

## **4.16 TRANSPORTATION AND TRAFFIC**

### **4.16.1 Overview**

This section describes the existing conditions of the transportation and traffic facilities in the vicinity of the proposed Tehachapi Renewable Transmission Project (TRTP) and assesses the impacts of the proposed Project during the construction and operational phases according to the California Environmental Quality Act (CEQA) Appendix G guidelines. Applicant Proposed Measures (APMs) are presented, as appropriate, to reduce any potentially significant transportation and traffic impacts to a less-than-significant level. All roads that would be crossed by the TRTP are identified, described, and located by Project milepost in tables contained in Appendix N of this PEA. Refer to Figure P.1-73 in Appendix P for the locations of applicable road crossings.

In addition to the CEQA Appendix G guidelines, summaries of relevant federal and state laws and regulations are also presented. This section also identifies the Congestion Management Agencies (CMAs) who have the authority to monitor and implement the CMA Congestion Management Program (CMP) to the local jurisdictions and unincorporated areas traversed by the TRTP linear segments or where transmission facilities are located.

During operations, traffic impacts would be limited to annual maintenance of facilities and are therefore considered insignificant. Based on manpower and equipment use data and the project sequencing schedule, the trip generation potential of the proposed TRTP activities is minimal as the activities are progressively spread throughout the construction calendar. The construction workers would be organized in small specialized crews with sufficient parking and widely dispersed staging and marshalling areas mostly within existing SCE transmission line (T/L) right of way (R-O-W) or substation property lines. Due to the minimal traffic that would occur during TRTP construction and operations, none of these activities would warrant or meet minimum thresholds required to conduct a formalized traffic impact study. Therefore, this report focuses on presenting qualitatively the anticipated tripmaking of the proposed TRTP construction activities (although minimal), in context with the surrounding transportation circulation system.

Section 3.3, Construction Plan, describes in greater detail the construction methods, approach and techniques to implement the proposed TRTP in an efficient, safe and timely manner. In addition to the Construction Plan, the Project applicant has built-in contingencies to handle potential short-term construction-related impacts via APMs, which are discussed in Section 4.16.5.

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All construction within or adjacent to roadways would be coordinated with the appropriate government agency. For example, the California Department of Transportation (Caltrans) for state highways, and local public works departments for city and county streets. All such construction typically requires an encroachment or entry permit, and the issuing governmental agency can place conditions on the permit to ensure that the work does not cause excessive traffic delays. SCE has committed to implementing APMs (refer to Section 4.16.5) that would address all potential roadway construction impacts and permitting requirements, as applicable.

Steps and techniques to avoid or minimize the potential effects on traffic movement include the following:

- Coordination with Caltrans and local agencies on the preparation of a traffic management plan as part of the Project construction plans. The traffic management plan may include provisions for signage and noticing to inform the public about work before any disruptions occur, temporary detour routes, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling work during nighttime hours or periods of minimum traffic flow.
- The erection of temporary guard poles, structures and/or netting to protect the underlying roadways or other structures during the stringing of conductors or other work.
- Where appropriate, implementation of a California Highway Patrol (CHP) controlled continuous traffic break while T/L conductor stringing operations were performed.

#### **4.16.2 Technical Methodology**

Potential Project effects are assessed on area transportation systems within the vicinity of the proposed linear and substation facilities for both the construction and operational phases of the TRTP. An estimate of the peak TRTP trip generation, by segment, is considered using construction and operational data developed by SCE.

Potential construction impacts are qualitatively evaluated based on peak (worst case) projected traffic conditions associated with construction of each TRTP segment and the estimated construction schedule and are presented in context to existing or baseline traffic conditions.

Potential operational impacts are evaluated based on projected traffic conditions after one year of full project operation and are based on the estimated trip distribution of traffic on local access roads. Operational impacts along TRTP linear segments would be minimal with negligible or minimal trip generation potential, and are qualitatively discussed as having less than significant traffic impacts.

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This analysis is supported by construction levels provided in Appendix P and locations where T/Ls cross roadways that are presented in tabular form in Appendix N and shown on Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P of this PEA.

**4.16.3 Regulations, Plans, and Standards**

**4.16.3.1 Federal and State**

The discussion of applicable federal and state regulations relative to traffic and transportation are combined herein, since the State of California implements federal requirements in California.

