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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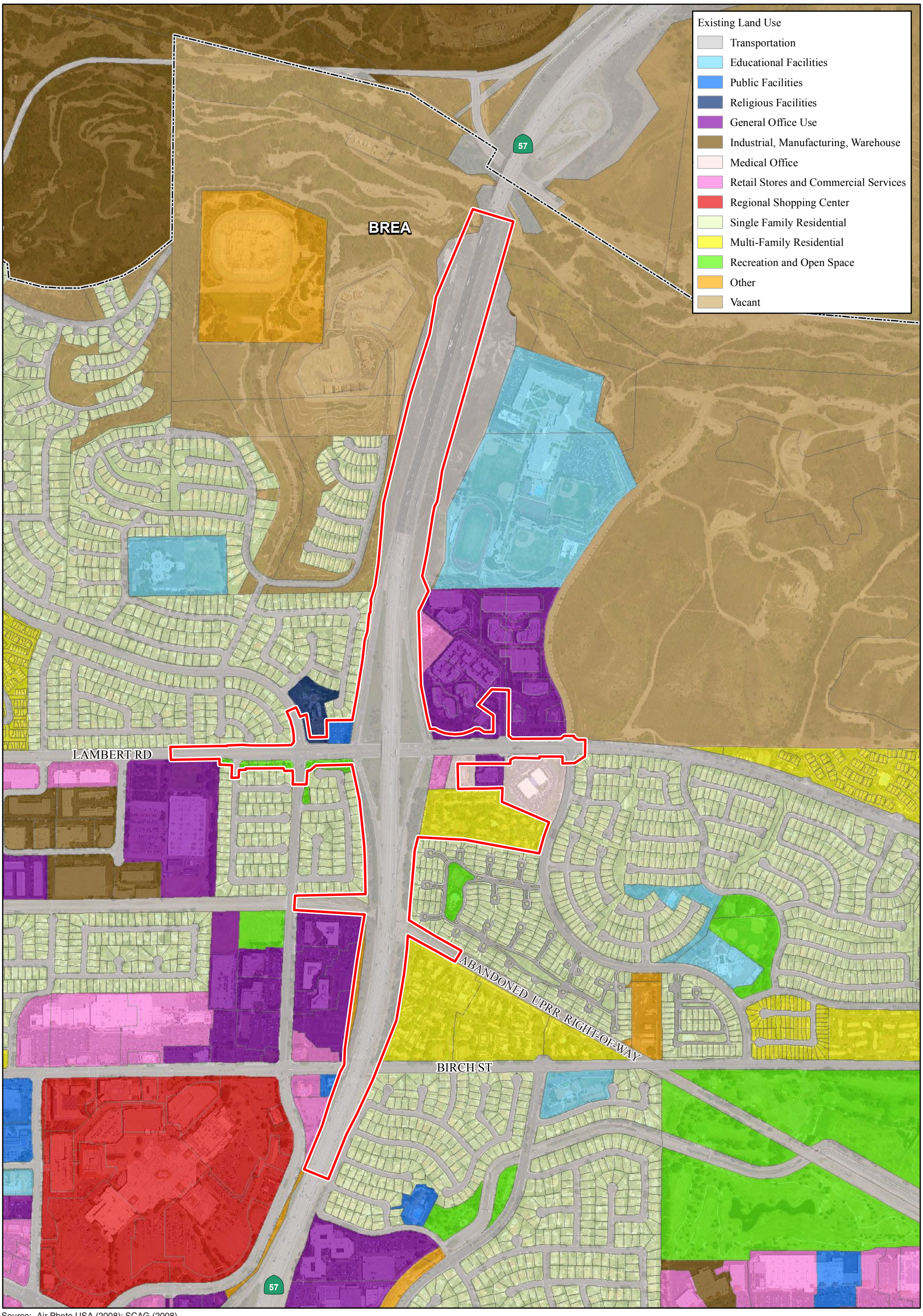

Source: Air Photo USA (2008); SCAG (2008).

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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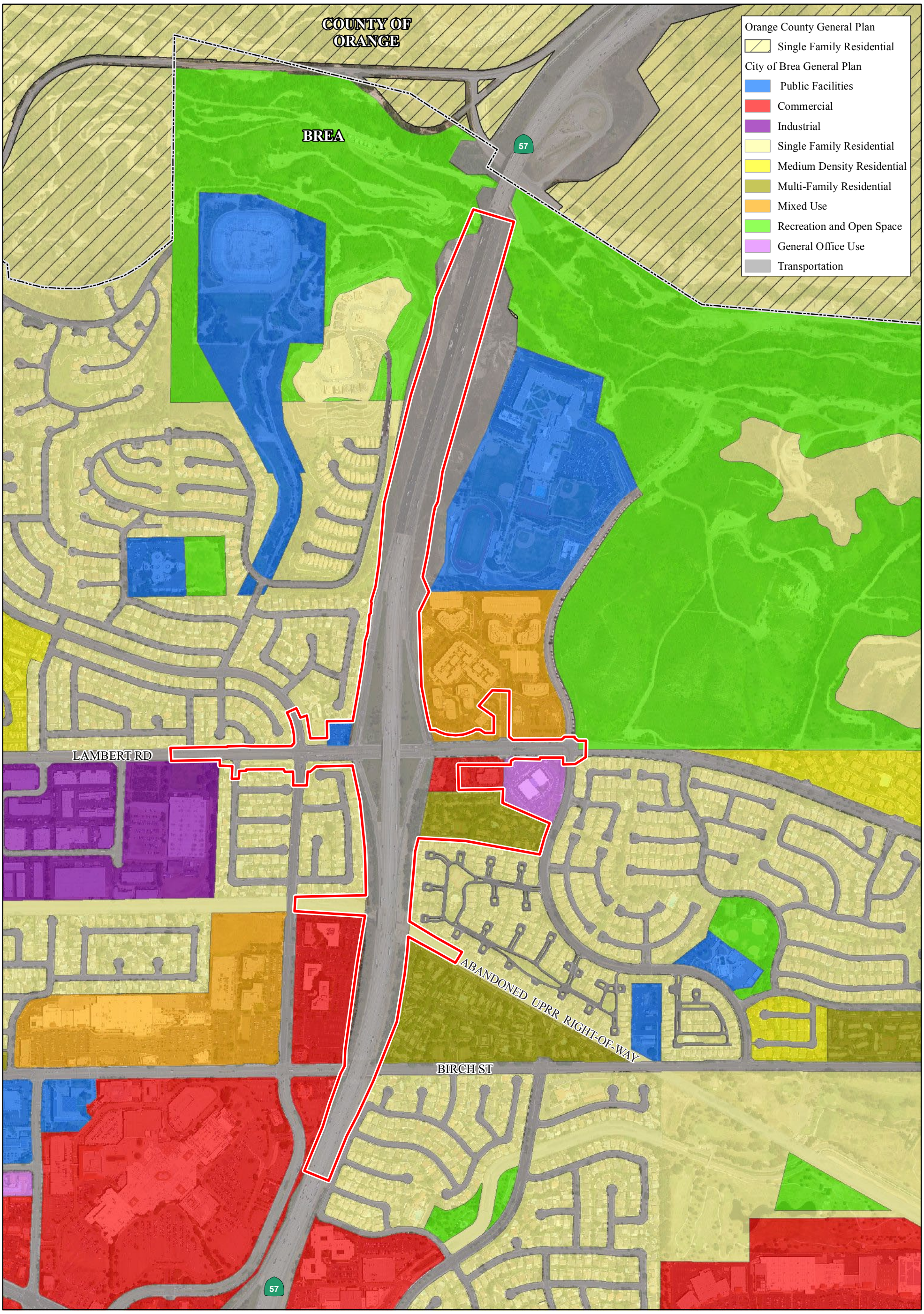

Source: Eagle Aerial (2011); City of Brea (12/15/2011); County of Orange (6/22/2005).

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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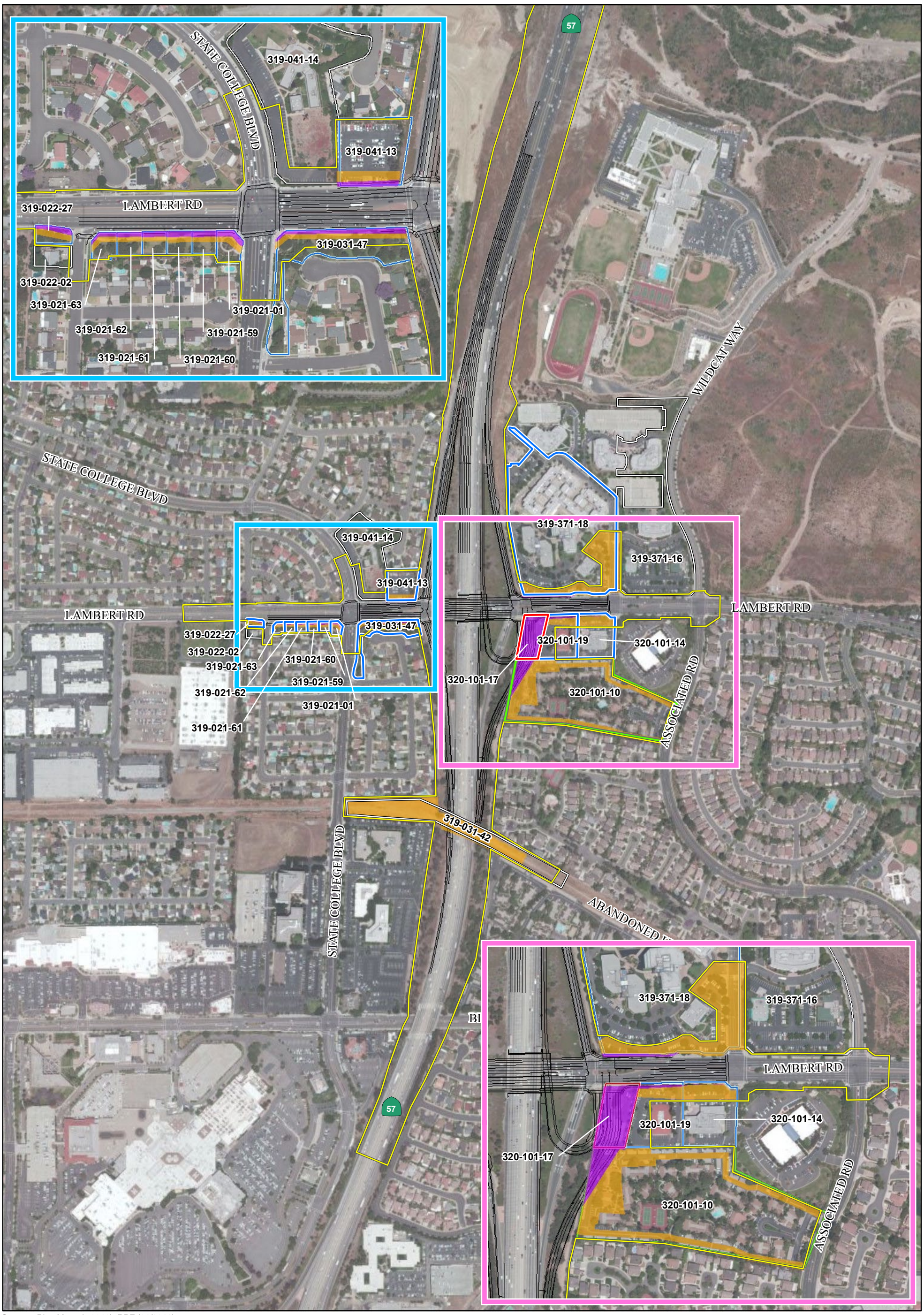

