4.16 Transportation and Traffic

This section describes transportation facilities and traffic in the area of the Proposed Project. The potential impacts of the Proposed Project and the Alternative Project are also discussed. This section contains a description of the existing circulation setting within the Project Study Area, as well as potential impacts on transportation and traffic from construction and operation of the Proposed Project. For purposes of this section, the Project Study Area is defined as locations where work described in Chapter 3.0, Project Description, would be performed, plus a buffer of approximately 1.5 miles from the centerline of the existing WOD corridor (Figure 4.16-1, Transportation Study Area). The buffer was selected for the purpose of identifying roadways potentially affected by construction traffic for those Proposed Project components.

4.16.1.1 Environmental Setting

The Project Study Area includes the cities of Banning, Beaumont, Calimesa, Colton, Desert Hot Springs, Grand Terrace, Loma Linda, Palm Springs, Rancho Cucamonga, Redlands, San Bernardino, and Yucaipa, and unincorporated areas of Riverside and San Bernardino counties. The Proposed Project component in the City of Rancho Cucamonga is limited to improvements within the Mechanical Electrical Equipment Room (MEER) at Etiwanda Substation. The extent of this work within an existing facility would not have the potential to affect traffic in the City of Rancho Cucamonga; therefore, the City of Rancho Cucamonga is not included for further discussion.

For this section, information was obtained directly from maps and the interpretation of aerial photographs and from secondary sources, including agency plans and applicable traffic counts. This section includes both regional and local information.

4.16.1.2 Existing Transportation Setting

Regional vehicular circulation in this area is served by Interstate 10 (I-10) and Interstate 215 (I-215). Other limited access State highways (i.e., freeways) include State Route 111 (SR-111) near Palm Springs, State Route 60 (SR-60) through Beaumont, and a small portion of State Route 62 (SR-62) near its intersection with I-10. The transmission system would run parallel to I-10, crossing it near Beaumont where I-10 traverses in a northwesterly direction. The transmission system would also cross I-10 near the Mountain View Generating Station and San Bernardino Substation and cross the I-215 near Grand Terrace. A telecommunications component of the Proposed Project would also cross State Route 243 (SR-243) near Banning where it is a two-lane road similar to a city street. Estimated average daily traffic volumes for these roadways are presented in Table 4.16-1, Average Daily Traffic on Highways, and illustrated in Figure 4.16-2, Highway Average Daily Traffic Volume.

Table 4.16-1: Average Daily Traffic on Highways

City	Highway	Roadway Section	Average Daily Traffic
Banning	I-10	Between Hargrave Street and SR-243	116,000
Beaumont	I-10	Between Oak Valley Road and Cherry Valley Avenue	91,000
	SR-60	Between I-10 and Jack Rabbit Trail	44,500
	SR-79	Between California Avenue and Gilman Springs Road	28,500
Calimesa	I-10	Between Cherry Valley Boulevard and Singleton Road	99,000
Colton	I-215	South of I-10	170,000
Desert Hot Springs	SR-62	Between Pierson Boulevard and Indian Canyon Drive	22,000
Grand Terrace	I-215	Between Barton Road and La Cadena Drive	153,000
Loma Linda	I-10	Between Mountain View Avenue and Waterman Avenue	194,000
Palm Springs	I-10	Between SR-111 and Indian Avenue	79,000
	SR-111	Between I-10 and Snow Creek Road	13,200
Redlands	I-10	Between Mountain View Avenue and California Avenue	190,000
Yucaipa	I-10	Between Yucaipa Boulevard and Wildwood Canyon Road	105,000
County of Riverside	I-10	Between SR-111 and Hargrave Street	116,000
	SR-79	Between California Avenue and Gilman Springs Road	28,500
	SR-62	Between I-10 and Pierson Boulevard	19,000
San Bernardino	I-10	Between Mountain View Avenue and Tippecanoe Avenue	194,000

Source: California Department of Transportation: http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2010all/index.html

I-10 = Interstate 10 I-215 = Interstate 215 SR-60 = State Route 60
SR-62 = State Route 62 SR-79 = State Route 79 SR-111 = State Route 111

Construction workers commuting to the Proposed Project site(s) would use interstates, State highways, and local roadways. Major and primary arterials have been identified from agency General Plan Circulation Elements. These are the roadways that carry regional traffic and have the potential to carry Proposed Project-related traffic within the Project Study Area. Table 4.16-2, Average Daily Traffic on Major and Primary Arterials, presents the major and primary arterials within the Proposed Project Study Area along County and municipal routes. Traffic volumes are based on these agencies' existing condition traffic flow maps.

Table 4.16-2: Average Daily Traffic on Major and Primary Arterials

City	Arterial	Segment	Average Daily Traffic
Banning	Highland Springs	North of Wilson Street	8,633
	Wilson Street	Between Highland Springs Avenue and Hathaway Street	12,544
	Ramsey Street	Between Hargrave Street and Hathaway Street	9,423
	Sunset Avenue	Between Ramsay Street and Gilman Avenue	14,782
	8th Street	Between Wilson Street and Ramsey Street	10,513
	Hargrave Street	Between Wilson Street and I-10	10,823
Beaumont	Oak Valley Road	Between I-10 and Oak View Drive	5,400
	14th Street	Between Oak View Drive and Highland Springs Road	5,400
	San Timoteo Canyon Road	Between I-10 and Palmer Avenue	5,400
	Highland Springs Road	Between I-10 and Brookside Avenue	11,800
	Beaumont Avenue	Between Oak Valley Parkway and Cougar Way	12,500
	Brookside Avenue	Between Highland Springs Avenue and I-10	1,000
Calimesa	San Timoteo Canyon Road	Between I-10 and Palmer Avenue	4,400
	Calimesa Boulevard	Between Singleton Road and Cherry Valley Avenue	7,300
	Singleton Road	North of Woodhouse Road	1,300
	Desert Lawn Road	Between Champions Road and Palmer Avenue	850
Desert Hot Springs	Pierson Boulevard	Between SR-62 and Indian Avenue	2,100
	Mission Lakes Boulevard	Between SR-62 and Indian Avenue	2,400
Loma Linda	Redlands Boulevard	Between Mountain View Avenue and Waterman Avenue	21,000
	Anderson Street	Between Barton Road and I-10	24,400
	Mountain View Avenue	Between Barton Road and I-10	24,000
	Barton Road	Between Waterman Avenue and Mountain View Avenue	24,500
Redlands	San Timoteo Canyon Road	Between Alessandro Road and Live Oak Canyon Road	20,000
	San Bernardino Avenue	Between Mountain View Avenue and California Street	33,000
	Redlands Boulevard	Between Mountain View Avenue and California Street	39,000
Yucaipa	Yucaipa Boulevard	Between I-10 and Oak Glen Road	47,000
	Oak Glen Road	Between I-10 and Yucaipa Boulevard	24,000

Table 4.16-2: Average Daily Traffic on Major and Primary Arterials

City	Arterial	Segment	Average Daily Traffic
County of Riverside	Cherry Valley Boulevard	Between I-10 and Highland Springs Avenue	5,100

Sources: City of Banning General Plan, 2006; City of Beaumont General Plan, 2007; City of Calimesa General Plan, 1994; City of Desert Hot Springs General Plan, 2000; City of Grand Terrace General Plan, 2010; City of Loma Linda General Plan, 2009; City of Redlands General Plan, 1997; City of Yucaipa General Plan, 2004; County of Riverside General Plan, 2003
I-10 = Interstate 10
SR-62 = State Route 62

Truck Routes

Heavy vehicle traffic is conveyed along the interstate highways as well as a network of regional and local truck routes. Table 4.16-3, Regional and Local Truck Routes, presents the truck routes in the Project Study Area. It appears that all reaches of the Proposed Project are accessible from the interstate highway system and regional/local truck routes.

Table 4.16-3: Regional and Local Truck Routes

City	Route	Roadway Section
Banning	I-10	Entire
	Highland Springs Avenue	North of Wilson Street
	Wilson Street	Between Highland Springs Avenue and Hathaway Street
	Ramsey Street	Between Hargrave Street and Hathaway Street
	Hathaway Street	Between Ramsay Street and Morongo Road
	Sunset Avenue	Between Ramsay Street and Gilman Avenue
	8th Street	Between Wilson Street and Ramsay Street
	Hargrave Street	Between Wilson Street and I-10
Beaumont	I-10	Entire
	SR-60	Entire
	SR-79	Entire
	Oak Valley Road	Between I-10 and Oak View Drive
	14th Street	Between Oak View Drive and Highland Springs Avenue
	Highland Springs Road	Between I-10 and Brookside Avenue
	San Timoteo Canyon Road	Between I-10 and Palmer Avenue
	Oak Valley Parkway	Between Beaumont Avenue and Highland Springs Avenue
	Beaumont Avenue	Between Oak Valley Parkway and Cougar Way
	Brookside Avenue	Between Highland Springs Avenue and I-10
Calimesa	I-10	Entire
	San Timoteo Canyon Road	Between I-10 and Palmer Avenue
	Calimesa Boulevard	Between Singleton Road and Cherry Valley
	Singleton Road	North of Woodhouse Road
	Desert Lawn Road	Between Champions Road and Palmer Avenue
Colton	I-215	Entire