**4.16.3.1.1 Title 49, Code of Federal Regulations (CFR), Parts 171-177.** Governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

To comply with the hazardous materials regulations, SCE would follow the guidelines set forth by the Federal Motor Carrier Safety Administration.

Standards for the transport of hazardous materials are contained in the Code of Federal Regulations (CFR), Title 49 and enforced by the U.S. Department of Transportation. Additionally, the State of California has promulgated rules for hazardous waste transport that are contained in the California Code of Regulations, Title 26. Hauling would be carried out in accordance with state and federal regulations that include the Resource Conservation and Recovery Act (42 U.S. Code 6901 et seq.) and the California Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.). Additional regulations for the transportation of hazardous materials are outlined in the California Vehicle Code (Sections 2500-505, 12804-804.5, 31300, 3400, and 34500-501). The two state agencies with primary responsibility for enforcing federal and state regulations governing the transportation of hazardous wastes are the CHP and Caltrans. In addition, the federal government prescribes regulations for transporting hazardous materials. These regulations are described in the CFR, Number 49, Part 171. These laws and ordinances place requirements on various aspects of hazardous waste hauling, from materials handling to vehicle signs, to ensure public safety.

**4.16.3.1.2 Title 14, Code of Federal Regulations, Section 77.13(2)(i).** Requires an applicant to notify the Federal Aviation Administration (FAA) of construction of structures with a height greater than 200 feet from grade or greater than an imaginary surface extending outward and upward at a slope of 10 to 1 from the nearest point of the nearest runway of an airport with at least one runway more than 3,200 feet in length. Potential impacts to navigable airspace could occur during both construction and operation of a transmission line project due to the presence of physical impediments attributable to the proposed Project. The

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Project, including any helicopter construction activities, would be required to comply with all appropriate regulations of the FAA.

**4.16.3.2 Local**

The California Public Utilities Commission (CPUC) General Order (GO) No. 131-D, Section XIV B clarifies that “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission’s jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters.” Due to this GO, the public utilities are directed to consider local regulations and consult with local agencies.

The U.S. Department of Transportation’s Transportation Equity Act for the 21st Century (TEA-21) requires development, establishment and implementation of a Congestion Management System (CMS) which is fully integrated into the regional transportation planning process (in compliance with Sections 500.109 and 450.320 of the Metropolitan Planning Regulations [23 U.S.C. 134 and 49 U.S.C. 5303-5005]).

A portion of the project area lies in Los Angeles County, which is a transportation management area (TMA). The Los Angeles County Metropolitan Transportation Authority (LACMTA) also functions as the Congestion Management Agency (CMA) under California requirements.

Section 500.103 of the Federal Management System defines TMA as follows:

“Transportation management area (TMA) means an urbanized area with a population over 200,000 (as determined by the latest decennial census) or other area when TMA designation is requested by the Governor and the Metropolitan Planning Organization (MPO) or affected local officials, and officially designated by the Administrators of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The TMA designation applies to the entire metropolitan planning area(s).”

Under state law, the Congestion Management Programs (CMPs) are prepared and maintained by the respective CMAs. The Congestion Management Level of Service (LOS) requirements for transportation and traffic facilities under each CMA jurisdiction are described below.

**4.16.3.2.1 Kern Council of Governments (Kern COG).** Level of Service “E” has been established as the minimum system wide LOS traffic standard in the Kern County Congestion Management Plan.

- All roadway segments in the Congestion Management network shall maintain a level of service “E” or better.
- Any roadway segments in the Congestion Management network that are operating at a level of service worse than “E” on the adoption of the first adoption of the first Congestion Management Program shall not be further degraded.

**4.16.3.2.2 Los Angeles County Metropolitan Transportation Authority (LACMTA).**

According to the 2004 Los Angeles County Congestion Management Program, the level of service (LOS) standard in Los Angeles County is LOS “E,” except where base year LOS is worse than “E.” In such cases, the base year LOS is the standard. A 1992 base year has been established for Los Angeles County.

**4.16.3.2.3 San Bernardino County Association of Governments (SANBAG).**

The following discussion of LOS standards was excerpted from the San Bernardino County CMP 2005 Update:

- **Objective 2.3** – Set level of service standards that provide a reasonable balance between mobility and the cost of building and operating the transportation system.
- **Policy 2.3.1** – Establish level of service E or the current level, whichever is farthest from LOS A, as the LOS standard for intersections or segments on the CMP system of roadways.

