones pertinentes y materiales entregadas por usted y cualquier otra información disponible que sea necesaria para asegurar una revisión justa. Caltrans le proveerá con una determinación de la apelación por escrito con una explicación de la base de la decisión. Si usted todavía no está satisfecho con las asistencia prestada, Caltrans le aconsejará que usted puede buscar una revisión judicial.

Noticiero de la Ley para Americanos con Incapacidades Físicas (ADA):

Para personas con incapacidades físicas, este documento es disponible en formatos alternativos. Para información llame al número (916) 654-5413, o escriba a 'Department of Transportation - Right of Way, MS-37, 1120 N Street, Sacramento, CA 95814.'

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Nonresidential (Spanish)
Effective October 1, 2014

Appendix F

Air Quality Conformity Determination

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 8, 2015

In Reply Refer To:
HDA-CA

Mr. Ryan Chamberlain
District Director
California Department of Transportation
District 12
3347 Michelson Dr. Suite 400
Irvine, CA 92612-8894

Attention: Paul Chang

SUBJECT: Project Level Conformity Determination for the SR- 57/Lambert Rd. Interchange Project (ORA120320)

Dear Mr. Chamberlain:

On Jane 19, 2015, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a complete request for a project level conformity determination for the SR- 57/Lambert Rd. Interchange Project. The project is in an area that is designated Non-Attainment or Maintenance for CO, Ozone and Particulate Matter (PM_{10}, $PM_{2.5}$).

The project level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 CFR Part 93 have been met. The project is included in the Southern California Association of Governments' (SCAG) current Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), as amended. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

As required by 40 CFR 93.116 and 93.123, the localized $PM_{2.5}$ and PM_{10} analyses are included in the documentation. The analyses demonstrate that the project will not create any new violations of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the SR-57/Lambert Rd. Interchange Project conforms with the State Implementation Plan (SIP) in accordance with 40 CFR Part 93.

If you have any questions pertaining to this conformity finding, please contact Joseph Vaughn at (916) 498-5346 or by email at Joseph.Vaughn@dot.gov.

Sincerely,

For: Vincent P. Mammano
Division Administrator

Appendix G

August 2015 IPAC Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2015-SLI-0630 August 10, 2015
Event Code: 08ECAR00-2015-E-01173
Project Name: Lambert Road Interchange Improvement

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Lambert Road Interchange Improvement

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2015-SLI-0630
Event Code: 08ECAR00-2015-E-01173

Project Type: TRANSPORTATION

Project Name: Lambert Road Interchange Improvement
Project Description: The project proposes to provide additional capacity and improve the overall operational performance of the SR-57/Lambert interchange area. In addition, this project would a diamond configuration of SR-57ramps/Lambert road intersection and construct additional lanes to improve the traffic congestion.The project is located on SR-57 at Lambert road in the City of Brea.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Orange, CA

Endangered Species Act Species List

There are a total of 3 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Coastal California gnatcatcher *(Polioptila californica californica)* Population: Entire	Threatened	Final designated	
Least Bell's vireo *(Vireo bellii pusillus)* Population: Entire	Endangered	Final designated	
Fishes			
Santa Ana sucker *(Catostomus santaanae)* Population: 3 CA river basins	Threatened	Final designated	

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	Critical Habitat Type
Coastal California gnatcatcher *(Polioptila californica californica)* Population: Entire	Final designated

Appendix H

USFWS Informal Section 7 Consultation Letter of Concurrence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer To:
FWS-OR-12B0186-15I0553

OCT 08 2015

Mr. Charles Baker
Branch Chief
Environmental Planning
Department of Transportation
3347 Michelson Drive, Suite 100
Irvine, California 92612-8894

Attention: Ms. Kedest Ketsela, Associate Environmental Planner

Subject: Informal Section 7 Consultation for the SR-57 Lambert Road Interchange Improvement Project, Orange County, California

Dear Mr. Baker:

This is in response to your correspondence, dated June 8, 2015, requesting our concurrence with your determination that the subject project is not likely to adversely affect the federally threatened coastal California gnatcatcher (*Polioptila californica californica,* gnatcatcher) and its designated critical habitat, in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). The California Department of Transportation (Caltrans) has assumed the Federal Highway Administration's (FHWA) responsibilities under the Act for this consultation in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012, as described in the National Environmental Policy Act (NEPA) assignment Memorandum of Understanding between FHWA and Caltrans (effective October 1, 2012) and codified in 23 U.S.C. 327.