Table 4.16-3: Regional and Local Truck Routes

City	Route	Roadway Section
Desert Hot Springs	SR-62	Between Pierson Boulevard and Indian Canyon Drive
	Pierson Boulevard	Between SR-62 and Indian Avenue
	Mission Lakes Boulevard	Between SR-62 and Indian Avenue
Grand Terrace	I-215	Entire
	Barton Road	Between Reche Canyon Road and I-215
	Mt. Vernon Avenue	Between I-215 and Van Buren Street
	Michigan Avenue	Between Barton Road and Van Buren Street
	La Cadena Drive	Between I-215 and Agua Mansa Road
Loma Linda	I-10	Entire
	Redlands Boulevard	Between Mountain View Avenue and Waterman Avenue
	Anderson Street	Between Barton Road and I-10
	Mountain View Avenue	Between Barton Road and I-10
	Barton Road	Between Mountain View Avenue and Waterman Avenue
Palm Springs	I-10	Entire
	SR-111	Entire
Redlands	I-10	Entire
	San Timoteo Canyon Road	Between Alessandro Road and Live Oak Canyon Road
	San Bernardino Avenue	Between Mountain View Avenue and California Street
	Redlands Boulevard	Between Mountain View Avenue and California Street
County of Riverside	I-10	Entire
	SR-60	Entire
	SR-79	Entire
	SR-243	Entire
	Cherry Valley Boulevard	Between I-10 and Highland Springs Avenue
San Bernardino	I-10	Entire
	I-215	Entire
Yucaipa	I-10	Entire

Sources: City of Banning General Plan, 2006; City of Loma Linda General Plan, 2009; City of Beaumont General Plan, 2007; City of Redlands General Plan, 1997; City of Calimesa General Plan, 1994; City of Palm Springs General Plan, 2007;County of Riverside General Plan, 2003; City of Grand Terrace General Plan, 2010; City of Desert Hot Springs General Plan, 2000.

I-10 = Interstate 10 I-215 = Interstate 215 SR-60 = State Route 60
SR-62 = State Route 62 SR-79 = State Route 79 SR-111 = State Route 111
SR-243 = State Route 243

Bus Routes and Transit

Transit and active transportation is also present in the more suburban areas of the Project Study Area. Metrolink commuter rail service is adjacent to the western edge of the Project Study Area, with stations in San Bernardino and Riverside. Primary transit providers include Omnitrans, Riverside Transit Agency, and SunLine Transit Agency. Omnitrans operates in the San Bernardino Valley.

Riverside Transit Agency operates two lines connecting Beaumont and Banning to the remainder of its system. SunLine Transit Agency operates in Desert Hot Springs, Palm Springs, and communities southeast of the Project Study Area. Beaumont Municipal

Transit operates nine lines within the City of Beaumont. The City of Banning also operates three bus lines within the City. Figure 4.16-3, Transit Provider Service Areas, illustrates the service areas of these transit providers.

Active Transportation

The Santa Ana River Trail is a Class I bike path, which currently begins in the Project Study Area in the City of Colton and provides a grade-separated bike path all the way to the Pacific Ocean. Construction is currently underway to extend the trail along the Santa Ana River, through the western portion of the Project Study Area, and into the City of Highland. Municipalities within the Project Study Area also provide Class II on-street bike lanes. Table 4.16-4, County and Municipal General Plan Bike Routes, identifies these County and municipal General Plan-level bikeways.

Table 4.16-4: County and Municipal General Plan Bike Routes

City	Route	Roadway Section
Grand Terrace	Barton Road	Between Reche Canyon Road and I-215
	La Cadena Drive	Between I-215 and Agua Mansa Road
	Mt. Vernon Avenue	Between I-215 and Van Buren Street
	Michigan Avenue	Between Barton Road and Van Buren Street
Loma Linda	Waterman Avenue	Within City Limits
	Mountain View Avenue	Within City Limits
	Anderson Street	Between Barton Road and I-10
Redlands	San Timoteo Canyon Road	Between Alessandro Road and Live Oak Canyon Road
	San Bernardino Avenue	Between Mountain View Avenue and California Street
Yucaipa	Oak Glen Road	Between 14th Street and Yucaipa Boulevard
	Yucaipa Boulevard	Between 14th Street and 5th Street

Sources: City of Banning General Plan, 2006; City of Beaumont General Plan, 2007; City of Calimesa General Plan, 1994; City of Grand Terrace General Plan, 2010; City of Loma Linda General Plan, 2009; City of Redlands General Plan, City of Palm Springs General Plan, 2007;1997; City of Yucaipa General Plan, 2004; County of Riverside General Plan, 2003
I-10 = Interstate 10 I-215 = Interstate 215

Railroads

Two Class I freight railroads operate in the Project Study Area. Union Pacific Railroad (UPRR) operates a rail line roughly paralleling I-10 through the Project Study Area and past Palm Springs. Passenger service is also provided along this line via Amtrak. Burlington Northern-Santa Fe (BNSF) freight rail service also operates a rail line in the western portion of the Project Study Area.

Airports

Four airports are present in the general Project Study Area. Banning Municipal Airport is a general aviation, fixed-wing, and helicopter airfield in the City of Banning and is located approximately 4,000 feet from the proposed 220 kV transmission line corridor

and approximately 6,000 feet from the existing WOD corridor. In 2010, the airport had 9,450 general aviation aircraft operations, an average of 25 per day. San Bernardino International Airport (SBIA) has over 60,000 annual flight operations, consisting mainly of charter, corporate, and general aviation users. SBIA recently completed a redesigned Passenger Terminal Facility in anticipation of future passenger airlines services. The nearest runway at SBIA is approximately 5,000 feet from the nearest point of the Proposed Project. Redlands Municipal Airport is a general aviation, fixed-wing, and helicopter airfield in the City of Redlands and is located approximately 5 miles north of the Proposed Project corridor.

In addition, Palm Springs International Airport (PSP) is located approximately 8 miles south of the Proposed Project corridor. In 2009, PSP served approximately 1.5 million air passengers, with its busiest season in the winter months. PSP is currently preparing a Master Plan Update. Environmental review for the Master Plan Update is expected to be complete by the end of 2013.

4.16.2 Regulatory Setting

4.16.2.1 Federal Regulatory Setting

Code of Federal Regulations, Title 14

C.F.R., Title 14, Part 77 establishes standards for determining physical obstructions to navigable airspace (C.F.R. 2008). Refer to Section 4.10, Land Use and Planning (4.10.2.1 Federal Regulatory Setting), for a further description of Federal Regulation Title 14, Part 77.

4.16.2.2 State Regulatory Setting

California Vehicle Code

The California Vehicle Code (CVC) includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials (CVC 2008).

The California Streets and Highway Code includes regulations for the care and protection of State and County highways, as well as provisions for the issuance of written permits (California Law 2008).

The California Department of Transportation (Caltrans) manages more than 45,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans carries out its mission of improving mobility across California with six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration, and the Equipment Service Center (Caltrans 2008).

If the Proposed Project would include activities related to the placement of towers, poles, or pole lines with, under, or over a Caltrans right-of-way (ROW), an encroachment permit must be obtained. To obtain an encroachment permit, all other statutory requirements, including environmental documentation, must be complied with and applicants must complete a Standard Encroachment Permit Application (TR-0100) with supporting documentation to the appropriate District Encroachment Permits Office having jurisdictional authority over the proposed encroachment site.

4.16.2.3 Local Regulatory Setting

The California Public Utilities Commission (CPUC) has jurisdiction over the siting and design of the Proposed Project because the CPUC regulates and authorizes the construction of investor-owned public utility (IOU) facilities. Although such projects are exempt from local land use and zoning regulations and permitting, General Order (GO) No. 131-D, Section III.C requires "the utility to communicate with, and obtain the input of, local authorities regarding land-use matters and obtain any nondiscretionary local permits."

As part of its environmental review process, SCE considered transportation and traffic policies from the County of Riverside General Plan, the County of San Bernardino General Plan, and the General Plans from the municipalities applicable to the Proposed Project (Banning, Beaumont, Calimesa, Colton, Desert Hot Springs, Grand Terrace, Loma Linda, Palm Springs, Redlands, San Bernardino, and Yucaipa).

Table 4.16-5, Local Land Use Documents Applicable to Transportation and Traffic for the Proposed Project, summarizes key policies in local land use plans applicable to traffic.

Table 4.16-5: Local Land Use Documents Applicable to Transportation and Traffic for the Proposed Project

Jurisdiction	Policy
City of Banning General Plan, Circulation Element	**Goal:** A safe and efficient transportation system. **Policy 6:** The City shall maintain peak hour Level of Service C or better on all local intersections, except those on Ramsey Street and at I-10 interchanges, where Level of Service D or better shall be maintained. **Program 21.A:** A land use designation decisions within the area of influence of the airport shall be specifically reviewed to assure compatibility. **Policy 22:** Maintain an accurate mapping of all utility corridors.
City of Beaumont General Plan, Circulation Element	**Goal 2:** The City of Beaumont will ensure the development and maintenance of a local roadway system that will meet both current and future transportation needs. **Policy 10:** The City of Beaumont will strive to maintain a minimum LOS "D" as a target LOS standard and LOS "E" as a threshold standard. **Policy 14:** The City of Beaumont will limit the environmental impacts associated with the construction of roadways and the installation of infrastructure improvements.