SCE would coordinate TRTP construction and operational traffic with local congestion management agencies, where appropriate.

Specific local jurisdictional requirements would be complied with by the TRTP to the maximum practicable extent. The majority of the proposed TRTP construction activities would be conducted within or adjacent to existing T/L R-O-W or within the fence lines of the proposed and existing substation facilities.

**4.16.4 Significance Criteria**

In accordance with Appendix G of the CEQA guidelines, Project-related impacts to traffic and transportation would be considered potentially significant if they would result in the following:

- Exceed, either individually or cumulatively, a level of service standard 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 result in substantial safety risks?
- Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?
- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?
- Result in inadequate parking capacity?
- Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

#### 4.16.5 Applicant Proposed Measures

This section presents measures proposed by SCE as part of the Project design to minimize Project-related traffic impacts.

**APM TRA-1: Minimize Street Use.** Construction activities would be designed to minimize work on or use of local streets.

**APM TRA-2: Obtain Permits.** When local streets must be used for more than normal traffic purposes, an encroachment permit or similar authorization would be obtained from Caltrans, County, and/or local jurisdictions (or other agency), as applicable.

**APM TRA-3: Incorporate Protective Measures.** Any construction or installation work requiring the crossing of a local street, highway, or rail line would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity. If necessary on state highways, continuous traffic breaks operated by the CHP would be planned and provided.

**APM TRA-4: Prepare Traffic Management Plans.** Traffic control and other management plans would be prepared where necessary to minimize project impacts on local streets.

**APM TRA-5: Repair Damaged Streets.** Any damage to local streets would be repaired, and streets would be restored to their pre-project condition.

#### 4.16.6 Proposed Project and Alternatives

The proposed TRTP consists of eight segments enumerated as Segment 4 through Segment 11. Segments 4, 5, and 10 involve upgrading and expanding SCE's transmission system north of SCE's Vincent Substation in order to integrate the Tehachapi area wind generation to SCE's electric system. Proposed Segments 6, 7, 8, and 11 involve upgrading and expanding SCE's transmission system south of SCE's Vincent Substation in order to deliver Tehachapi area wind generation to SCE's electrical load centers. Segment 9 involves building, upgrading, or expanding substations along the various T/L routes. The major components of these facilities are summarized in the following sections. More complete descriptions are provided in Section 3.0, Project Description, and Appendix P to the PEA. The following sections assess potential Project-related impacts on a segment-by-segment basis for the transmission and substation components of the proposed Project.

##### 4.16.6.1 Segment 4

**4.16.6.1.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 4 are identified and described in Appendix N, Tables N-1 and N-2.

**Freeways and State Highways.** Near its midway point, approximately 7 miles northwest of the Antelope Substation, Segment 4 crosses State Route (SR) 138 in northern Los Angeles County (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). This segment of SR 138 is a 2-lane undivided highway with an annual average daily traffic (AADT) volume of 4,600 vehicles. SR 138 is a key travel corridor, which connects Interstate 5 (I-5) and SR 14 providing travelers a more direct route from near Tejon Pass to the cities of Palmdale and Lancaster and the Antelope Valley region. Table N-1 (Appendix N) summarizes the state highway crossings associated with the proposed Segment 4 alignment.

##### **Transit and Rail Service.**

**Lancaster and Nearby Areas.** The Antelope Valley Transit Authority (AVTA) provides local bus service. AVTA operates 16 routes throughout the cities of Lancaster and Palmdale, and nearby communities. All of the operations of the AVTA are to the east of Segment 4. The nearest AVTA operations are in Lancaster and include Route 7, which extends westward to 60th Street W where it runs between Avenues H and L-8, and Route 5, which extends westward along Avenue L-12 to the Mayflower Gardens convalescent hospital and 67th Street W. Segment 4 traverses approximately 1.25 miles to the west of the nearest AVTA Route 5 stop.