Caltrans, together with the City of Brea, proposes to improve the State Route 57 (SR-57) Lambert Road Interchange in the City of Brea, Orange County, California. Caltrans and the City of Brea are hereafter referred to as the project proponents. The project is proposed to relieve traffic congestion and improve safety and traffic flow at the interchange. This consultation addresses the proposed project preferred alternative 7A, which will improve the southbound and northbound SR-57 on and off ramps, provide an additional (fourth) approach lane, widen the south side of Lambert Road, lower the road profile, and maintain the existing ramp metering system (Caltrans 2015).

The gnatcatcher is known to occur in the vicinity of the project. We have about 30 records for the gnatcatcher, dating from 1999 to 2013, within half a mile of the project site [Carlsbad Fish and Wildlife Office (CFWO) GIS data 2015]. Focused surveys for gnatcatchers were not conducted for the project due to personnel safety concerns because the habitat affected by the project is located on steep cut slopes adjacent to the SR-57 freeway. Due to numerous nearby records and the presence of

suitable habitat, Caltrans has concluded that the habitat within the project area is likely occupied by the gnatcatcher (Caltrans 2015). We agree with this conclusion.

The project will result in 0.15 acre and 1.4 acres of permanent and temporary impacts, respectively, to sage scrub/grassland ecotone that is suitable for gnatcatcher foraging. Of this area, 0.01 acre and 0.51 acre of permanent and temporary impacts, respectively, are located within Unit 9 of designated critical habitat for the gnatcatcher (Caltrans 2015). The function of Unit 9 is to support core populations of gnatcatchers at the Montebello Hills, the south slopes of the Puente-Chino Hills from Whittier east to Yorba Linda, and the East and West Coyote Hills, and to provide connectivity between populations within the Orange County Central-Coastal NCCP (Unit 6), the Western Riverside County MSHCP (Unit 10) and the Bonelli Regional Park population within East Los Angeles (Unit 12).

The following measures have been incorporated into the project design to avoid and minimize potential effects to the gnatcatcher and its designated critical habitat:

1. Permanent impacts to 0.15 acre of habitat suitable for the gnatcatcher will be offset through the restoration and permanent conservation of 1.5 acres of coastal sage scrub habitat within designated gnatcatcher critical habitat at Puente Hills, through the Puente Hills Habitat Preservation Authority (Authority), or at another location approved by the CFWO. Documentation that the habitat has been conserved will be provided to the CFWO prior to the commencement of vegetation removal and project construction.

2. The project proponents will submit final upland habitat restoration plans to the CFWO for review and approval at least 30 days prior to initiating project impacts. The final plan will include the following information and conditions:

    a. All habitat restoration/enhancement sites will be prepared for planting in a way that mimics natural habitat to the maximum extent practicable. All plantings will be installed in a way that mimics natural plant distribution and not in rows;

    b. Planting palettes (plant species, size, and number/acre) and seed mix (plant species and pounds/acre). The plant palettes proposed in the draft plan will include native species specifically associated with the habitat type(s). Unless otherwise approved by the CFWO, only locally native species (no cultivars) obtained from the Chino/Puente Hills or other source within 15 miles of the Chino/Puente Hills will be used, unless otherwise approved by the CFWO. Native grass seed, which is wind pollinated, may be collected from anywhere in Southern California. The specific source location of all plant material and seed will be provided to the CFWO prior to use in restoration activities;

    c. Container plant survival will be 60 percent of the initial plantings for the first 5 years. At the first and second anniversary of plant installation, all dead plants will be replaced unless their function has been replaced by plants from seed or natural recruitment;

d. A final implementation schedule will indicate when all impacts, as well as restoration planting and irrigation will begin and end. Offsite restoration planting and irrigation will be completed during the concurrent or next planting season (i.e., late fall to early spring) after initiating project impacts;

e. The final restoration plan will include 5 years of success criteria for restoration areas including: percent cover, evidence of natural recruitment of multiple species for all habitat types, 0 percent coverage will be maintained for woody California Invasive Plant Council's (Cal-IPC's) "Invasive Plant Inventory" species, and no more than 15 percent coverage for other exotic/weed species;

f. A minimum 5 years of maintenance and monitoring of restoration areas, unless success criteria are met earlier and all artificial water supplies have been off for at least 2 years;