Table 4.16-5: Local Land Use Documents Applicable to Transportation and Traffic for the Proposed Project

Jurisdiction	Policy
City of Calimesa General Plan, Circulation Element	**Goal 1:** Provide a balanced transportation system that ensures the safe and efficient movement of people and goods throughout the City, while minimizing the use of land for transportation facilities. **Policy 1.4:** Arterial roads should carry both local and through traffic and be improved to maintain a Level of Service "C" or better.
City of Colton General Plan, Circulation Element	The City of Colton General Plan defines acceptable Level of Service as Level of Service E or better as defined in the 1985 Highway Capacity Manual **Goal 1:** Develop a transportation system that is safe, convenient efficient and provides adequate capacity to meet local and regional demands. **Policy 1.6:** Establish a signalized arterial street system that will provide an acceptable Level of Service during peak hours under build-out conditions.
City of Desert Hot Springs General Plan, Circulation Element	**Goal.** A circulation network that efficiently, safely and economically moves people, vehicles, and goods using transportation facilities that meet the current demands and projected needs of the City, while maintaining and protecting its residential and spa resort character. **Policy 1:** Establish and maintain a master plan of roads, which sets forth detailed improvement plans and priority schedules for implementation, to assure minimal levels of mid-block roadway and intersection operations at LOS C and LOS D, respectively.
City of Grand Terrace General Plan, Circulation Element	**Goal 3.1:** Provide a comprehensive transportation system that provides for the current and long-term efficient movement of people and goods within and through the City. **Policy 3.1.7:** The maximum acceptable Level of Service for streets identified in the City Master Plan of Streets and Highways during peak hours shall be LOS "D."
City of Loma Linda General Plan, Transportation and Circulation Element	**Principle 6:** Traffic levels of service throughout the City of Loma Linda shall be maintained at current levels and new development shall be required to fully mitigate any impact on traffic resulting from that development. **Policy 2:** Levels of Traffic Service Throughout the City Shall Be Maintained: To assure the adequacy of various public services and to prevent degradation of the quality of life experienced by the residents of Loma Linda, all new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, traffic levels of service (LOS) are maintained at a minimum of LOS C throughout the City, except where the current level of service is lower than LOS C. In any location where the level of service is below LOS C at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the level of traffic service is maintained at levels of service that are no worse than those existing at the time an application for development is filed. In any location where the Level of Service is LOS F at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the volume to capacity ratio is maintained at a volume to capacity ratio that is no worse than that existing at the time an application for development is filed. Projects where sufficient mitigation to achieve the above stated objectives is

Table 4.16-5: Local Land Use Documents Applicable to Transportation and Traffic for the Proposed Project

Jurisdiction	Policy
	infeasible shall not be approved unless and until the necessary mitigation measures are identified and implemented.
City of Palm Springs General Plan, Circulation Element	**Goal CR2:** Establish improved levels of service for efficient traffic flow and provide a safe circulation system. **Policy CR2.1:** Maintain Level of Service D or better for the City's circulation network, as measured using "in season" peak hour conditions.
City of Redlands General Plan, Circulation Element	**Guiding Policy 5.20a:** Maintain LOS C or better as the standard at all intersections presently at LOS C or better. **7.42b:** Manage aggregate resources to ensure that extraction results in the fewest environmental impacts. Require preparation and assured implementation of a reclamation plan for aggregate extraction sites as a condition of approval of mining. **7.42c:** Reserve designated MRZ areas outside the Santa Ana Wash for agricultural or urban use.
City of San Bernardino General Plan, Chapter 6: Circulation	**Policy 6.2.1:** Maintain a peak hour level of service D or better at street intersections. **Policy 6.2.5:** Design roadways, monitor traffic flow, and employ traffic control measures (e.g., signalization, access control, exclusive right and left turn lanes, lane striping, and signage) to ensure City streets and roads continue to function safely within our Level of Service standards. **Policy 6.3.1:** Promote the principle that streets have multiple uses and users, and protect the safety of all users. **Policy 6.5.1:** Provide designated truck routes for use by commercial/industrial trucking that minimize impacts on local traffic and neighborhoods. **Policy 6.5.2:** Continue to regulate on-street parking of trucks to prevent truck parking on residential streets or in other locations where they are incompatible with adjacent land uses. The use of signs, restricted parking, limited parking times, and the posting of "no overnight" parking signs are mechanisms that can be employed depending upon the specific needs of the affected area.
City of Yucaipa General Plan, Transportation Element	**Goal T-5:** Strive to achieve minimum level of service "C" on all highways and intersections.
County of Riverside General Plan, Circulation Element	**Policy C 2.1:** Maintain the following countywide target Levels of Service: LOS "C" along all County maintained roads and conventional State highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Urban, Expressways, conventional State highways or freeway ramp intersections. LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities. (AI 3)
County of Riverside Pass Area Plan, Local Circulation Policies	**Policy PAP 10.2:** Maintain the County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.

Table 4.16-5: Local Land Use Documents Applicable to Transportation and Traffic for the Proposed Project

Jurisdiction	Policy
County of Riverside, Reche Canyon/Badlands Area Plan Local Circulation Policies	**RCBAP 9.2:** Maintain the County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.
County of San Bernardino, General Plan	The County's Congestion Management Program's (CMP) level of service (LOS) standard requires all CMP segments to operate at LOS E or better, with the exception of those facilities identified in the General Plan **Goal CI 4:** The County will coordinate land use and transportation planning to ensure adequate transportation facilities to support planned land uses and ease congestion.

EB = eastbound
I-10 = Interstate 10
I-15 = Interstate 15
I-215 = Interstate 215
LOS = level of service
MRZ = mineral resource zone
NB = northbound
SB = southbound
SR-15 = State Route 15
SR-18 = State Route 18
SR-30 = State Route 30
SR-60 = State Route 60

Both the County of Riverside and the County of San Bernardino utilize level of service (LOS) D as the lowest acceptable standard for operation of roadways and intersections within their jurisdictions.

Each city has control over transportation infrastructure and the capital improvement programs within its jurisdiction. In the absence of another local agency, the County government has authority over transportation infrastructure. The majority of these jurisdictions utilize LOS D as the lowest acceptable standard for operation of roadways and intersections within their jurisdictions. The exceptions are the cities of Loma Linda, Redlands, and Yucaipa, which utilize LOS C as the lowest acceptable standard for operation of roadways and intersections. The City of Calimesa utilizes LOS C as the lowest acceptable standard for operation of roadways and LOS D as the lowest acceptable standard for operation of intersections.

Morongo Reservation

The Proposed Project will traverse approximately 8 miles of the tribal trust lands of the Morongo Indian Reservation east of Banning, California. Except for approximately two miles of new corridor between Malki Road and the western boundary of the Reservation, the Proposed Project will utilize the transmission corridor that has been used by existing SCE 220 kV transmission lines starting in 1945, and as subsequently expanded. Matters concerning the use of the Reservation's trust lands are subject to approval by the Morongo Band's General Membership, which consists of all enrolled adult voting members. With limited exceptions, the Morongo Band does not release its internal ordinances and other laws to the public.

The Morongo Band's General Membership has voted to approve the Bureau of Indian Affairs' grants to SCE of the rights of way and easements necessary for SCE to continue operating its existing 220 kV facilities on the Morongo Reservation and to replace and upgrade those facilities with the WOD Project. The Morongo Band's approval of these

grants of rights of way and easements includes relocating approximately two miles of the corridor west of Malki Road into a new corridor depicted on Figure 2-1, Proposed and Alternative Transmission Line Routes, as either the Proposed Project (Alternative 1) or the Alternative Project (1X). The existing corridor, plus either Alternative 1 or 1X, thus would be consistent with all applicable tribal laws, and are the only corridors approved by the Morongo Band for the continued operation and eventual replacement of SCE's 220 kV facilities on and across the trust lands of the Morongo Indian Reservation.

4.16.3 Significance Criteria

4.16.3.1 CEQA Significance Criteria

The significance criteria for assessing the impacts to transportation and traffic come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.16.3.2 NEPA Analysis

Unlike CEQA, NEPA does not have specific significance criteria. However, NEPA regulations contain guidance regarding significance analysis. Specifically, consideration of "significance" involves an analysis of both context and intensity (Title 40 Code of Federal Regulations 1508.27).

4.16.4 Impact Analysis

4.16.4.1 CEQA Impact Assessment

Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Construction Impacts

The Proposed Project consists of upgrades to existing substations, transmission lines, distribution facilities, subtransmission facilities, telecommunication facilities, and preparation of staging yards. SCE would need access roads to all facilities it plans to modify, remove, and/or construct as part of the Proposed Project. The transmission roads are classified into two groups: access roads and spur roads. Access roads are through roads that run between structure sites and serve as the main transportation route along the ROW. Spur roads branch off from access roads and terminate at one or more structure sites.

It is estimated that access to the WOD corridor for construction activities associated with the Proposed Project would be accomplished by utilizing a network of approximately 130 miles of existing access/spur roads and constructing approximately 30 miles of new access/spur roads.[1] SCE's existing access roads are located within SCE ROW/easements. New or expanded property rights may be required for new access/spur roads.

The estimated length of new access/spur roads for each segment is summarized in Table 4.16-6, Approximate Miles of New Access and Spur Roads per Segment.