Source: Bing Maps (c.2010); RBF (01/2012).

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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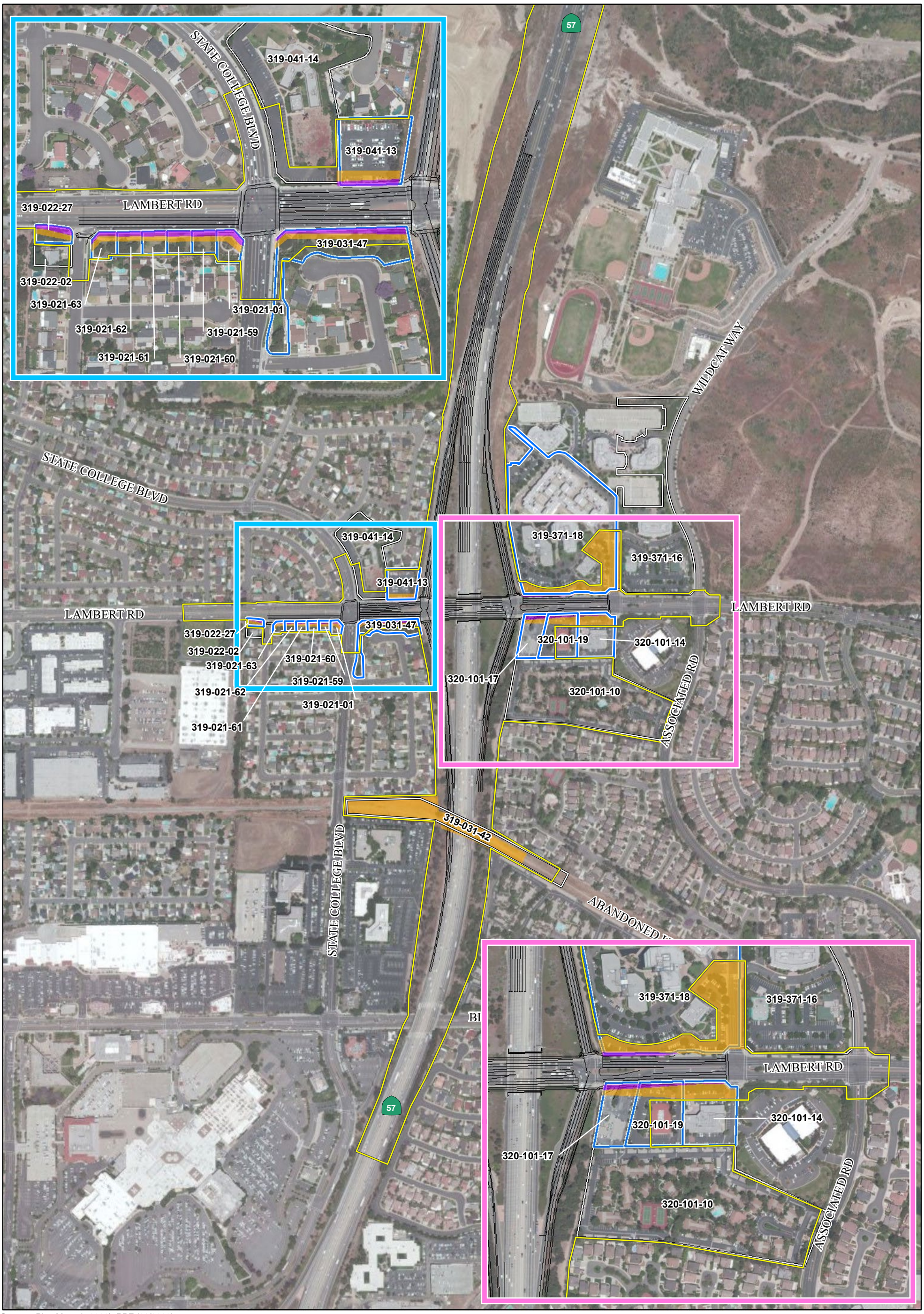

Source: Bing Maps (c.2009); RBF (01/2012).

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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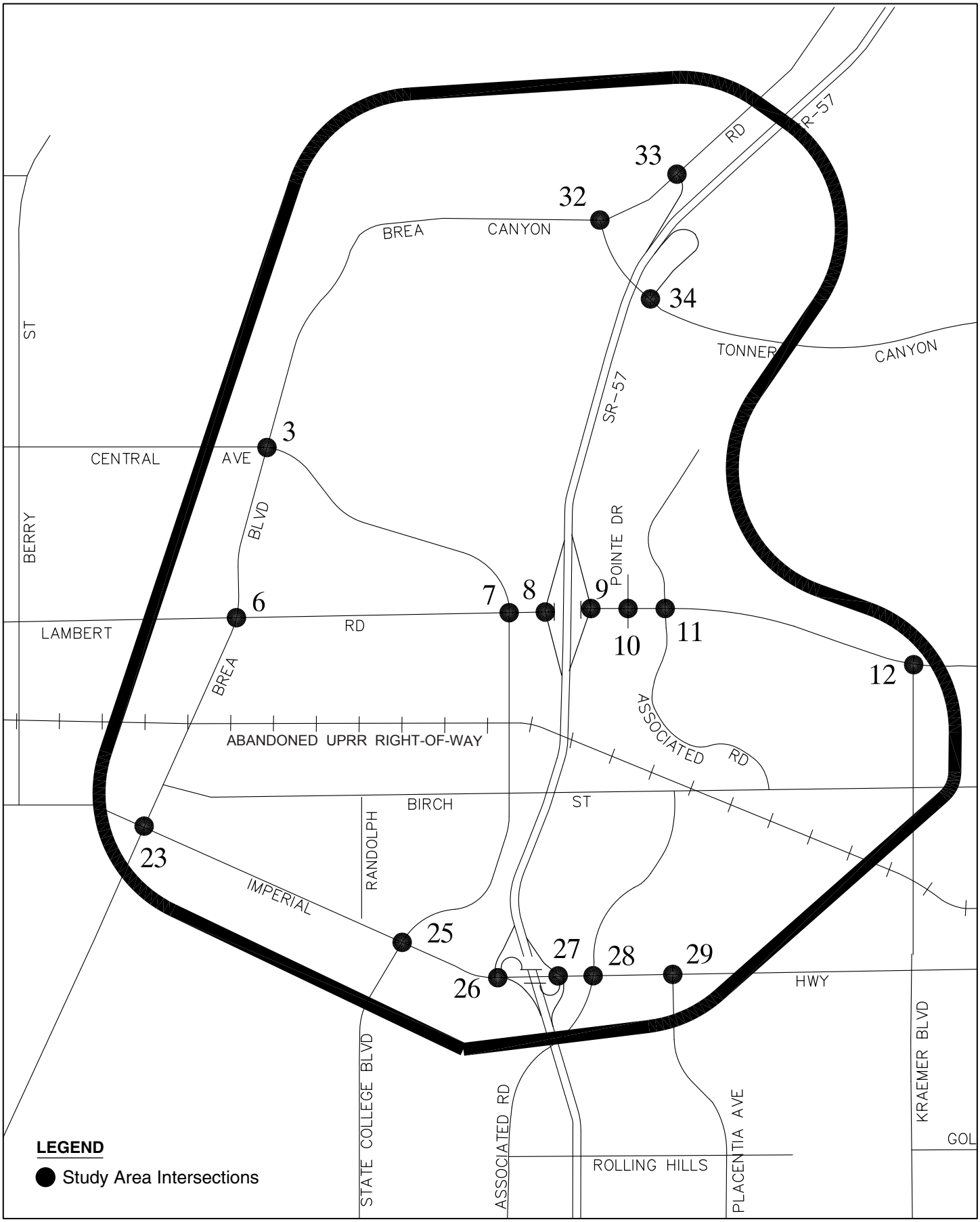

Source: Stantec, March 2012

not to scale

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

Study Area

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

Figure 2.2.5-1

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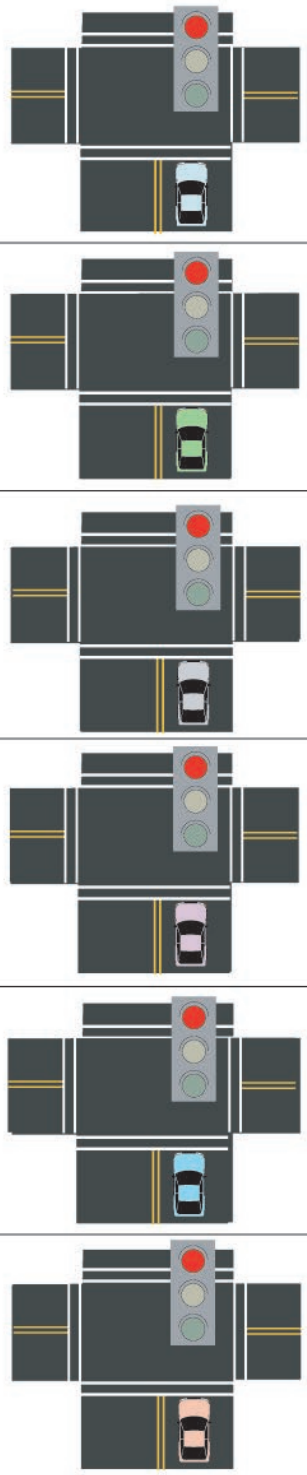
LEVELS OF SERVICE

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.