g. A qualitative and quantitative vegetation monitoring plan with a map of proposed sampling locations. Photo points will be used for qualitative monitoring and stratified-random sampling will be used for all quantitative monitoring;

h. Contingency measures in the event of creation/restoration/enhancement failure;

i. Annual mitigation maintenance and monitoring reports will be submitted to the CFWO no later than December 1 of each year; and

j. If maintenance of a coastal sage scrub restoration area is necessary between February 15 and August 31, a biologist with knowledge of the biology and ecology of gnatcatchers and approved by the CFWO will survey for gnatcatchers within the restoration area, access paths to it, and other areas susceptible to disturbances by site maintenance. Surveys will consist of three visits separated by 2 weeks, starting March 1 of each maintenance/monitoring year. Work will be allowed to continue on the site during the survey period. However, if gnatcatchers are found during any of the visits, Caltrans will notify and coordinate with the CFWO to identify measures to avoid and/or minimize effects to the gnatcatcher (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work).

3. The project proponents will prepare and implement perpetual management, maintenance, and monitoring plans for the 1.5 acre conservation area, with consideration of the fact that the Authority property is already managed pursuant to the Authority's conservation mission. The project proponents will also establish a non-wasting endowment for an amount approved by the CFWO based on Property Analysis Records (PAR)[1] or similar cost estimation methods, to ensure that there is sufficient funding for perpetual management, maintenance and monitoring of the property. The project proponents will submit draft long-term management plans for the property to the CFWO for review and approval. The long-term management plans will include, but not be limited to, the following: 1) the PAR or other cost

[1] Center for Natural Lands Management ©1998

estimation results for the non-wasting endowment; 2) the proposed land manager's name, qualifications, business address, and contact information; and 3) the method of protecting the resources in perpetuity (e.g., conservation easement), monitoring schedule, measures to prevent human and exotic species encroachment, funding mechanism, and contingency measures should problems occur. The long-term management plan will be provided and the endowment will be established prior to initiation of vegetation removal and construction activities for the project.

4. A perpetual biological conservation easement or other conservation mechanism acceptable to the CFWO will be recorded over the 1.5-acre conservation area. The conservation mechanisms will specify that no easements or activities (e.g., fuel modification zones, public trails, drainage facilities, walls, maintenance access roads, utility easements) that will result in soil disturbance and/or native vegetation removal will be allowed within the biological conservation easement areas. The draft conservation mechanism will be provided to the CFWO for review and approval prior to initiation of vegetation removal and construction activities for the project. The project proponents will also submit the final conservation mechanism to the CFWO.

5. All areas of temporary impact, totaling 1.4 acres, will be revegetated and restored with native species. These areas will be returned to original grade, as feasible. Prior to initiating project impacts, a restoration plan will be developed for the temporary impact areas. The plan will be submitted to the CFWO for review and approval. This plan will include a detailed description of restoration methods, slope stabilization, and erosion control, criteria for restoration to be considered successful, and monitoring protocol(s). Following the completion of construction activities within each area of impact, the restoration plan will be implemented for a minimum of 5 years, unless success criteria are met earlier and all artificial water has been off for at least 2 years. Temporary impact areas will be planted as soon as possible following re-grading after completion of construction to prevent encroachment by nonnative plants.

6. A biologist (Project Biologist[2]) approved by the Carlsbad Fish and Wildlife Office (CFWO) will be on site during: 1) initial clearing and grubbing; and 2) weekly during project construction within 200 feet of gnatcatcher habitat to ensure compliance with all conservation measures. The Project Biologist will be familiar with the habitats, plants, and wildlife in the project area to ensure that issues relating to biological resources are appropriately and lawfully managed. Caltrans will submit the biologist's name, address, telephone number, and work schedule on the project to the CFWO prior to initiating project impacts. The biologist will be provided with a copy of this consultation.

7. Under the supervision of the Project Biologist, the limits of project impacts (including construction staging areas and access routes) will be clearly delineated with bright orange plastic fencing, stakes, flags, or markers that will be installed in a manner that does not impact habitats to be avoided and such that they are clearly visible to personnel on foot and operating heavy equipment. If work occurs beyond the fenced or demarcated limits of impact, all work

[2] The designated project biologist for this measure should be experienced in gnatcatcher biology and ecology.

will cease until the problem has been remedied to the satisfaction of the CFWO. Temporary construction fencing and markers will be maintained in good repair until the completion of project construction and removed upon project completion.