Table 4.16-6: Approximate Miles of New Access and Spur Roads per Segment (miles)

Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Total
2.3	2.7	10.3	6.3	5.2	3.2	30

The following trip generation summary represents construction trips that would occur temporarily and was determined using the workforce and construction equipment estimates. Average daily trips (ADT) and traffic occurring in the morning and afternoon peak travel hours are provided. A number of conservative assumptions were made to provide a conservatively high estimate of Proposed Project trip generation. It is anticipated that, where possible, Proposed Project components would occur concurrently. Trip generation is also calculated for full deployment of construction equipment, in excess of the estimated maximum daily personnel. All construction workers and vehicles

[1] The proposed access/spur road mileages are approximate and are subject to change following the completion of final engineering.

are analyzed as arriving in the a.m. peak hour and leaving in the p.m. peak hour. While it is possible that the construction work day would permit workers to arrive and depart outside of the a.m. and p.m. peak hours, this methodology reinforces the conservative approach. Also, some construction workers may choose to carpool, but each worker is analyzed as arriving in a single-occupant vehicle.

Construction vehicles are separated into passenger car size or large trucks. Large trucks utilize more roadway capacity than passenger vehicles due to their larger size, slower start-up times, and reduced maneuverability. In order to account for the increase in roadway capacity utilized by construction vehicles, passenger car equivalent (PCE) factors are used. These factors are applied to the vehicle trip generation to account for the difference in operational characteristics of heavy vehicles. The Highway Capacity Manual (HCM) adjustments for heavy vehicles and the San Bernardino/Riverside County Warehouse/Distribution Center Vehicle Trip Generation Study (Crain and Associates 2005) were consulted to determine the PCE for the various types of trucks that could be used during construction of the Proposed Project. Based on this information, the vehicle trip generation has been converted into PCE, and both are reported in Table 4.16-7, Construction Trip Generation for Substation Modifications.

The traffic impacts by Proposed Project component are described below. Impact conclusions are based on the total impacts of the Proposed Project and are summarized for Proposed Project construction and operation scenarios for all Proposed Project components.

Substation Modifications. There are no new substations proposed as part of the Proposed Project. Modifications to existing substation equipment would be performed to accommodate continuous and emergency power on the 220 kV transmission lines between Vista, San Bernardino, El Casco, Etiwanda, and Devers substations. Additionally, modifications to Timoteo and Tennessee substations would also be performed to accommodate the 66 kV subtransmission line relocations. All substation-related work would be conducted within the existing substation walls or fence lines. The Proposed Project would not result in changes to access, parking, drainage patterns, or modifications to perimeter walls or fencing at the existing substations.

Concrete removal and replacement at Tennessee Substation would be limited to one truck trip each, which is considerably less than required at the other substations closer to the transmission corridor.

Access to the substations would be provided by the public roadway network. Wherever possible, work would occur concurrently on multiple substations. However, due to the distances between substations, traffic generated to and from each substation is anticipated to utilize a different set of roadways. It is estimated that work would be limited to approximately 15 personnel at each substation on any given day. The workforce estimates analyzed in Table 4.16-7, Construction Trip Generation for Substation Modifications, are the maximum estimated for each substation, again providing a conservative estimate of trip generation.

220 kV Transmission Lines. The Proposed Project would include the removal and upgrade of approximately 181 circuit miles of existing 220 kV transmission line facilities (approximately 48 corridor miles), primarily within the existing WOD corridor. The Proposed Project would primarily be constructed on a combination of new 220 kV double-circuit lattice steel towers (LSTs), double-circuit tubular steel poles (TSPs), and single-phase TSPs. Each of the proposed 220 kV transmission lines would consist of overhead wires (conductors).

4.16-7: Construction Trip Generation for Substation Modifications

Construction Equipment/Vehicles						Vehicle Trip Generation							PCE Trip Generation						
							A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour		
	Description	Workforce	Qty	Type	PCE	ADT	In	Out	Total	In	Out	Total	ADT	In	Out	Total	In	Out	Total
Vista Substation	Auger Truck/Crew Cab 4×4	19	7	Passenger Car	1.0	52	26	0	26	0	26	26	52	26	0	26	0	26	26
	Boom Crane Truck/Back Hoe/ Dump Truck/Low Boy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/ 150-Ton Crane/Man Lift		16	Large Truck	2.0	32	16	0	16	0	16	16	64	32	0	32	0	32	32
	Total					**84**	**42**	**0**	**42**	**0**	**42**	**42**	**116**	**58**	**0**	**58**	**0**	**58**	**58**
San Bernardino Substation	Auger Truck/Crew Cab 4×4	24	7	Passenger Car	1.0	62	31	0	31	0	31	31	62	31	0	31	0	31	31
	Boom Crane Truck/Back Hoe/ Dump Truck/LowBoy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/ 150-Ton Crane/Man Lift		17	Large Truck	2.0	34	17	0	17	0	17	17	68	34	0	34	0	34	34
	Total					**96**	**48**	**0**	**48**	**0**	**48**	**48**	**130**	**65**	**0**	**65**	**0**	**65**	**65**
El Casco Substation	Auger Truck/Crew Cab 4×4	19	5	Passenger Car	1.0	48	24	0	24	0	24	24	48	24	0	24	0	24	24
	Boom Crane Truck/Back Hoe/ Dump Truck/LowBoy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/ 150-Ton Crane/Man Lift		16	Large Truck	2.0	32	16	0	16	0	16	16	64	32	0	32	0	32	32
	Total					**80**	**40**	**0**	**40**	**0**	**40**	**40**	**112**	**56**	**0**	**56**	**0**	**56**	**56**
Devers Substation	Auger Truck/Crew Cab 4×4	24	8	Passenger Car	1.0	64	32	0	32	0	32	32	64	32	0	32	0	32	32
	Boom Crane Truck/Back Hoe/Dump Truck/Low Boy Truck/ Fork Lift/Ditch Dragger/Bucket Trucks/150-Ton Crane/Man Lift		14	Large Truck	2.0	32	16	0	16	0	16	16	64	32	0	32	0	32	32
	Total					**92**	**46**	**0**	**46**	**0**	**46**	**46**	**120**	**60**	**0**	**60**	**0**	**60**	**60**
Tennessee Substation	Auger Truck/Crew Cab 4×4	14	4	Passenger Car	1.0	36	18	0	18	0	18	18	36	18	0	18	0	18	18
	Boom Crane Truck/Back Hoe/ Dump Truck/Low Boy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/ 150-Ton Crane/Man Lift		6	Large Truck	2.0	12	6	0	6	0	6	6	24	12	0	12	0	12	12
	Total					**48**	**24**	**0**	**24**	**0**	**24**	**24**	**60**	**30**	**0**	**30**	**0**	**30**	**30**

4.16-7: Construction Trip Generation for Substation Modifications

Construction Equipment/Vehicles						Vehicle Trip Generation							PCE Trip Generation						
							A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour		
	Description	Workforce	Qty	Type	PCE	ADT	In	Out	Total	In	Out	Total	ADT	In	Out	Total	In	Out	Total
Timoteo Substation	Auger Truck/Crew Cab 4×4	13	4	Passenger Car	1.0	34	17	0	17	0	17	17	34	17	0	17	0	17	17
	Boom Crane Truck/Back Hoe/ Dump Truck/Low Boy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/150-Ton Crane/Man Lift		6	Large Truck	2.0	12	6	0	6	0	6	6	24	12	0	12	0	12	12
	Total					**46**	**23**	**0**	**23**	**0**	**23**	**23**	**58**	**29**	**0**	**29**	**0**	**29**	**29**
Etiwanda Substation	Auger Truck/Crew Cab 4×4	2	1	Passenger Car	1.0	6	3	0	3	0	3	3	6	3	0	3	0	3	3
	Utility Truck		1	Large Truck	2.0	2	1	0	1	0	1	1	4	2	0	2	0	2	2
	Total					**8**	**4**	**0**	**4**	**0**	**4**	**4**	**10**	**5**	**0**	**5**	**0**	**5**	**5**

ADT = Average Daily Traffic
PCE = Passenger Car Equivalent

Access and spur roads would be used to access the planned removal and construction areas. New and/or expanded property rights may be required to construct new access/spur roads.

Temporary wood and/or steel structures would be used to facilitate construction of the new 220 kV transmission lines and would function as guard structures and/or shoo-fly structures. These temporary structures would be direct-buried and/or guyed and removed following completion of construction for the particular location.

Some of the construction equipment and vehicles may remain on the transmission corridor at the end of the work day rather than being transported between staging areas and the transmission corridor each day. Some equipment and materials would be stored overnight in staging areas located near the corridor. At the beginning of each day of construction, workers would arrive at the staging areas in personal vehicles and depart the staging area in work vehicles destined for the transmission corridor. The entire corridor is not accessible from a single access road, as topographic features and intervening public roadways break up the corridor. This equipment would occasionally have to be transported to another portion of the transmission corridor via public roads. To present a conservative estimate, the trip generation estimate depicts the movement of all equipment except for equipment specifically utilized in staging areas.

Access to the corridor is provided by the paved public roadway system and unpaved roads, including transmission access roads. The typical transmission access road consists of a network of (dirt or paved, or both) roads accessed from paved public and/or private roads. Temporary access roads would be required for the duration of construction activities. The Proposed Project's permanent access roads would be used for both construction and operation. Access and spur road construction details are described in Section 3.2.3.1, Access and Spur Roads. The entire corridor is not accessible from a single access road, as topographic features and intervening public roadways break up the corridor. In addition, equipment and personnel limitations would occasionally require vehicles to return to the public ROW, but these trips are not anticipated to occur between each structure.