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

Freeway Mainline LOS

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

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):

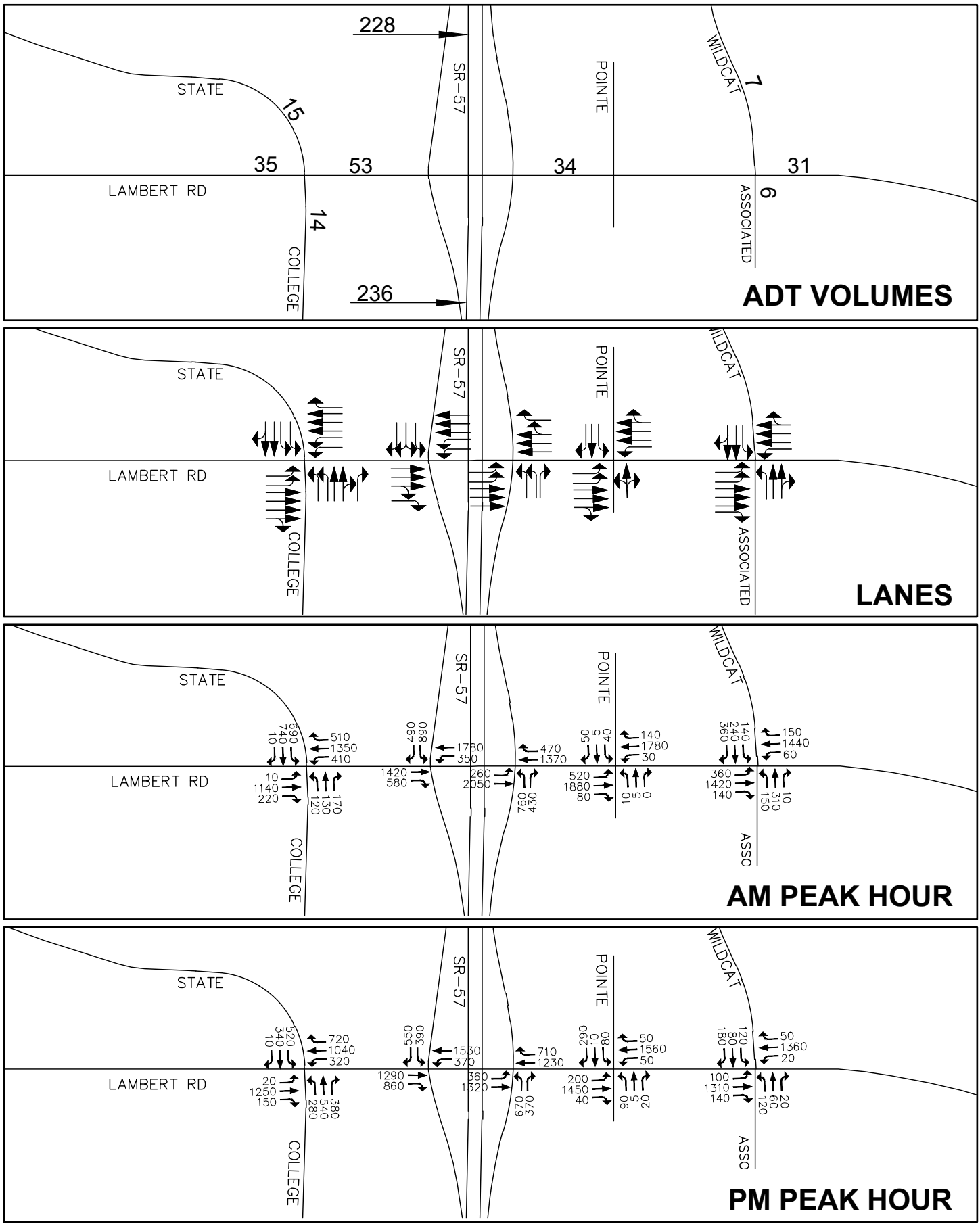
LOS	Average Delay	ICU V/C	LOS	Average Delay	ICU V/C
A	0.0 – 10.0	.00 –.60	D	35.1 – 55.0	.81 –.90
B	10.1 – 20.0	.61 –.70	E	55.1 – 80.0	.91 – 1.00
C	20.1 – 35.0	.71 –.80	F	>80.0	>1.00

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

not to scale

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Existing ADT and Peak Hour Volumes

1/14/13 JN 10-107792-18226 MAS

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

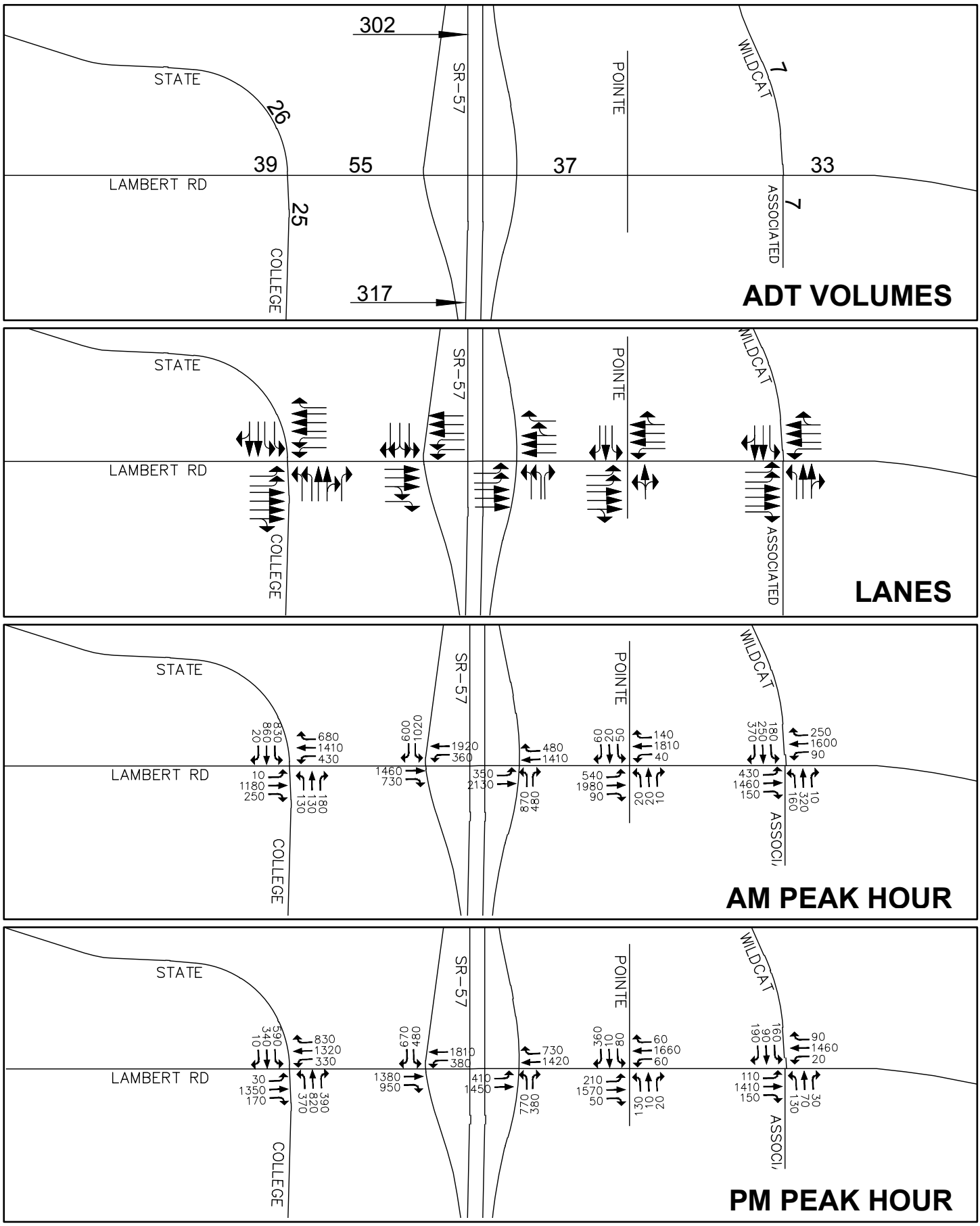
SBL: Southbound Left
SBT: Southbound Through
SBR: Southbound Right

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

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2040 ADT and Peak Hour Volumes No Build Alternative