8. The Project Biologist will submit a final report to the CFWO within 120 days of project completion including photographs of impact areas and adjacent habitat, documentation that authorized impacts were not exceeded, and documentation that general compliance with all conservation measures was achieved. The report will specify numbers, locations, and sex of gnatcatchers (if observed), observed gnatcatcher behavior (especially in relation to project activities), and remedial measures employed to avoid and minimize impacts to gnatcatchers and their critical habitat. Raw field notes should be available upon request by the CFWO.

9. An employee education program will be developed and implemented by the Project Biologist. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program prior to working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area (including photographs), their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area.

10. The clearing and grubbing of native habitats for the project will be conducted between September 1 and February 14 to avoid the gnatcatcher breeding season (or sooner than September 1 if the Project Biologist demonstrates to the satisfaction of the CFWO that all nesting is complete). If vegetation clearing must be conducted during the breeding season, Caltrans will re-initiate consultation with the CFWO to address unanticipated effects to this species.

11. If invasive weed species are already growing within the project area, special care will be taken during transport, use, and disposal of soils containing invasive weed seeds to ensure that invasive weeds are not spread into new areas by the project. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds. Eradication strategies will be implemented should an invasion of nonnative plant species be observed in the project work area by the Project Biologist.

12. No invasive species listed in the National Invasive Species Management Plan, State of California Noxious Weed List, or Cal-IPC Invasive Plant Inventory list will be included in the landscaping plans for the proposed project. Landscaping will not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas, and water runoff from landscaped areas will be directed away from adjacent native habitats and contained and/or treated within the development footprint. Caltrans will review the landscaping plans for the project and then submit them to the CFWO for review and approval.

13. If nighttime construction is necessary, all project lighting (e.g., staging areas, equipment storage sites, roadway) will be selectively placed and directed toward the construction site and away from gnatcatcher habitat. Construction lighting will be of the lowest illumination necessary for safety, and light glare shields will be used to reduce the extent of illumination into gnatcatcher habitat.

14. Permanent project lighting will be of the lowest illumination necessary for safety and will be directed toward the road and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. Caltrans will review the permanent lighting plans for the project and then submit them to the CFWO for review and approval.

15. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated disturbed/developed areas. They will be located such that runoff from the designated areas will not enter gnatcatcher habitat.

16. Appropriate erosion and siltation controls will be installed prior to the onset of vegetation clearing and be maintained in good repair until the completion of project construction. Erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.

17. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures.

18. To avoid attracting predators of the gnatcatcher the project site will be kept as clean of debris as possible. Food-related trash items will be kept in enclosed containers and regularly removed from the site.

19. If fill must be borrowed from, or disposed of offsite, the construction contractor will identify any necessary borrow and disposal sites and provide this information to Caltrans for review. Caltrans will review borrow and disposal site information and submit the information to the CFWO. If borrow or disposal activities may affect a listed species or critical habitat, Caltrans will reinitiate section 7 consultation.

20. Project personnel will be prohibited from bringing domestic pets to the construction site to ensure that domestic pets do not disturb or depredate wildlife in the adjacent native habitat.

Gnatcatcher territories in coastal areas average 5.7 acres, with a minimum size of 2.5 acres (Atwood *et al*. 1998). The small and predominantly temporary impacts (0.15 acre and 1.4 acres of permanent and temporary impacts, respectively) associated with the project will occur within a narrow, linear swath along the SR-57 cut slope. The sage scrub/grassland ecotone on the site is dominated by annual nonnative grassland with small, scattered patches of scrub that represent less than 20 percent cover of any given area. Taken overall, the sage scrub comprises about 5 percent of the habitat (Caltrans 2015). These patches likely represent a small portion of any gnatcatcher territories found adjacent to the site and, as such, impacts to these patches are not anticipated to result in an

appreciable impact to gnatcatchers within the area. Due to baseline conditions within the impact area that include sparse, degraded patches of scrub habitat, freeway noise, and lighting, habitat within the project impact area is not considered to be suitable for gnatcatcher nesting but may provide for gnatcatcher foraging or dispersal.

Because of the small size of the anticipated impacts and the fact that the impacts will be confined to small patches along the edges of potential gnatcatcher territories, we have determined that sufficient habitat will remain to support essential breeding, feeding, and sheltering behaviors, and that the project impacts will not significantly affect gnatcatcher survival or reproduction. For the purposes of section 7 consultation, an insignificant effect is one that is sufficiently small that a person would not be able to meaningfully measure, detect, or evaluate it.