AVTA also operates commuter bus service from the Lancaster Transfer Center, where connections with local service are available, and employment centers in Los Angeles. Other

**TABLE 4.16-1  
TRANSIT SERVICE IN THE VICINITY OF SEGMENT 4**

Route	Route Name	Destination	Jurisdiction Served
785	785 Los Angeles	Downtown Los Angeles	Lancaster, Palmdale, Los Angeles
786	786 Century City/West Los Angeles	Century City – West Los Angeles	Lancaster, Palmdale, Century City, West Los Angeles
787	787 West San Fernando Valley	West San Fernando Valley	Lancaster, Palmdale, West San Fernando Valley

park-and-ride facilities and a transfer center are located in Palmdale. Service is provided along the routes listed in Table 4.16-1.

The Amtrak and Metrolink station in Lancaster is located at 44812 N. Sierra Highway, approximately 7 miles to the east of the Antelope Substation. Amtrak operates motor coaches that connect between Bakersfield and Palmdale. Metrolink is operated by the Southern California Regional Rail Authority (SCRRA), and offers commuter rail service to downtown Los Angeles, with stops at cities and communities between Union Station and Lancaster. Another Metrolink Station is located at Vincent Grade/Acton, east of the southerly end of the proposed Segment 4 T/L route. Existing 500 kV and 220 kV lines pass from north to south, just west of the Metrolink Station parking lot, and the proposed new T/L R-O-W would be immediately to the west of the existing lines.

The Union Pacific Railroad (UPRR) line is located approximately 10 miles east of the Antelope Substation, and east of SR 14 through Lancaster. This line carries freight traffic and the Metrolink commuter trains southward from Lancaster, as described above. Amtrak does not use this segment of the UPRR line. The main line of the UPRR runs to the east and north of Segment 4.

**Kern County and Tehachapi Areas.** The Kern Regional Transit service is operated by Kern County. Express bus service is provided from Bakersfield to Tehachapi, Rosamond, and Lancaster. Within Rosamond and Tehachapi, only dial-a-ride service is provided. During the summer months, Kern Regional Transit provides expanded service throughout Tehachapi.

**Los Angeles County Unincorporated Areas.** The Los Angeles Metropolitan Transit Authority (MTA) provides transit bus service as far north as Sylmar, which is about 30 miles southwest of the southern terminus of Segment 4. The unincorporated areas of North Los Angeles County are served by the transit lines and commuter facilities described above.

There are no Los Angeles MTA facilities or services in the area that would potentially be affected by Segment 4.

***Air Transportation.*** General William J. Fox Airfield near Lancaster is a regional general aviation airport owned by Los Angeles County and operated under contract by American Airports Corporation. There is no scheduled air service at this airport, but charter service and pilot support services are available. It is located approximately 5 miles northeast of the Antelope Substation (Figure 4.10-2, Sheets 1 through 2, illustrates the location of all airports in the vicinity of the TRTP).

The joint use Palmdale/Air Force Plant 42 airport is located approximately 15 miles southeast of the Antelope Substation, and about 10 miles northeast of proposed Segment 4 midpoint. With the exception of chartered and special flights, there are no regular passenger air services currently operating at this airport, and prior permission is required for its use by the public.

Mojave Airport is located about 6 miles east of Segment 4. The East Kern Airport District operates Mojave Airport. Although there is no commercial air service, Mojave Airport is very active and serves general aviation and heavy transport. The airport property is also used by several major airlines to store large aircraft.

Mountain Valley Airport is located near Mojave. This airport is privately owned but is open to the general public, serves general aviation, and is predominantly used for recreational sailplane operations.

The Tehachapi Municipal Airport is located about 3 miles to the northwest of the proposed and alternative locations for the Whirlwind Substation. This general aviation airport is operated by City of Tehachapi and is open to the public. The Little Buttes Antique Airfield Airport is located approximately 7 miles northeast of the existing Antelope Substation. This is a privately owned airport that is open to the public. Little Buttes Antique Airfield serves as a general aviation facility.

Skyotee Ranch Airport is located approximately 2 miles southeast of the proposed Whirlwind Substation. This is a privately owned airport that is open to the public and serves as a general aviation facility.

Bohunks Airpark is located approximately 1 mile east of the existing Antelope Substation. This is a privately owned airport that is open to the public and serves as a general aviation facility.