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Figure 2.2.5-5

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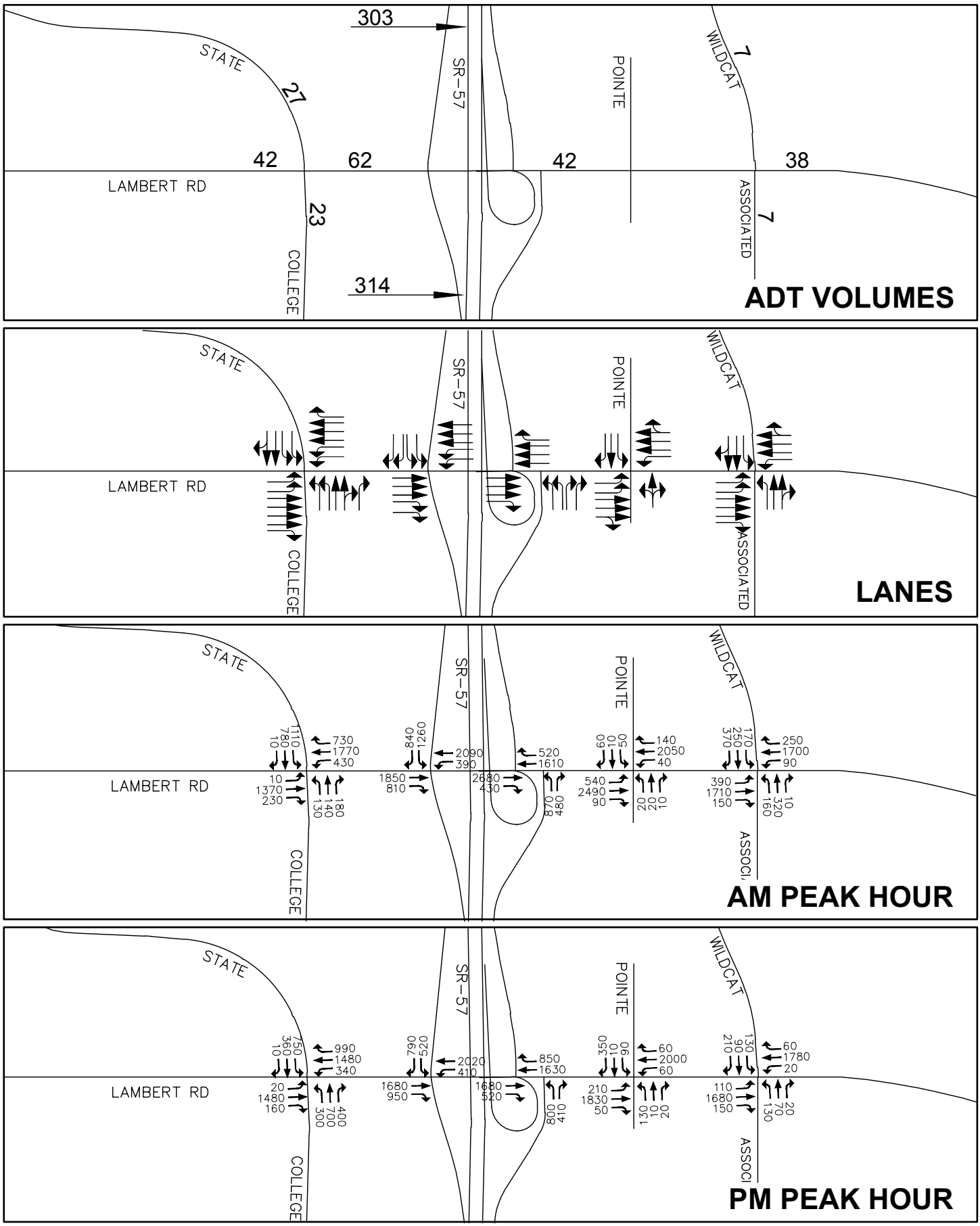

Source: Stantec, October 2012

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2040 ADT and Peak Hour Volumes Build Alternative 7A

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

Figure 2.2.5-6

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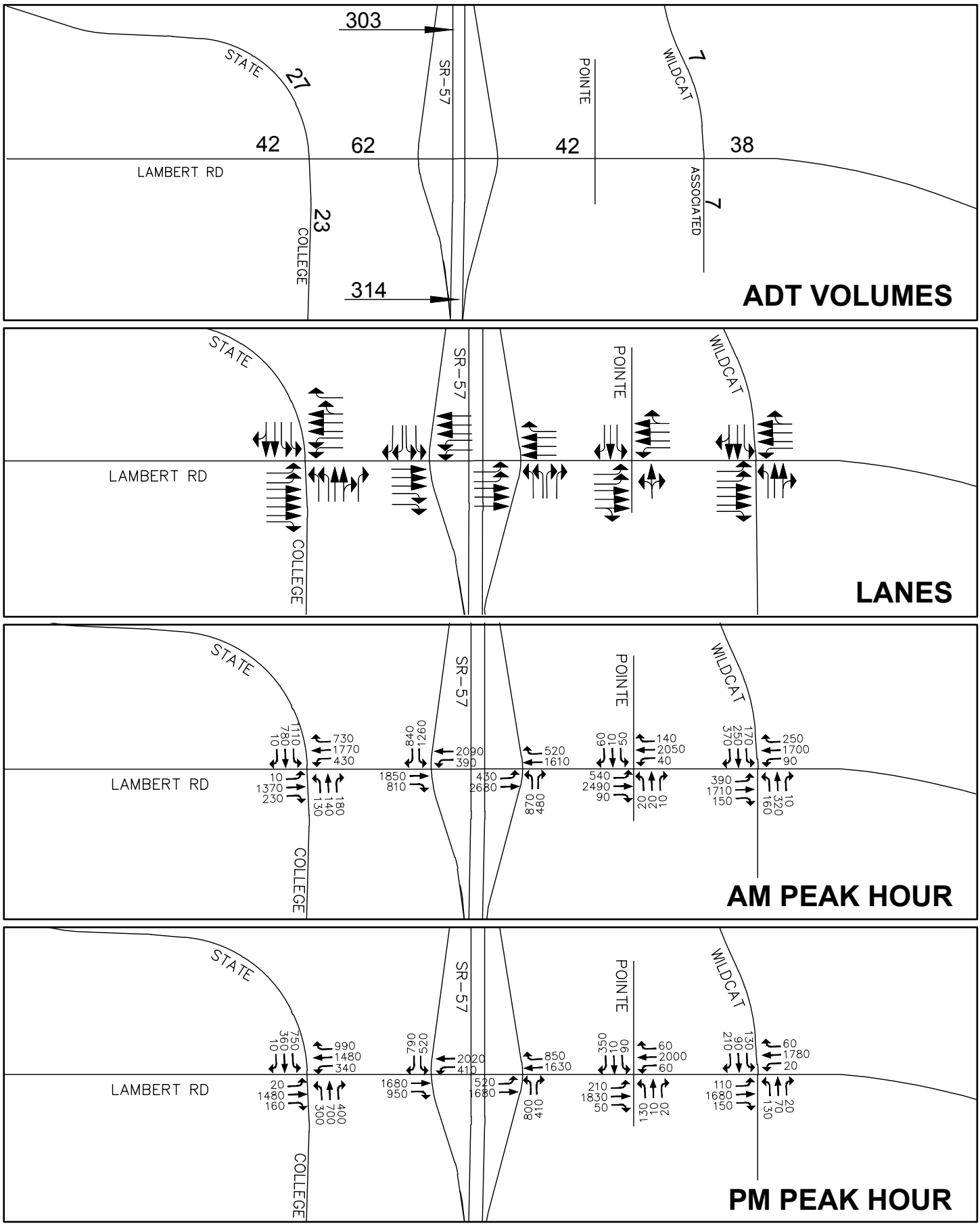

Source: Stantec, October 2012

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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).