Wherever possible, work would occur concurrently from multiple staging areas. No more than 300 personnel are anticipated to be working on this component on any given day. However, full deployment of the equipment would require a workforce of 767, which is used in Table 4.16-8, Construction Trip Generation for Transmission, Shoo-Fly, and Distribution Component, to generate a conservative trip generation.

In addition to the peak-hour trip generation described above, the transmission component would include trips during the work day, including movement of cut-and-fill material, watering for dust control, concrete delivery, disposal of old structures, and delivery of new structures.

Table 4.16-8: Construction Trip Generation for Transmission, Shoo-Fly, and Distribution Component

Construction Equipment/Vehicles					Vehicle Trip Generation							PCE Trip Generation						
						A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour		
Description	**Workforce**	**Qty**	**Type**	**PCE**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Transmission																		
Pickup Truck/Auger Truck	767	189	Passenger Car	1.0	1,912	767	189	956	189	767	956	1,912	767	189	956	189	767	956
R/T Crane/R/T Fork Lift/Motor Grader/Front Loader/Track Type Dozer/Drum Type Compactor/ Excavator/Compressor Trailer/Flat Bed Pole Truck/Concrete Mixer Truck/Rough Terrain Fork Lift/22-Ton Manitex/Splicing (Rig, Lab, Cart)/3 Drum Strawline Puller/D8 Cat/ Sag Cat with 2 Winches/Static Truck/ Tensioner/Boom Crane Truck/Back Hoe/Dump Truck/LowBoy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/ Boom/Crane Trucks/150 Ton Crane/Man Lift/Water Truck		358	Large Truck	2.0	2,140	0	358	358	358	0	358	4,280	0	716	716	716	0	716
Shoo-Fly																		
Pickup Truck/Auger Truck	321	54	Passenger Car	1.0	750	321	54	375	54	321	375	750	321	54	375	54	321	375
Backhoe/Front Loader/Bulldozer/Road Grader/Water Truck/Lowboy/Motor Grader/Crane Truck/Flatbed Pole Truck/Bucket Truck/Sock Line Puller/Bull Wheel		153	Large Truck	2.0	306	0	153	153	153	0	153	612	0	306	306	306	0	306

Table 4.16-8: Construction Trip Generation for Transmission, Shoo-Fly, and Distribution Component

Construction Equipment/Vehicles					Vehicle Trip Generation							PCE Trip Generation						
						A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour		
Description	**Workforce**	**Qty**	**Type**	**PCE**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Puller/Splicing Rig/D8 Cat/Hydraulic Rewind Puller																		
Distribution																		
Pickup Truck/Crew Truck	31	6	Passenger Car	1.0	74	31	6	37	6	31	37	74	31	6	37	6	31	37
Line Truck/Rodder Truck/Cable Dolley/Reel Truck/Concrete Truck/Dump truck/Backhoe/Bucket Truck/Material Transport/Fork Lift/Splice Lab		12	Large Truck	2.0	24	0	12	12	12	0	12	48	0	24	24	24	0	24
Total					5,206	1,119	772	1,891	772	1,119	1,891	7,676	1,119	1,295	2,414	1,295	1,119	2,414

ADT = Average Daily Traffic
PCE = Passenger Car Equivalent

Based on preliminary construction estimates for simultaneous work along the entire corridor and a 936-day construction schedule, average daily construction trips are estimated at 712 truck round-trips (1,424 one-way truck trips, which is 2,848 PCE) for cut-and-fill material, watering, concrete delivery, and structure delivery and disposal.

Table 4.16-8, Construction Trip Generation for Transmission, Shoo-Fly, and Distribution Component, also includes construction of shoo-fly facilities parallel to the transmission lines in order to maintain continuous power flow in the existing WOD corridor/ROW during construction. A shoo-fly is a temporary electrical line on temporary poles that is used during construction to maintain electrical service to the area while allowing portions of a permanent line to be taken out of service, ensuring safe working conditions during construction activities. The shoo-fly facilities would be removed after construction is completed. These temporary facilities would need to be installed parallel to the transmission corridor work zone prior to disconnecting and replacing the transmission facilities. However, work upstream or downstream of the current transmission work zone is likely to occur concurrently with work along the transmission corridor. In order to present a conservative estimate, full deployment of this Proposed Project component is depicted in Table 4.16-8, Construction Trip Generation for Transmission, Shoo-Fly, and Distribution Component.

Relocation of existing distribution facilities would be required to accommodate construction of the new 220 kV transmission infrastructure. Distribution work resulting from the 220 kV transmission portion of the Proposed Project would include overhead and underground construction and would be conducted in franchise[2] or newly acquired utility ROW. The Dental 12 kV circuit would be relocated to a new underground system (approximately 1.5 miles). The Intern 12 kV circuit would be relocated into the same new underground system as the Dental 12 kV circuit, and a portion would be underbuilt on an existing 66 kV subtransmission line. Additionally, the relocations of both the San Bernardino-Redlands-Timoteo 66 kV and the San Bernardino-Redlands-Tennessee 66 kV subtransmission lines would require the additional relocation of existing distribution circuits and associated equipment from existing poles to new subtransmission poles exclusively in Segment 1. It is anticipated that no more than 20 personnel would work on distribution facilities on any given day. However, full deployment of the equipment identified for this component would require a workforce of 31 people, which is used in Table 4.16-8, Construction Trip Generation for Transmission, Shoo-Fly, and Distribution Component, to provide a conservative trip generation.

66 kV Subtransmission Lines. The Proposed Project would require relocation of portions of the existing San Bernardino-Redlands-Timoteo (approximately 2 miles) and the San Bernardino-Redlands-Tennessee 66 kV (approximately 3.5 miles) subtransmission lines located within Segment 1 to new routes within existing ROW or franchise, or newly acquired ROW. The relocated 66 kV subtransmission lines would be constructed within new ROW or existing franchise.

[2] The term “franchise” refers to utility infrastructure ROW agreements that SCE holds with local jurisdictions.

Equipment and materials for this component would also be stored overnight in staging areas located near the corridor. Workers upgrading the subtransmission facilities are included in the 300 total personnel estimated to work on the transmission and subtransmission components on any given day. However, full deployment of the subtransmission equipment would require a workforce of 151, which is used in Table 4.16-9, Construction Trip Generation for Subtransmission Component, to calculate a conservative trip generation.

Telecommunications. The new telecommunications infrastructure would include additions and modifications to the existing telecommunications system in order to maintain telecommunications operations during and after construction of the Proposed Project. The telecommunications infrastructure would be constructed in new and existing underground conduit and cable trench and on existing riser, distribution, and subtransmission poles. Additionally, removal of the fiber optic portions from the 220 kV existing structures to connections in the field and/or at existing substations would be required. Telecommunications equipment and cables would be installed along the same route as the 220 kV transmission lines, as well as other locations outside of the existing WOD corridor as shown in Figure 3.1-7, Telecommunications Route Description. The telecommunication routes outside of the existing WOD corridor are associated with existing substations and would be constructed primarily in existing public streets.

SCE anticipates that no more than 14 personnel would work on telecommunications facilities on any given day. However, full deployment of the equipment identified for this component would require a workforce of 36 people, which is used in Table 4.16-10, Construction Trip Generation for Telecommunications Components, to provide a conservative trip generation.

Staging Yards. SCE anticipates using one or more of the possible temporary staging yards listed in Table 3.2-A, Potential Staging Yard Locations, and seen in Figure 3.2-1, Potential Staging Yard Locations, and used as a reporting location for workers, vehicle and equipment parking, and material storage. Normal maintenance and refueling of construction equipment would also be conducted at these yards. Typically, each yard would be 3 to 20 acres in size, depending on land availability and intended use. Preparation of the staging yard would include the installation of temporary perimeter fencing and, depending on existing ground conditions at the site, may include the application of gravel or crushed rock. As the trip generation estimates for Proposed Project components discussed above include worker arrival at the staging areas and equipment movement from the staging areas, no additional trips are allocated to the staging areas.

Tables 4.16-7, Construction Trip Generation for Substation Modifications through 4.16-10, Construction Trip Generation for Telecommunications Components, depict concurrent effort along the entire corridor. This results in a conservative trip generation of approximately 2,475 peak-hour trips or 3,200 PCE. These trips would not all utilize the same route or impact the same roadways. Instead they would be spread over the 7 substations, 10 staging areas, and 48-mile transmission corridor.