To ensure that any effects of clearing activities on individual gnatcatchers are reduced to the level of insignificance, a Service-approved biologist will be present to ensure that gnatcatchers are not directly killed or injured during vegetation removal activities. All vegetation removal work will be conducted during the non-breeding season, which will ensure that there is no potential for clearing activities to affect gnatcatcher breeding. Gnatcatchers may be passively flushed out of the work area in the direction of coastal sage scrub adjacent to the project site as vegetation is cleared for the project work. In the context of this project, this low-level flushing activity during the non-breeding season is considered an avoidance and minimization measure that has an insignificant effect on individual gnatcatchers and does not rise to the level of take as defined by the Act.

Temporary indirect impacts may occur to gnatcatchers as a result of noise, introduction of invasive species, erosion, sedimentation, and human encroachment resulting from the project. Noise and vibration associated with the use of mechanized equipment during construction of the proposed project has the potential to disrupt gnatcatcher foraging and sheltering behaviors in adjacent habitat by masking intraspecific communication and startling birds (e.g., see Dooling and Popper 2007 for a discussion of observed effects of highway noise on birds). However, gnatcatchers at this location are adjacent to a freeway with heavy traffic, so they are already exposed to high noise and activity levels and are unlikely to be substantially disrupted by proposed construction activity. In addition, the topography of the site is such that noise from project construction is not anticipated to significantly affect gnatcatchers in the adjacent habitat.

Construction lighting has the potential to affect gnatcatchers. Light that alters natural light patterns in ecosystems can lead to increased predation, disorientation, and disruption of inter-specific interactions (Longcore and Rich 2004). SR-57 is an existing facility, so adjacent habitat is already exposed to increased lighting, high activity levels, and increased invasive species introductions. Nevertheless, measures (listed above), such as the incorporation of light glare shields, have been incorporated into the project to reduce potential lighting impacts to gnatcatchers to the level of insignificance. The project has also incorporated measures (listed above) to prevent the introduction and spread of invasive species, and to minimize construction erosion, sedimentation, and human encroachment into the adjacent habitat. With the proposed measures, any increase in habitat degradation associated with these factors is likely to be insignificant.

The primary constituent elements of designated gnatcatcher critical habitat consist of CSS and other vegetation communities necessary to support core gnatcatcher populations and provide connectivity within populations. The small amount (0.01 acre and 0.51 acre of permanent and temporary impacts, respectively) to disturbed CSS within Unit 9 of designated gnatcatcher critical habitat will not affect the function of the unit to support core populations of gnatcatchers and to provide connectivity between populations in adjacent critical habitat units. With the incorporation of the above measures, the proposed project impacts on the primary constituent elements in Unit 9 of gnatcatcher critical habitat are considered to be insignificant.

In addition, permanent (0.15 acre) construction impacts to habitat suitable for gnatcatchers, including 0.01 acre of designated gnatcatcher critical habitat, will be offset by the restoration and conservation of 1.5 acre of gnatcatcher critical habitat at Puente Hills through the Puente Hills Habitat Preservation Authority or at another location approved by the CFWO. Further, the project's temporary impact areas will be restored, which will contribute to the survival and recovery of the species.

Based on the information provided and the above measures that have been incorporated into the proposed project, we concur with your determination that the proposed project is not likely to adversely affect the gnatcatcher and its designated critical habitat. Therefore, the interagency consultation requirements of section 7 of the Act have been satisfied. Although our concurrence ends informal consultation, obligations under section 7 of the Act will be reconsidered if new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered or this action is subsequently modified in a manner that was not considered in this assessment.

Thank you for your coordination on this project. If you have any questions regarding this letter, please contact Sally Brown of this office at 760-431-9440, extension 278.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor

LITERATURE CITED

Atwood, J. L., S. H. Tsai, C. H. Reynolds, J. C Luttrell, and M. R Fugagli. 1998. Factors affecting estimates of California gnatcatcher territory size. Western Birds 29:269-279.

[Caltrans] California Department of Transportation. 2015. SR-57/Lambert Road Interchange Improvement Project Biological Assessment. 27+ pp.

Dooling, R. J. and A. N. Popper. 2007. The effects of highway noise on birds. Prepared by Environmental BioAcoustics LLC for the California Department of Transportation, Sacramento, California. 74 pp.

Longcore, T. and C. Rich. 2004. Ecological light pollution. Front Ecological Environment 2:191-198.