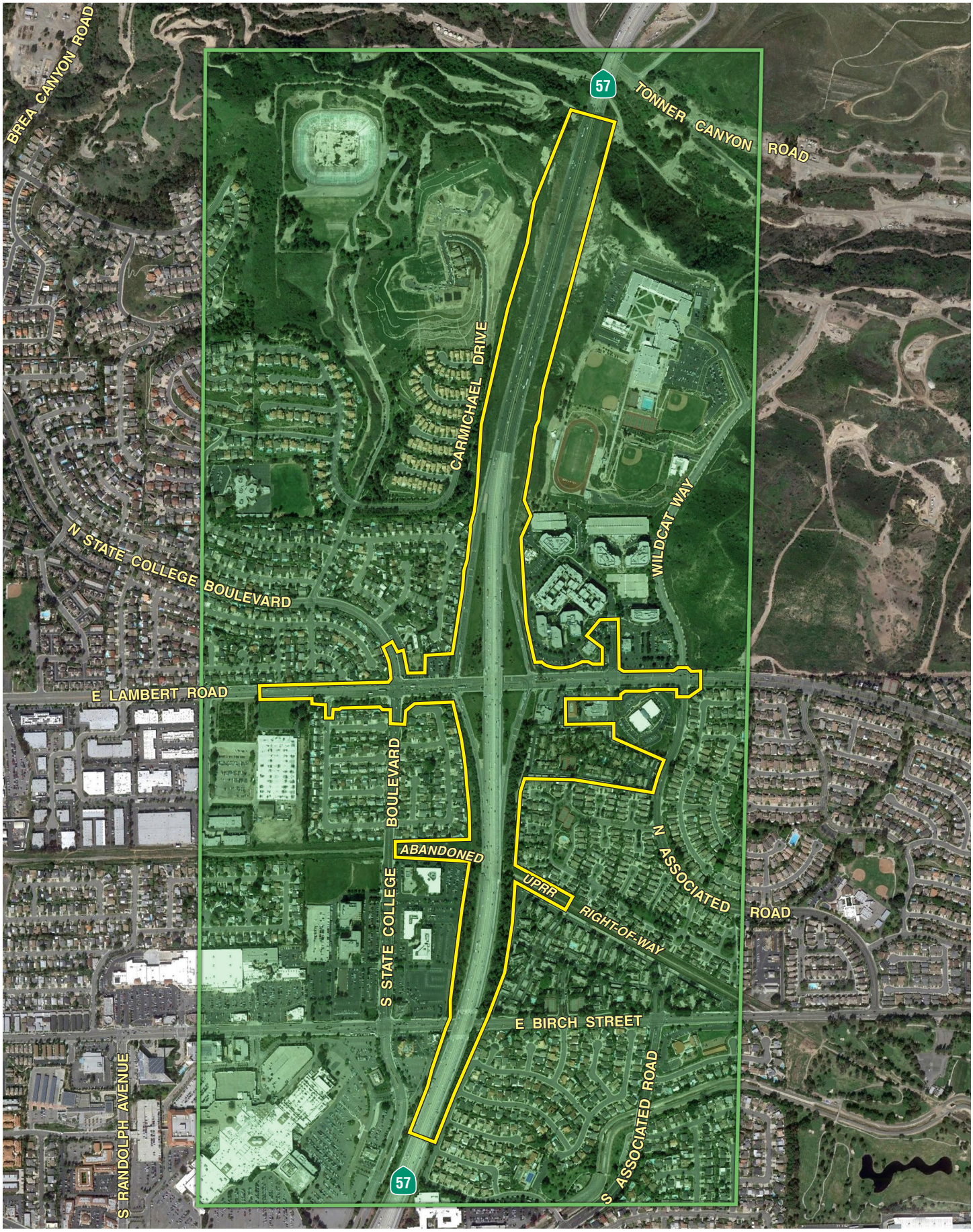
Project Area Viewshed

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.



not to scale

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

Visual Assessment Unit

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

Figure 2.2.6-1

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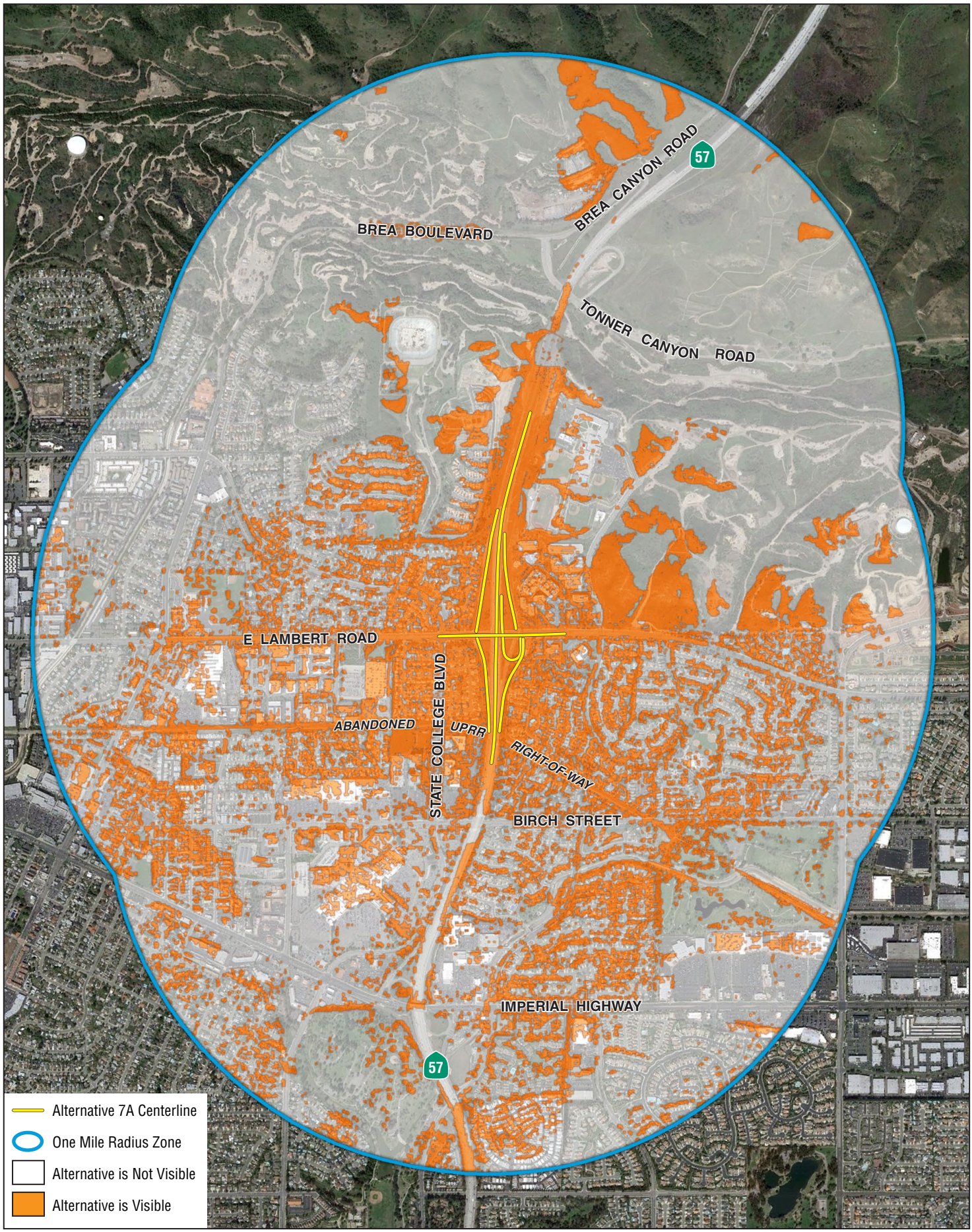

Source: Google Maps Pro Aerial

0 0.25 0.5 miles

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

Viewshed Map • Alternative 7A

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

Figure 2.2.6-2a

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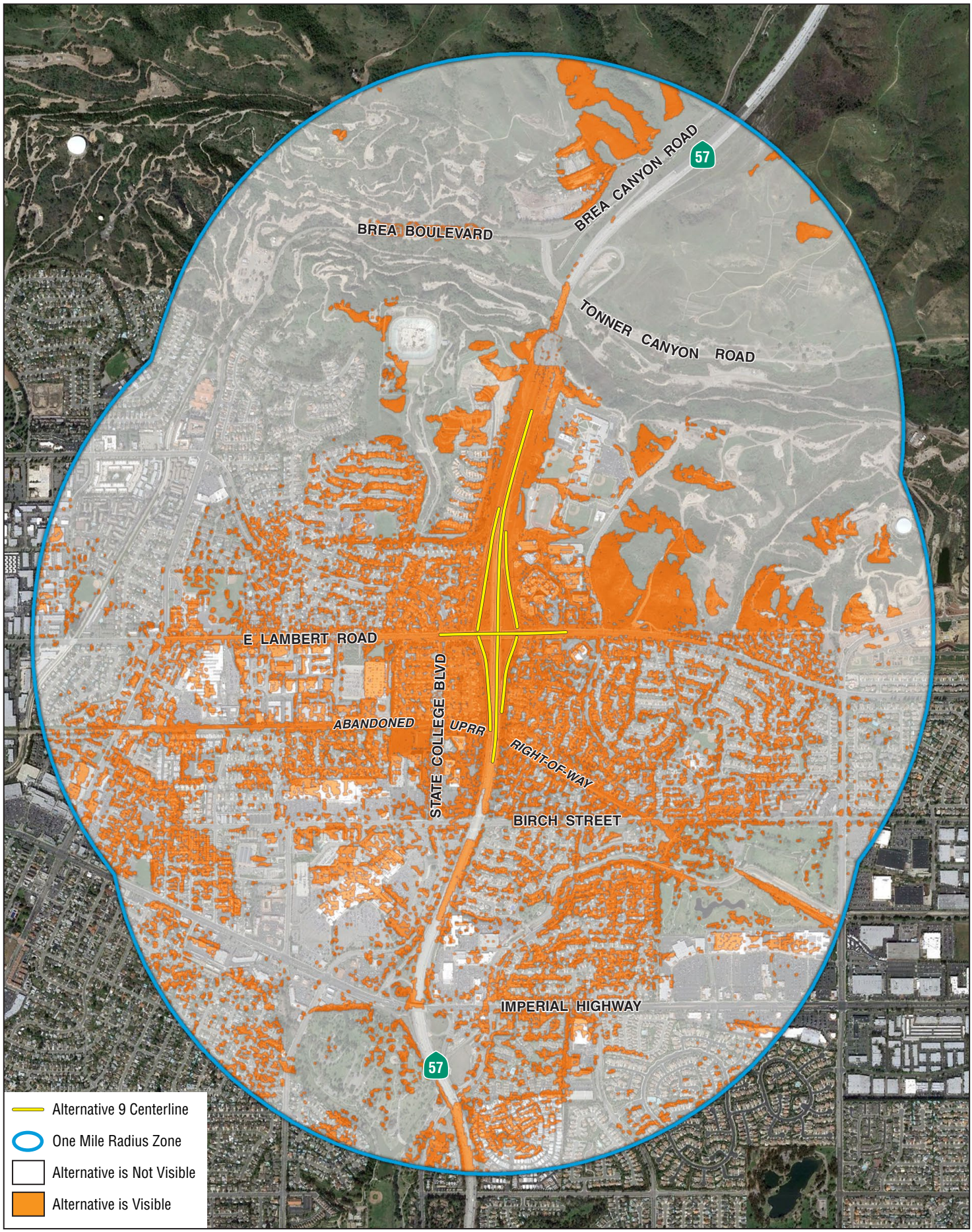