Table 4.16-9: Construction Trip Generation for Subtransmission Component

Construction Equipment/Vehicles					Vehicle Trip Generation							PCE Trip Generation						
						A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour		
Description	**Workforce**	**Qty**	**Type**	**PCE**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Pickup Truck/Auger Truck	151	40	Passenger Car	1.0	382	151	40	191	40	151	191	382	151	40	191	40	151	191
R/T Crane/R/T Fork Lift/Motor Grader/ Front Loader/Track Type Dozer/Drum Type Compactor/Excavator/Compressor Trailer/Flat Bed Pole Truck/Concrete Mixer Truck/Rough Terrain Fork Lift/22-Ton Manitex/Splicing (Rig, Lab, Cart)/3 Drum Strawline Puller/D8 Cat/Sag Cat with 2 Winches/Static Truck/ Tensioner/Boom Crane Truck/Back Hoe/ Dump Truck/LowBoy Truck/Fork Lift/Ditch Dragger/Bucket Trucks/ Boom/Crane Trucks/150 Ton Crane/Man Lift/Water Truck		109	Large Truck	2.0	218	0	109	109	109	0	109	436	0	218	218	218	0	218
Total					**600**	**151**	**149**	**300**	**149**	**151**	**300**	**818**	**151**	**258**	**409**	**258**	**151**	**409**

ADT = Average Daily Traffic
PCE = Passenger Car Equivalent

Table 4.16-10: Construction Trip Generation for Telecommunications Components

Construction Equipment/Vehicles					Vehicle Trip Generation							PCE Trip Generation						
						A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour		
Description	**Workforce**	**Qty**	**Type**	**PCE**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Pickup Truck/Crew Truck	36	3	Passenger Car	1.0	78	36	3	39	3	36	39	78	36	3	39	3	36	39
Bucket Truck/Back Hoe/Dump Truck/ Material Transport/Fork Lift/Splice Lab		18	Large Truck	2.0	36	0	18	18	18	0	18	72	0	36	36	36	0	36
Total					**114**	**36**	**21**	**57**	**21**	**36**	**57**	**150**	**36**	**39**	**75**	**39**	**36**	**75**

ADT = Average Daily Traffic
PCE = Passenger Car Equivalent

Under the conservative trip generation estimates, the following roadways would experience the greatest volume of construction related traffic: Mount Vernon Avenue (Grand Terrace and Colton), Mountain View Avenue (San Bernardino and Redlands), San Bernardino Avenue (San Bernardino and Redlands), San Timoteo Canyon Road (Riverside County), Beaumont Avenue (Beaumont), Hathaway Street (Banning), Dillon Road (Riverside County), and Diablo Road (Palm Springs). Most of these roadways appear on Table 4.16-3, Regional and Local Truck Routes, which lists local and regional truck routes. The exceptions are Dillon Road and Diablo Road which, due to their remote location, are anticipated to experience a low ambient traffic volume, which would leave capacity to accommodate project construction-related trips.

Construction workers would typically arrive at staging yards prior to 7:00 a.m., although it is expected that some workforce traffic may arrive during the a.m. peak commute period. The length of the work day would vary by season based on available sunlight. During winter, construction workers would typically leave prior to 4:00 p.m. During summer, construction workers would typically leave after 6:00 p.m. Therefore, during most of the year, construction worker trips would occur outside of the peak commute periods[3] and there would be no impact on traffic during the morning (a.m.) and evening (p.m.) peak periods. In addition, the effect of construction traffic would be temporary and would cease upon completion of construction.

The majority of traffic generated by construction activity to and from the substations and staging areas will occur outside the peak commute periods when overall traffic volumes are lower and the roadway capacity is available. Given the dilution of trip generation both spatially throughout the 48-corridor mile project, and temporally (i.e., over the course of the 36–48 month construction period), as well as outside of the peak commute periods, the overall impact of the Proposed Project construction traffic would be less than significant.

Operation Impacts

The following discussion addresses all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, and telecommunication facilities..

Normal operation of the lines would be controlled remotely through SCE control systems, and manually in the field as required. SCE inspects the transmission, subtransmission, telecommunications and distribution overhead facilities in a manner consistent with CPUC GO 165, a minimum of once per year via ground and/or aerial observation. Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and structures, tree trimming, brush and weed control, and access road maintenance. Most regular O&M activities of overhead facilities are performed from existing access roads with no surface disturbance. Repairs to existing

[3] The a.m. peak hour is the highest volume hour during the 7:00 a.m. and 9:00 a.m. peak period. The p.m. peak hour is the highest volume hour during the 4:00 p.m. and 6:00 p.m. peak period.

facilities, such as repairing or replacing existing poles and structures, could occur in undisturbed areas.

The Proposed Project occurs primarily at and along existing facilities. A description of Proposed Project operation and maintenance (O&M) is provided in Section 3.12, Project Operation and Maintenance. Operation and maintenance traffic to and from the Proposed Project would be very similar to existing conditions and is not expected to exceed O&M traffic to the existing facilities. Because it is not likely that new traffic would be generated beyond that already existing for O&M, a less than significant impact to LOS would result.

Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The following discussion addresses all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

Congestion Management Program (CMP) facilities (Riverside County Transportation Commission 2011; San Bernardino Associated Governments 2007) within the Project Study Area may be utilized by construction workers traveling to work and returning home after work. Full deployment of equipment for simultaneous work on all Proposed Project components along the entire 48-mile corridor would require 1,421workers. The passenger vehicles driven by these workers during their commute do not require a PCE conversion. These 2,842 daily trips on CMP facilities would be spread across highways listed in Table 4.16-1, Average Daily Traffic on Highways. The contribution of traffic to any one of the facilities is anticipated to be less than 1 percent of existing volume, which would result in a less than significant impact to the CMP facilities.

Operation Impacts

The Proposed Project occurs primarily at and along existing facilities. A description of Proposed Project O&M is provided in Section 3.12, Project Operation and Maintenance. Operation and maintenance traffic to and from the Proposed Project would be very similar to existing conditions and is not expected to exceed O&M traffic to the existing facilities. Because no new traffic would be generated, there would be no impact the CMP facilities.

Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The following discussion addresses all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

Helicopter use would be in accordance with a Helicopter Use Plan. A Project-Specific Helicopter Use Plan would be prepared prior to the start of construction; however, a general overview of helicopter use is described below.

Helicopters could be used to support construction activities Proposed Project-related helicopter activities could include delivery of equipment and materials to structure sites, structure placement, hardware installation, and assistance with the installation of conductor and/or optical ground wire (OPGW) stringing operations. Helicopters may be used in other areas to facilitate construction, depending on recommendations by the installation contractor.

The operations area of the helicopters would be limited to the Project Study Area, including staging areas, ground locations in close proximity to conductor and/or OPGW pulling, tensioning, and splice sites, including locations in previously disturbed areas near construction sites. In addition, helicopters must be able to land within SCE ROWs, which could include landing on access or spur roads. All helicopter refueling in the staging areas, ROWs, or access/spur roads would be in accordance with the Storm Water Pollution Prevention Plan (SWPPP) prepared for that particular location. It is also assumed that at night or during off days, for safety and security concerns, helicopters and their associated support vehicles and equipment may be based at a local airport. The helicopter contractor would coordinate flight patterns with local air traffic control and the FAA in accordance with standard industry practice for helicopter use. As a result, helicopter use during construction would result in a less than significant impact.

Furthermore, as described in Section 4.16.1.2, Existing Transportation Setting, four airports are located in the general vicinity of the Proposed Project. The FAA needs to be notified of any construction or alteration if the height of the new structure is greater than the distance to the closest runway divided by 100, out to a distance of 20,000 feet. Redlands Municipal Airport and Palm Springs International Airport are more than 20,000 feet from the transmission corridor and therefore would not require such notification. The nearest runway at San Bernardino International Airport is approximately 5,000 feet from the nearest point of the Proposed Project. Therefore, notification would be necessary for structures greater than 50 feet in height. The nearest runway at Banning Municipal Airport is approximately 3,500 feet from the proposed corridor, requiring notification for structures greater than 35 feet in height.

LST structures account for the majority of the new transmission structures. These structures range in height from approximately 110 feet to 184 feet. Where necessitated by topography, a few TSP structures ranging in height from approximately 110 feet to 200 feet could be utilized. As of the time of the preparation of this Proponent's Environmental Assessment (PEA), SCE anticipates that over the entire length of the Proposed Project, approximately 165 structures would require FAA notification (49 structures in Segment 1; 8 structures in Segment 2; 0 structures in Segment 3; 16 structures in Segment 4; 84 structures in Segment 5; and 4 structures in Segment 6). The

number of structures requiring FAA notifications would be updated following completion of final engineering.

SCE would file the necessary FAA Form 7460-1 for structures or lines as outlined in Federal Air Regulation (FAR) Part 77. SCE would file the form upon completion of final engineering and prior to construction, per FAR Part 77. To the extent practicable, SCE would implement FAA recommendations into the design of the Proposed Project. If a span requires three or fewer marker balls, the marker balls on the span would all be aviation orange. If a span requires more than three marker balls, the marker balls would alternate between aviation orange, white, and yellow. Marker balls would be 36 inches in diameter. If a structure requires lighting, three red lights would be installed, one red "flashing" light at the peak/top, and two red "steady" lights at the middle height of the structure. As of the time of the preparation of this PEA, and subject to subsequent FAA review, SCE anticipates that the FAA may recommend that marker balls should be installed on approximately 110 spans, and lighting would be required on approximately 30 structures of the Proposed Project. However, the FAA has not conducted its review of the Proposed Project and thus has not issued any recommendations to date. Notifications pursuant to FAR Part 77 and coordination with the FAA regarding marking would result in a less than significant impact to air traffic patterns.

Operation Impacts

SCE conducts routine inspections of overhead and underground facilities at a minimum of once per year by ground inspection and/or by aerial inspection for subtransmission overhead facilities on alternating years. For aerial inspections, SCE would consult with the FAA regarding helicopter flight plans that would take place. Helicopter use for O&M would result in a less than significant impact to air traffic patterns.

Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The following discussion addresses all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

Transportation of new transmission structures to the transmission corridor may result in vehicle lengths and/or widths that exceed typical dimensions for vehicles traveling on public roadways. Construction activities completed within public street ROWs would require the use of a traffic control service, and any lane closures would be conducted in accordance with local ordinances and city permit conditions. These traffic control measures would be consistent with those published in the California Joint Utility Traffic Control Manual (California Inter-Utility Coordinating Committee 2010). SCE would implement measures contained within the California Joint Utility Traffic Control Manual and obtain appropriate permits from the local jurisdictions and Caltrans, as applicable, to facilitate the safe movement of these facilities. Locations along anticipated construction routes requiring special accommodation would be identified during final engineering.