**Local Roadways.**

**Kern County West of Rosamond and the City of Lancaster.** The unincorporated areas of southern Kern County, through which the proposed Segment 4 passes, are generally rural in nature. Compared to the adjacent properties along Segment 4 in Los Angeles County, there is more irrigated agricultural land in Kern County, with better access roads to the surrounding farmlands. Table N-2 (Appendix N) summarizes the main roadways in the unincorporated Kern County areas traversed by Segment 4. In addition to the listed roadways, there are many other unpaved roads throughout the route that provide access to agricultural areas, open recreational areas, and the wind resource area east of Tehachapi. The southern end of Segment 4 traverses the western portion of Lancaster and unincorporated areas of northern Los Angeles County.

Beginning at the proposed Cottonwind Substation towards its southerly terminus at the existing Antelope Substation, the proposed route for the new Segment 4 T/L crosses roads as summarized in Table N-2 in Appendix N.

**4.16.6.1.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 4. The proposed Project could potentially cause short-term and temporary traffic-related impacts during the construction phase. No long-term, operational phase impacts would occur.

**Construction.** Typical construction activities for the TRTP are described in Section 3.0, Project Description. Key items relative to the assessment of potential impacts to traffic follow. These include daily trips by construction workers getting to and from work and the movement of construction equipment and materials.

Construction workers would primarily affect transportation and traffic as they move back and forth between their living quarters (e.g., hotels) and marshalling areas. Construction schedules of all segments would overlap to some degree, and the TRTP workforce (all segments combined) would average approximately 155 workers per day. Given that these workers would be dispersed throughout the proposed Project area, construction worker trips are expected to have a less than significant impact on regional and local transportation and traffic.

Staging areas would be required for storing materials, construction equipment and construction vehicles. Staging areas would typically be located off the T/L R-O-W and near the endpoints of the proposed line route near the proposed substation sites, and would require an area of approximately 5 acres. Staging areas would be accessed via existing roadways and any traffic impacts would be less than significant.

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Constructing the T/L would begin with the building of unpaved access roads to facilitate entry to individual structure sites. Where possible, new access roads would be connected to the existing access road system contained within the T/L R-O-W. It is anticipated that access roads would be constructed using a grader, followed by a vibratory compactor. In situations where rougher terrain was encountered, a bulldozer, followed by a grader would be used to smooth the ground for vehicular and equipment traffic. Typically, a minimum of 12-foot-wide straight sections of roadway and 15-foot-wide sections at curves are required to allow safe movement of construction equipment and vehicles. Construction roads across areas that are not required for future maintenance access would be removed and restored after construction was completed. In other areas, roads would be left in place to facilitate future access for operations and maintenance purposes. Gates would be installed where required at fenced property lines to restrict general and recreational vehicular access from or to the T/L R-O-W. Construction of new access roads would not conflict with existing roadways. Impacts, if any, would be less than significant.

After access roads were graded, clearing of individual structure sites would be required to install the T/L structures. Clearing individual structure sites would be done using a bulldozer to blade the required area. It is anticipated that a disturbed area of approximately 200 feet by 200 feet would typically be cleared for construction activities at each structure location. This area would provide a safe working space for placing equipment, vehicles and materials. Removal of old structures and erection of new structures and other related construction activities would take place within new and existing R-O-Ws and any impact to the regional and local transportation network would be less than significant.

Although most construction equipment would not affect public roadways, some construction activities would occur in adjacent areas and could slow traffic. These are addressed further below. Implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels.

***Freeways and State Highways.*** The Segment 4 T/L crosses SR 138 in northern Los Angeles County. Project construction would include work activities adjacent to the highway, for the erection of towers, guard structures, and/or staging areas. There would also be some operations across the highway, to install guard structures and then to install the conductors on the towers. These activities could temporarily slow down highway traffic from construction vehicles, equipment and materials (including T/L) crossings and for very brief periods. This type of construction is not unique, and APMs would avoid and minimize effects on traffic. These measures, combined with the fact that the construction and stringing operations at any one location would be short-term, would reduce all transportation and traffic impacts to a less-than-significant level.

**Transit and Rail Service.**

**Los Angeles County.** There are no MTA or Metrolink facilities in the vicinity of Segment 4 T/L, therefore, no significant adverse effects on Los Angeles County transit and rail facilities are anticipated with Segment 4.

**Kern County.** There are no fixed route transit and rail facilities near the Segment 4 alignment within Kern County, therefore, no significant adverse effects on transit and rail facilities would occur associated with the Segment 4 T/L in this region.