Source: Google Maps Pro Aerial

0 0.25 0.5 miles

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

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

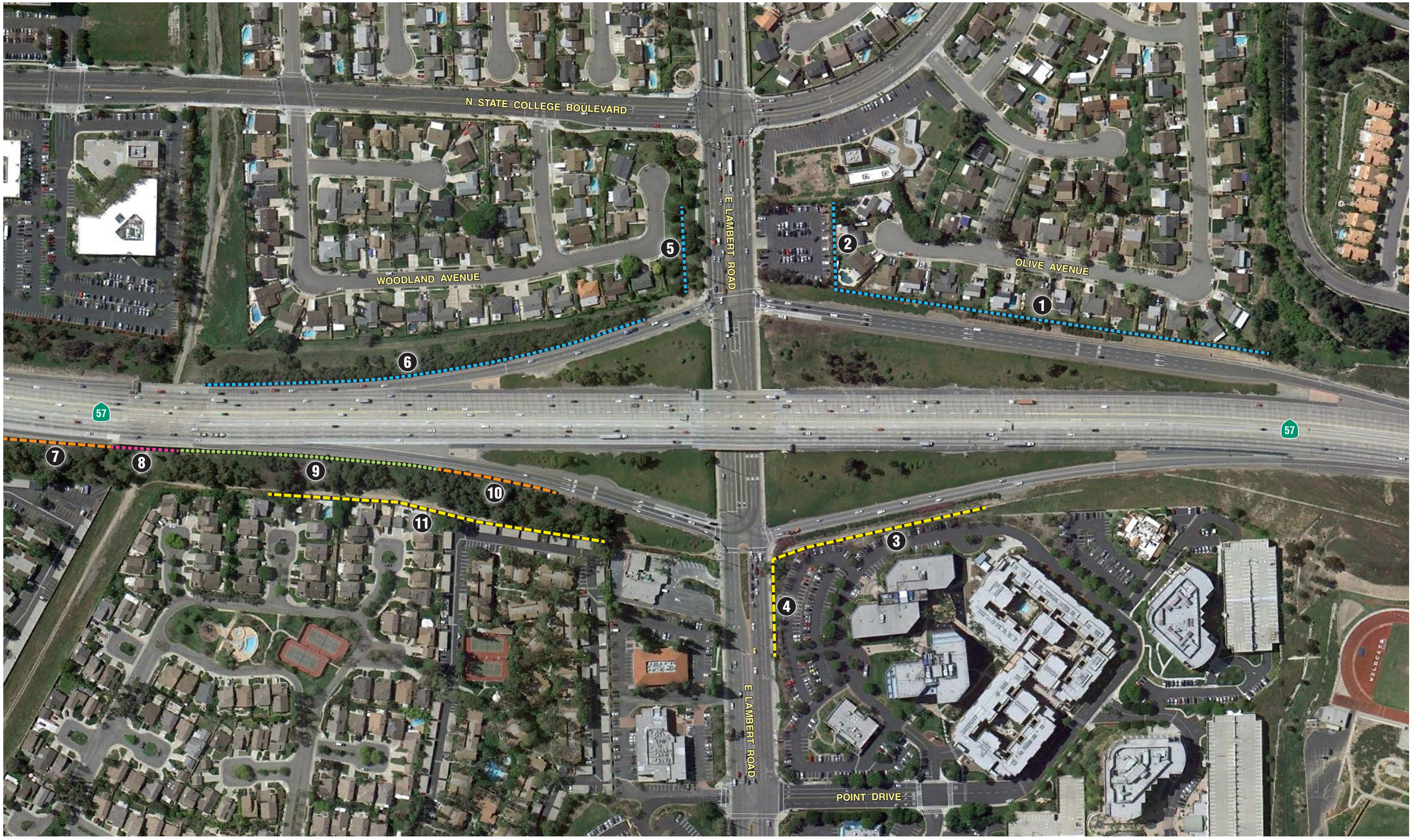
Wall Location[1]	Wall Type	Length (feet)	Maximum Height (feet)
1	Soundwall	1,050	10
2	Soundwall	215	6
3	Retaining Wall	470	3
4	Retaining Wall	560	6
5	Soundwall	390	10
6	Soundwall	1,090	6
7	Retaining Wall[2]	1,035	17.5
8	Soundwall[2, 4]	175	8.3
9	Combination Wall[3]	675	28.3
10	Retaining Wall[2]	250	14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

not to scale

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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.

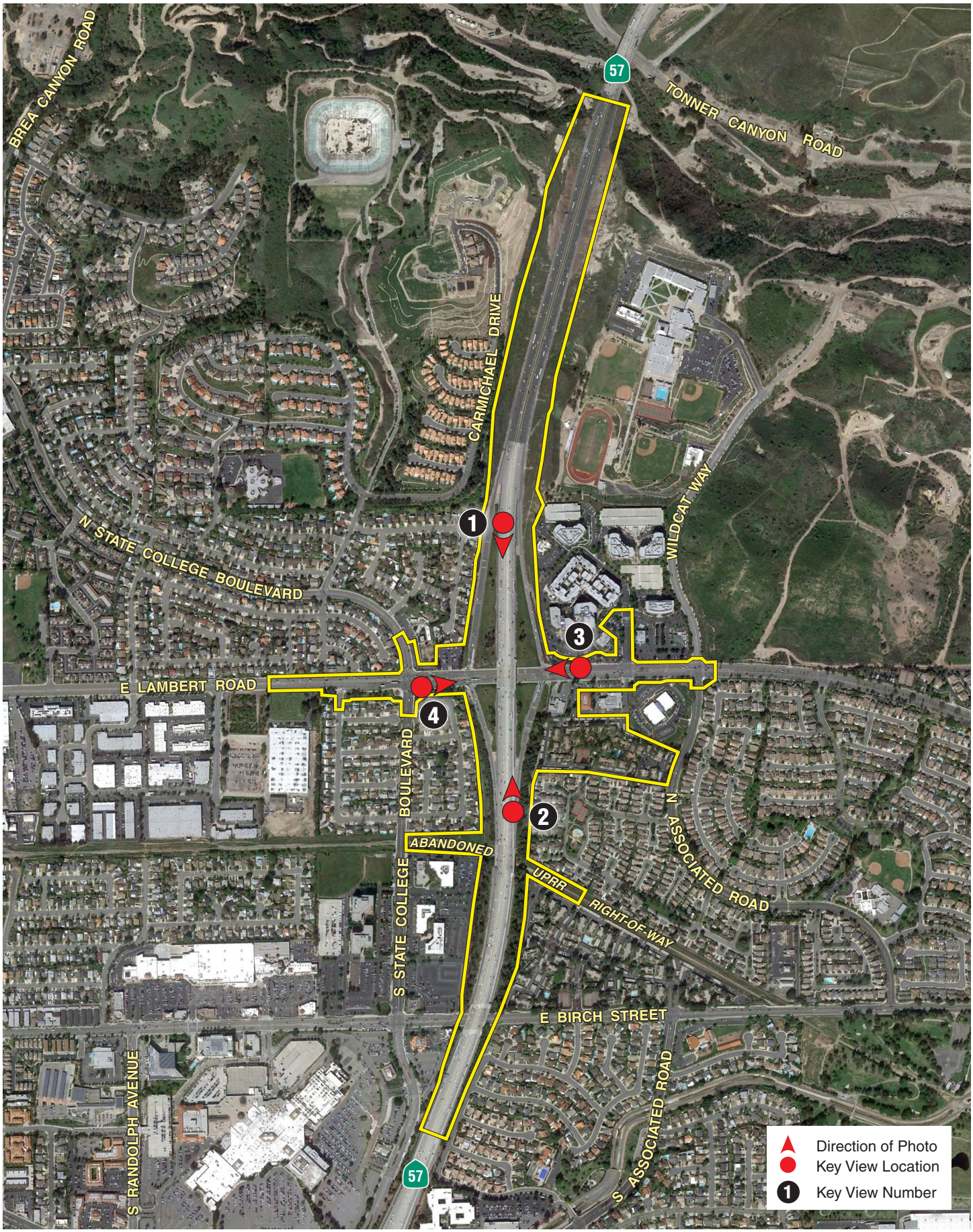
The visual form in Key View 2 appears to be uniform throughout the view. SR-57 appears to be generally linear and continuous, with the exception of the curved Lambert Road off-ramp. The colors throughout Key View 2 consist of shades of grey associated with the freeway, as well as greens associated with 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.



0 1000'
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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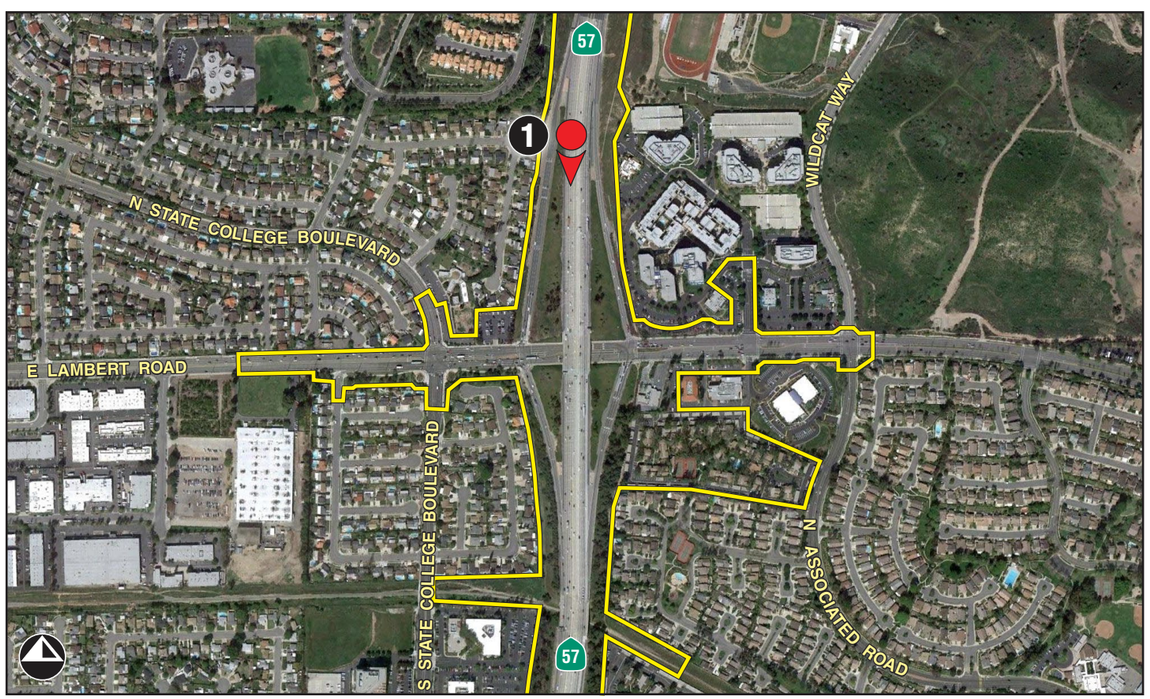