Implementation of the California Joint Utility Traffic Control Manual would result in a less than significant impact.

Operation Impacts

Operation and maintenance of the Proposed Project would not include components that would increase any transportation-related design hazards nor involve incompatible uses. SCE conducts routine inspections of overhead and underground facilities at a minimum of once per year by ground inspection and/or by aerial inspection for subtransmission overhead facilities on alternating years. Although less likely to occur, emergency repairs may require lane closures or rehabilitation of unpaved roads. Therefore, operation of the Proposed Project would not substantially increase hazards caused by a design feature or incompatible use. Thus, the impact would be less than significant.

Would the project result in inadequate emergency access?

The following discussion addresses all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

Construction of the Proposed Project may require temporary alterations to local roadways. SCE would conduct any work that requires modifications or activities within the local road ROWs in a manner consistent with local requirements. This process would involve the preparation of appropriate traffic management plans and provisions to ensure adequate compliance with local requirements.

Proposed Project construction activities such as installing or removing poles, stringing conductor over local roadways, trenching for underground facilities, and other construction activities that may require the use of a traffic control service or lane closures may impact emergency access routes. However, as described in Section 3.2.1.4, Traffic Control, these activities would be conducted consistent with local ordinances and ministerial city permit conditions. Traffic control measures would be consistent with the California Joint Utility Traffic Control Manual. Therefore, construction of the Proposed Project would not result in inadequate emergency access in the Project Study Area. As a result, impacts to emergency access would be less than significant.

Operation Impacts

SCE conducts routine inspections of overhead and underground facilities at a minimum of once per year by ground inspection and/or by aerial inspection for subtransmission overhead facilities on alternating years. Although less likely to occur, emergency repairs may require lane closures or rehabilitation of unpaved roads to complete emergency repairs. In places where maintenance or emergency repair of the Proposed Project would span a road or a lane closure would be required, activities would be coordinated with the local jurisdiction so as not to cause closure of any emergency access route. Operation and maintenance of the Proposed Project would not result in inadequate emergency access to

the area affected by the Proposed Project. Therefore, the impact would be less than significant.

Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The following discussion addresses all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

As discussed above, construction of the Proposed Project may require alterations to local roadways, some of which contain public transit routes or bicycle/pedestrian facilities. Should construction-related activities be planned that could decrease the performance or safety of such facilities, SCE would satisfy appropriate requirements from the local jurisdictions and Caltrans, as applicable, for construction activities that would encroach upon any public ROW or easement, and would implement measures contained in the California Joint Utility Traffic Control Manual. These measures would ensure the safety of pedestrians and bicyclists and would reduce any performance impacts to less than significant levels.

Operation Impacts

Operation of the Proposed Project would involve the routine inspection and maintenance of Proposed Project components, some of which are located adjacent to or near public transit routes or bicycle/pedestrian facilities. Should operations-related activities be planned that could decrease the performance or safety of such facilities (i.e., would require the use of a traffic control service or lane closures), those operations would be conducted consistent with local ordinances and ministerial city permit conditions, as applicable. As described in Section 3.2.1.4, Traffic Control, traffic control measures would be consistent with the California Joint Utility Traffic Control Manual. These measures would ensure the safety of pedestrians and bicyclists and would reduce any performance impacts to less than significant levels.

4.16.4.2 NEPA Impact Assessment

Based on the analysis performed, it is anticipated that the Proposed Project would not result in significant effects under NEPA.

4.16.5 Applicant Proposed Measures

Although the Proposed Project would not result in potentially significant impacts associated with transportation and traffic, an Applicant Proposed Measure has been included to further reduce impacts:

APM-TRANS-1: SCE would prepare a project specific helicopter use plan to describe anticipated helicopter activities. The helicopter plan will include information related to the types of activities to be conducted by helicopters, locations of and activities to be conducted at helicopter yards, flight and data management procedures, and safety information.

4.16.6 Alternative Project

The 220 kV Line Route Alternative 2 (Alternative Project) would include relocation of an approximately 3-mile section of Segment 5 of the existing WOD corridor pursuant to an agreement between SCE and Morongo (see Figure 3.1-3, Transmission Line Route Description). Both the Proposed Project and Alternative Project include the same common elements outside of Segment 5.

The Alternative Project transects the Reservation in a different location than the Proposed Project. This alternative would be located approximately 500 feet to 1,500 feet south of and roughly parallel to the Proposed Project Alignment. The Alternative Project is approximately 0.13 mile longer than the Proposed Project. Due to the similarities between the proposed and alternative alignments in Segment 5, there are no changes to the traffic impact assessment between the Proposed Project and the Alternative Project. The impacts to surface traffic of the Alternative Project are essentially the same as the Proposed Project.

The nearest runway at Banning Municipal Airport is approximately 3,750 feet from the Alternative Project**,** 4,530 feet from the Proposed Project right of way, and approximately 6,000 feet from the existing corridor. Similar to the Proposed Project, notifications pursuant to FAR Part 77 and coordination with the FAA regarding marking would result in a less than significant impact to air traffic patterns, if feasible. Due to the proximity of the Alternative Project to the Banning Airport and associated FAA clearance requirements, however, this alternative may only be practical with the closure of Banning Airport (see Section 2.1.1.2**,** 220 kV Line Route Alternative 2, of this PEA).

4.16.7 No Project Alternative

The No Project Alternative would not result in construction or operation of the Proposed Project. No construction traffic impacts or operation traffic impacts would result.

4.16.8 References Cited

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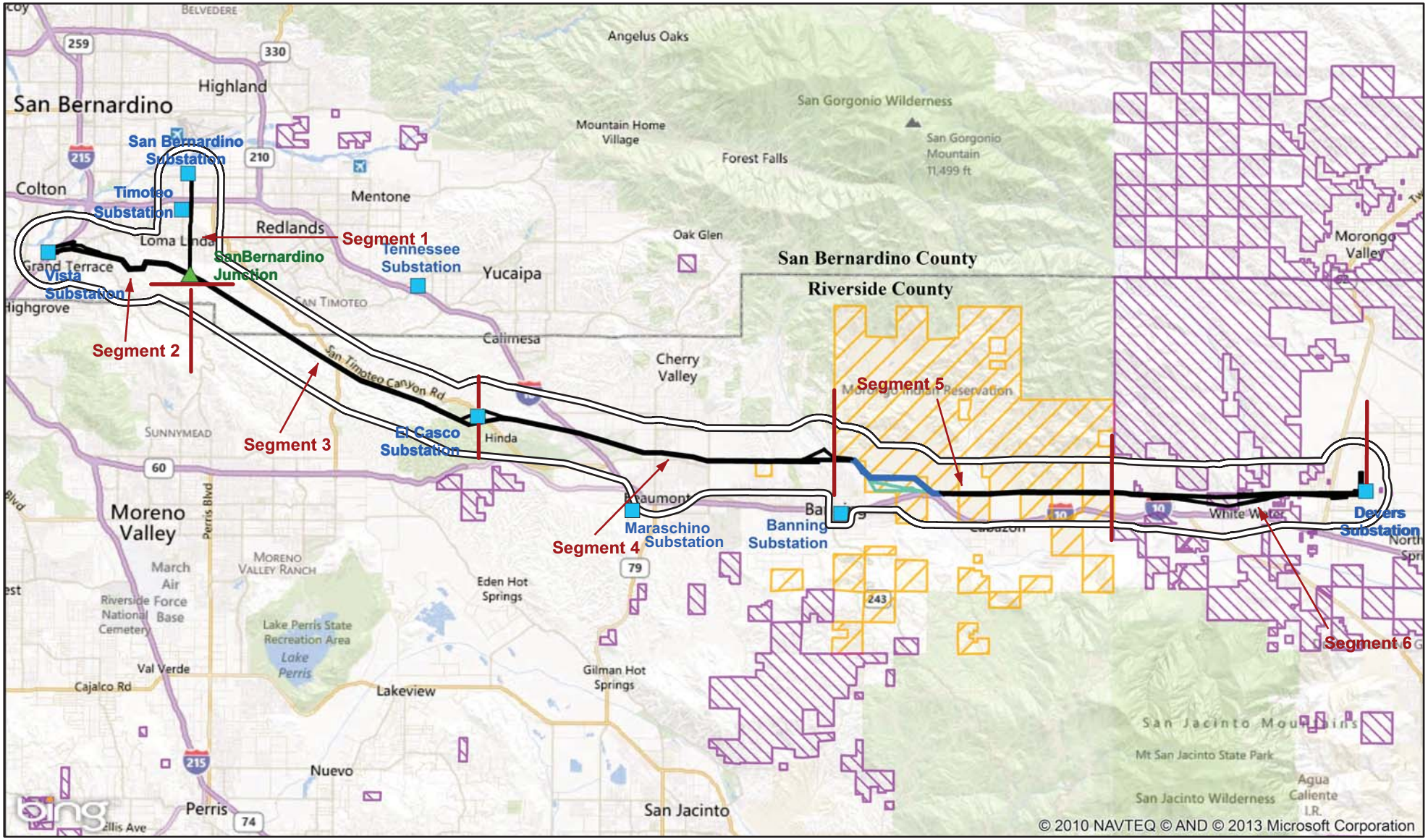