Direction of Photo
Key View Location
1 Key View Number

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

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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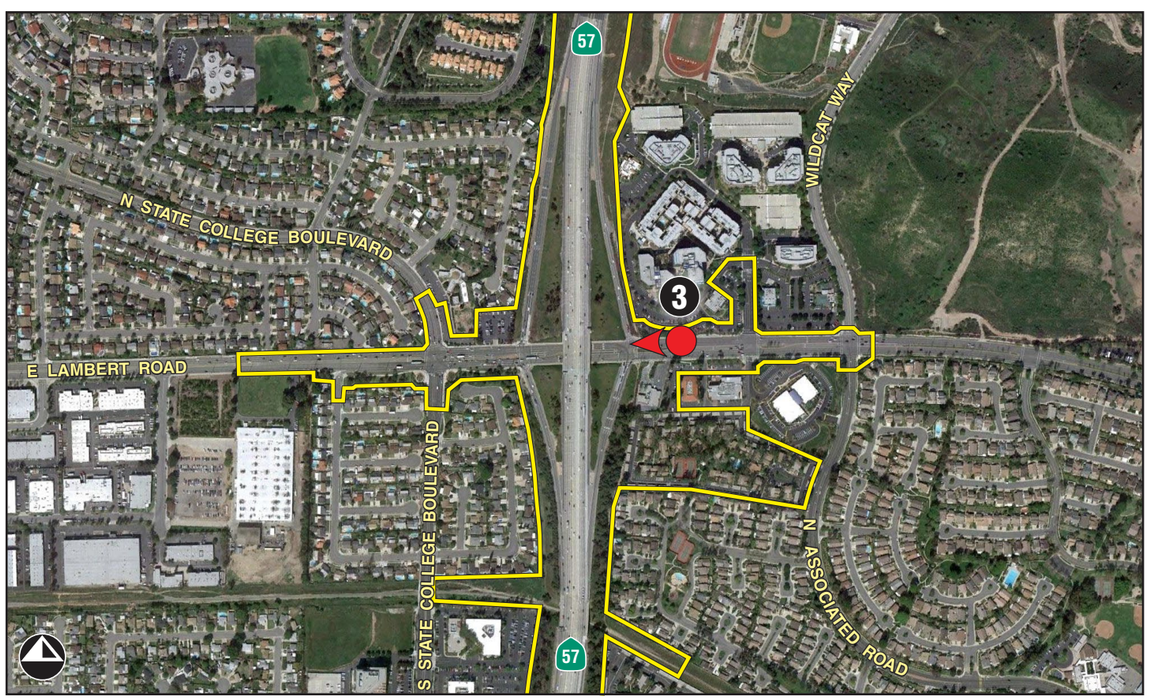

Direction of Photo
Key View Location
3 Key View Number

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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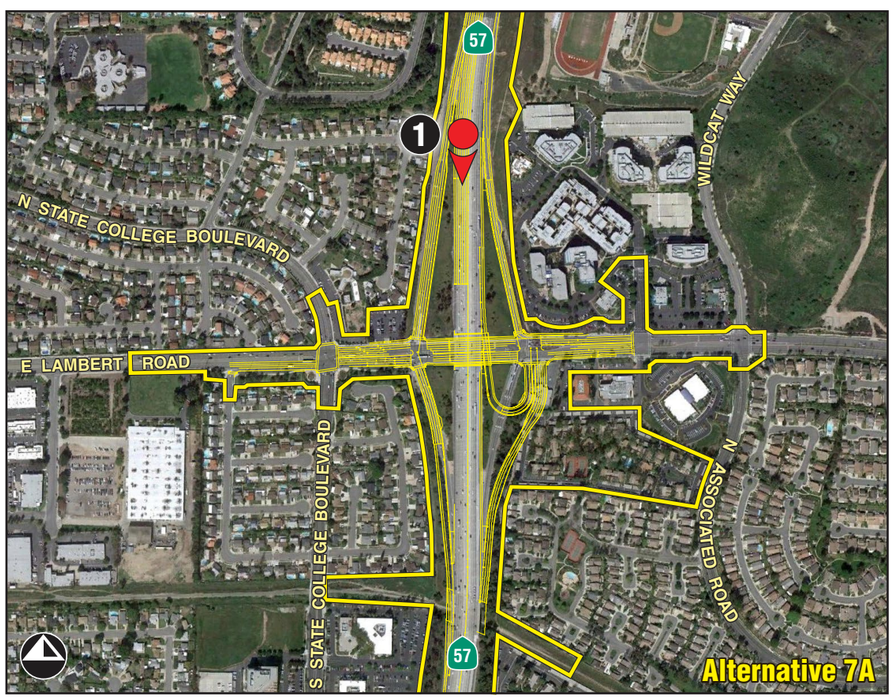

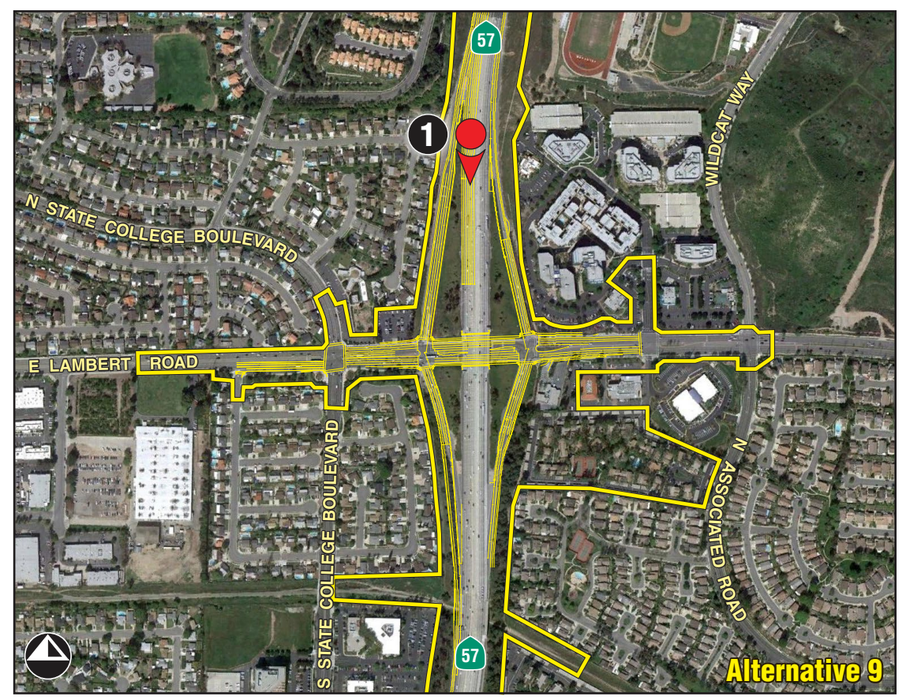

NOTES:

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

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

Figure 2.2.6-10

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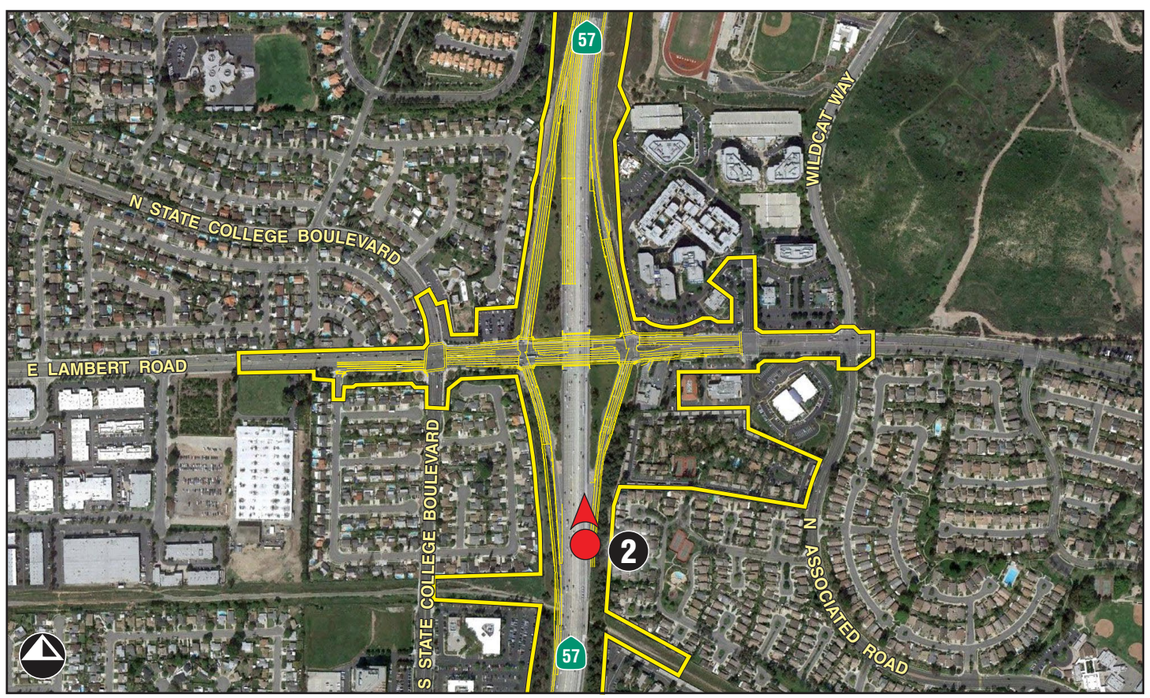

Direction of Photo
Key View Location
Key View Number
Project Limits Boundary
Proposed Improvements

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.

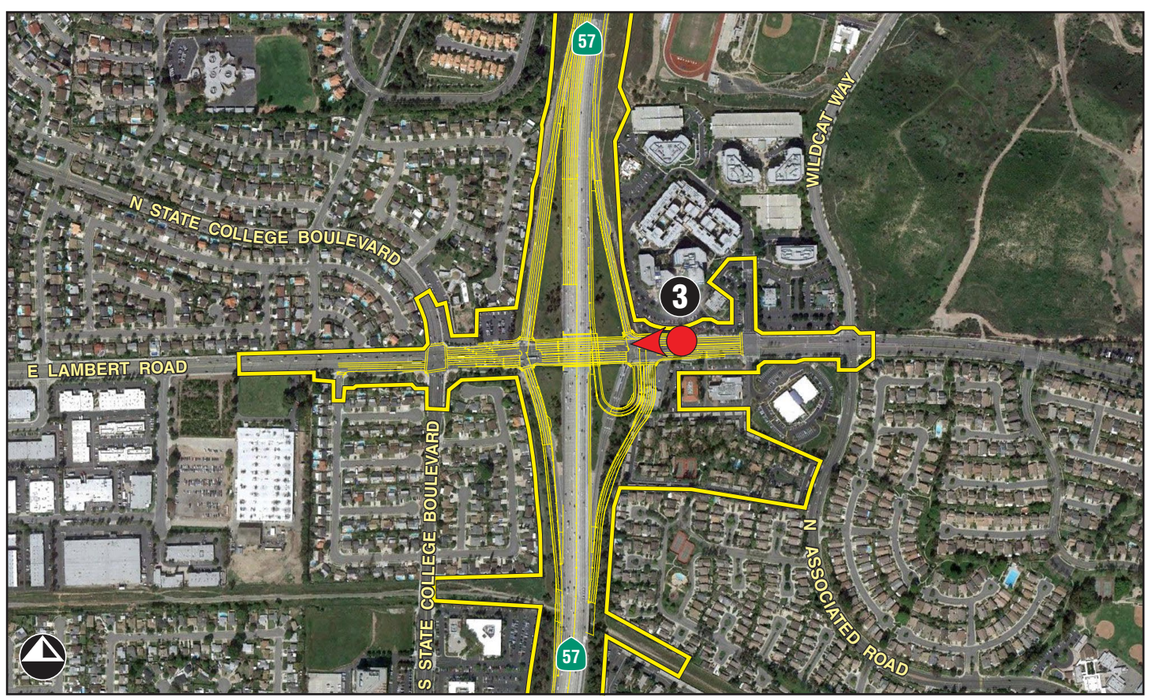
Build Alternative 9

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."

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

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).

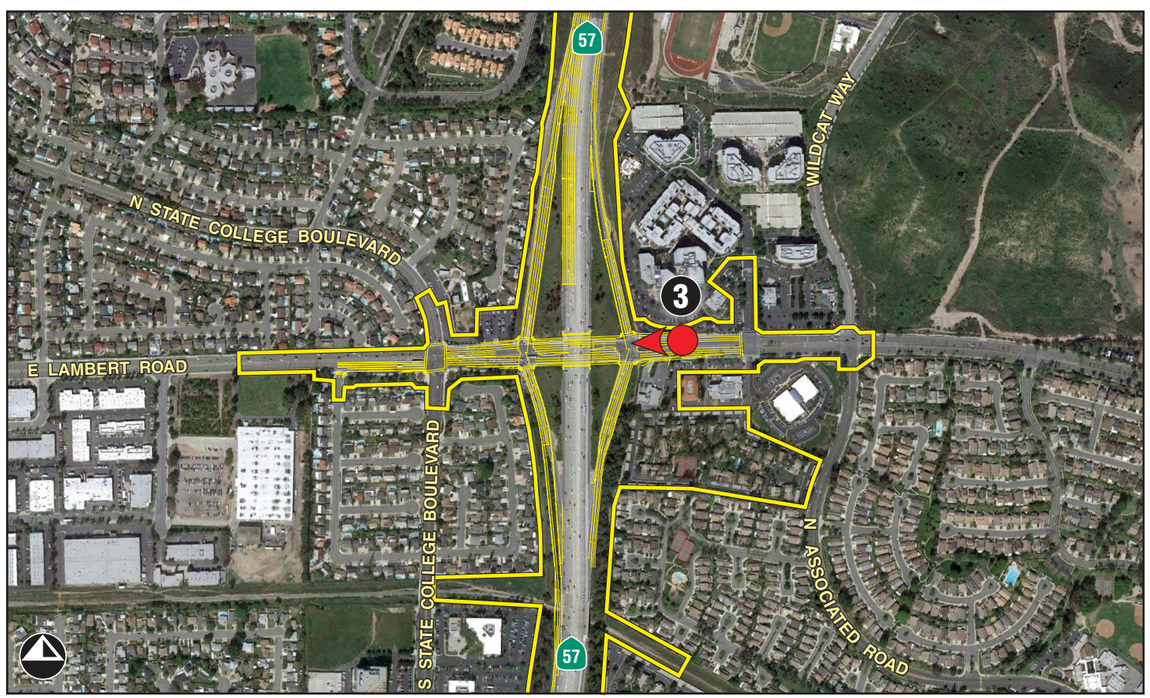
Proposed Project Features – Both Build Alternatives (Alternatives 7A and 9)

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."

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

Key View 3 Proposed Condition - Alternative 9

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Figure 2.2.6-13

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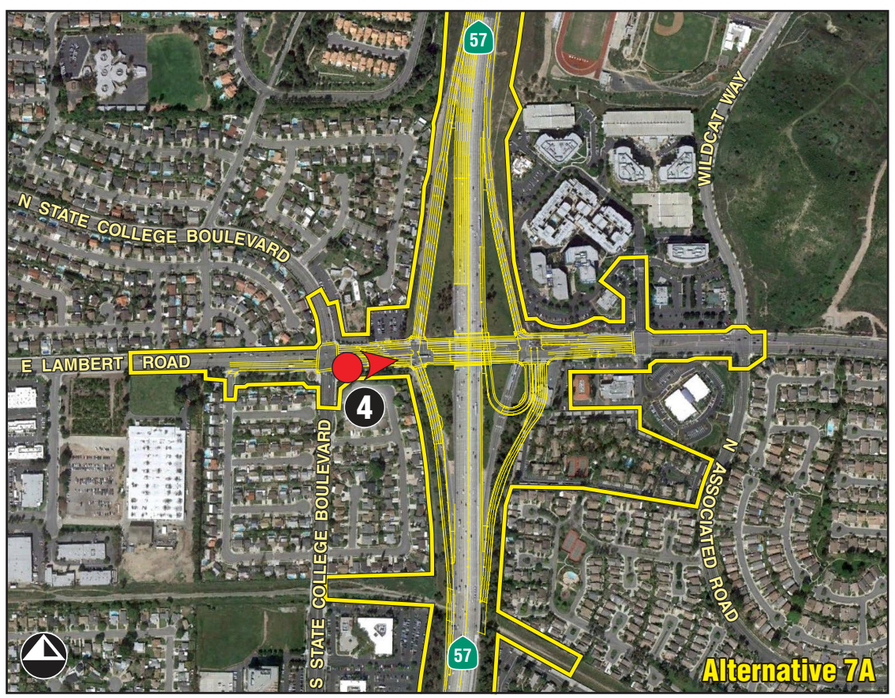

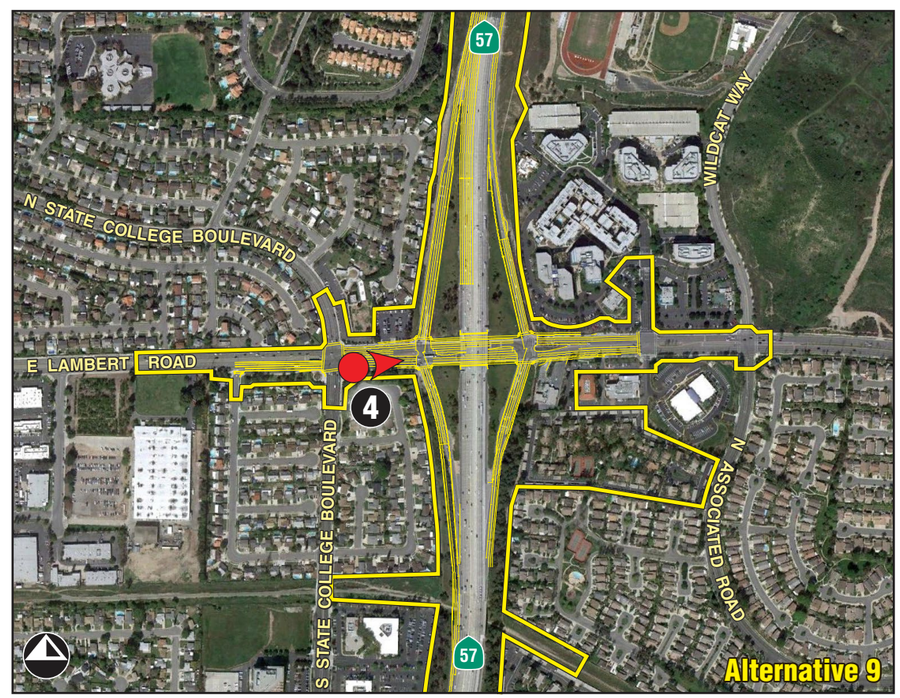

"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project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

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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.