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

LEGEND

- Existing Transmission Line Right of Way
- Existing Transmission Line Right of Way to be Removed
- Proposed and Alternative Transmission Line Right of Ways
- Substations
- Junctions
- U.S. Bureau of Land Management
- Morongo Indian Reservation
- Study Area

0 2.25 4.5
MILES

SOURCE: Bing Maps (c. 2010); BLM (2012); BIA (2012); SCE (2012, 2013)

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FIGURE 4.16-1

Southern California Edison
West of Devers Upgrade Project

Transportation Study Area

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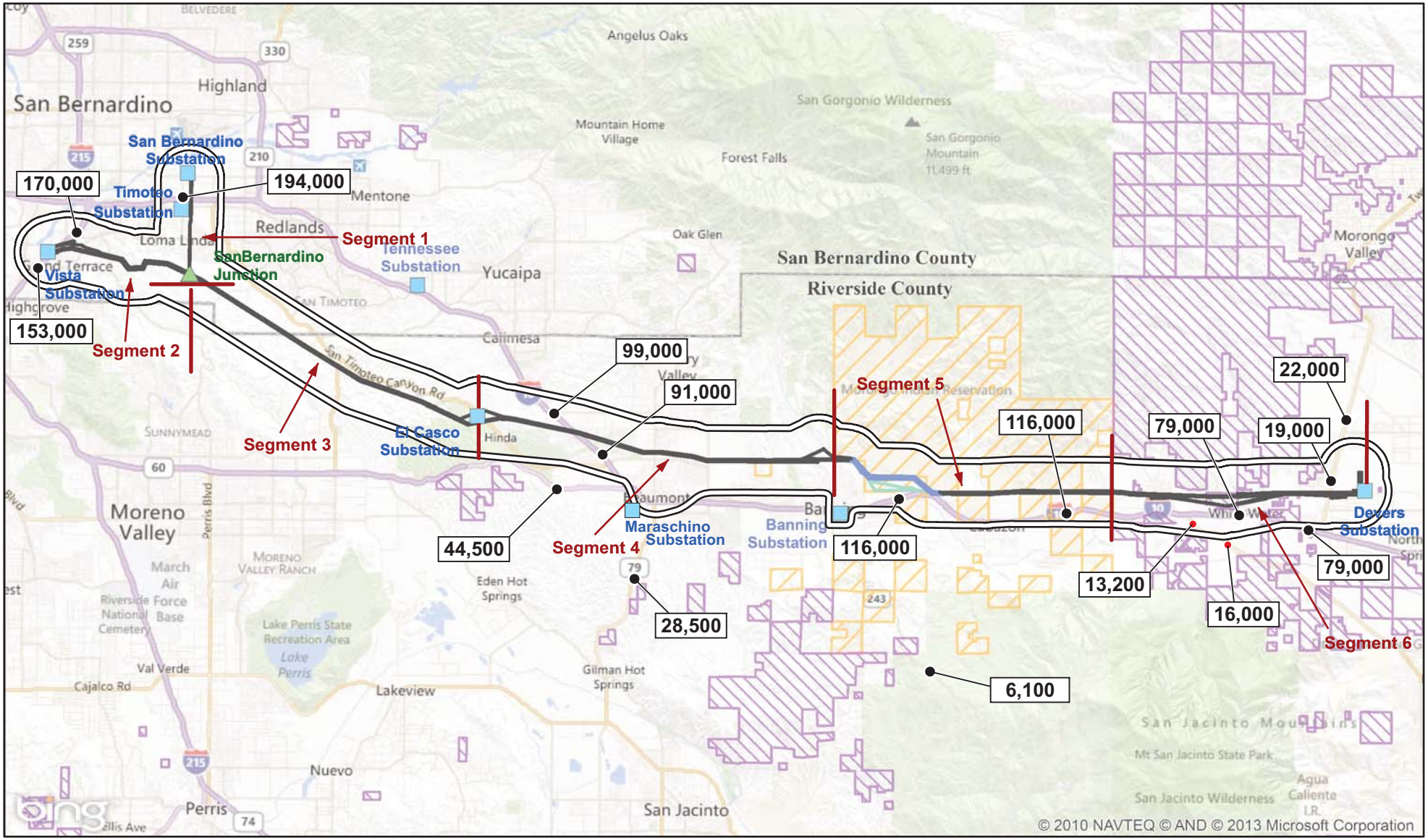

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LEGEND

- Existing Transmission Line Right of Way
- Existing Transmission Line Right of Way to be Removed
- Proposed and Alternative Transmission Line Right of Ways
- Substations
- Junctions
- U.S. Bureau of Land Management
- Morongo Indian Reservation
- X,XXX Average Daily Traffic Volume
- Study Area

N

0 2.25 4.5
MILES

SOURCE: Bing Maps (c. 2010); BLM (2012); BIA (2012); SCE (2012, 2013)

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FIGURE 4.16-2

Southern California Edison
West of Devers Upgrade Project

Highway Average Daily Traffic Volumes

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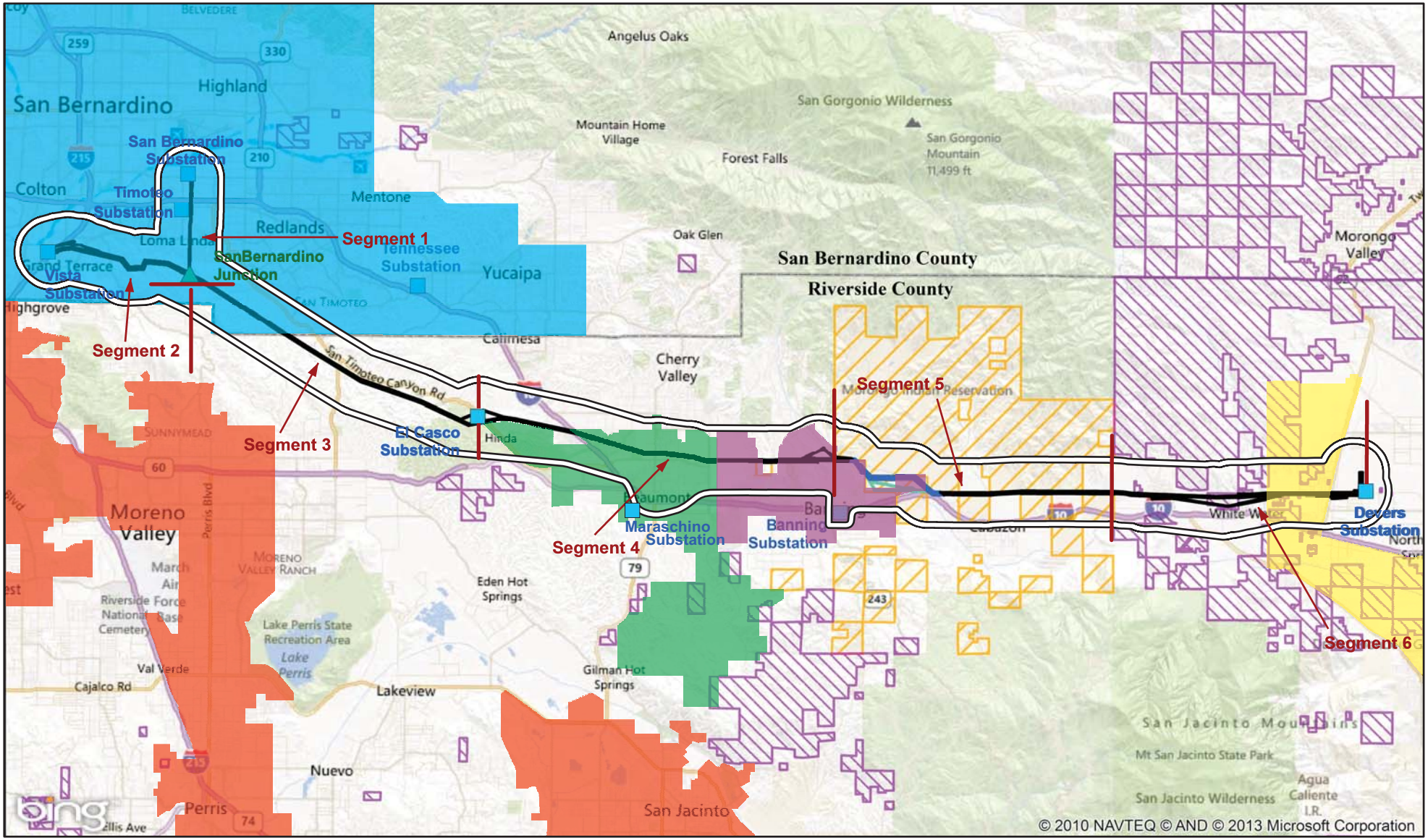

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LEGEND

- Existing Transmission Line Right of Way
- Existing Transmission Line Right of Way to be Removed
- Proposed and Alternative Transmission Line Right of Ways
- Substations
- Junctions
- U.S. Bureau of Land Management
- Morongo Indian Reservation
- Study Area
- Omnitrans Service Area
- Riverside Transit Agency Service Area
- Sun Line Transit Agency Service Area
- Beaumont Municipal Transit Service Area
- City of Banning Service Area

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MILES

SOURCE: Bing Maps (c. 2010); BLM (2012); BIA (2012); SCE (2012, 2013)

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FIGURE 4.16-3

Southern California Edison
West of Devers Upgrade Project

Transit Provider Service Areas

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