**Air Transportation.** No elements of Segment 4 T/L are near or directly adjacent to general aviation or larger airports; therefore, no adverse effects would occur. Air traffic operations of the airports described in this section would not be adversely affected by Segment 4 construction activities.

**Local Roadways.**

**Los Angeles County.** For the most part, Segment 4 route passes through vacant land or areas with very little development. Long stretches of Segment 4 run north-south along existing roads. Construction of the middle portions of the Segment 4 T/L route would place truck and heavy equipment traffic on these roadways, and may include some work within a road R-O-W. There are also several east-west county roads that would be crossed by Segment 4 crossings. Construction worker use of these roadways to travel to and from marshalling yards would represent a negligible increase in traffic and implementation of APMs would reduce any impacts to less than significant levels.

**Kern County.** All of the Segment 4 facilities would be outside of the Tehachapi City limits, and no significant impacts would occur. Construction vehicles and worker traffic would use city streets to access construction sites, but there would be no construction activity or construction incursions into city streets implementation of APMs would reduce any impacts to less than significant levels.

**Operation.** Routine operation of the proposed Segment 4 would include visual inspection at least once per year (as required under GO 95 and FERC requirements), and occasional maintenance work as needed. Operation would generate minimal tripmaking and would not adversely impact the surrounding transportation system. Thus, no significant impacts would be expected to occur.

**4.16.6.1.3 Summary.** The following discussions summarize the TRTP impact findings for Segment 4 relative to CEQA Appendix G significance criteria.

**Would the Project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?**

Construction and operation of proposed TRTP T/L Segment 4 would not cause a substantial increase in traffic, and implementation of APMs would reduce all transportation and traffic-related impacts to a less-than-significant level.

**Would the Project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

Due to the small TRTP-related workforce, the short-term and linear nature of project construction activities, and SCE's commitment to implement appropriate APMs, no potentially significant impacts related to exceedance of established LOS standards would occur.

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

Proposed TRTP Segment 4 would be constructed adjacent to an existing T/L R-O-W and, thus, would not constitute a new obstruction to navigable air space. Periodic helicopter use during construction would increase air traffic but Segment 4 would not potentially change air traffic patterns or pose new safety risks. Any TRTP helicopter-related activities would be done in compliance with applicable FAA standards. No potentially significant air traffic-related impacts would occur associated with the TRTP.

**Would the Project substantially increase hazards to a design feature or incompatible uses?**

Proposed TRTP Segment 4 would not involve, create, or increase hazards at applicable transportation-related facilities in the Project area and would not involve activities or features that would create incompatibility with existing land uses such as farming operations.

**Would the Project result in inadequate emergency access?**

With implementation of APMs TRA-2, through TRA-4, proposed TRTP Segment 4 would not significantly affect emergency response along any of the roadways traversed by the proposed T/L route. For example, APM TRA-3 requires the use of guard poles, netting, or similar means at T/L roadway crossings to protect moving traffic, and APM TRA-4 requires use of traffic control and other traffic management techniques, where necessary, to minimize project impacts on traffic flow and access. Impacts would be less than significant.

**Would the Project result in inadequate parking capacity?**

Construction of proposed TRTP Segment 4 would not create a significant demand for offsite parking facilities. Construction workers would park in designated areas, such as marshalling yards and would not utilize offsite parking facilities. Impacts would be less than significant.

**Would the Project conflict with adopted polices supporting alternative transportation?**

The proposed TRTP would not conflict with adopted polices supporting alternative transportation facilities or strategies.

**4.16.6.1.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 4 would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.1.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 4 would be less than significant.

**4.16.6.2 Segment 5**

**4.16.6.2.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 5 are identified and described in Appendix N, Tables N-3 and N-4.

**Freeways and State Highways.** Near Segment 5's southern end, approximately 1 mile north of the Vincent Substation, the proposed T/L route crosses State Route 14 (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). This segment of SR 14 is a 4-lane divided highway, with an AADT volume of 93,000 vehicles. SR 14 is located in a regionally important travel corridor, Soledad Pass, which connects the Santa Clarita and Los Angeles area to the Antelope Valley region containing the cities of Palmdale and Lancaster. Two frontage roads adjacent to the highway include Forest View Road and Sierra Highway. Table N-3 in technical Appendix N summarizes the state highway crossings.

**Transit and Rail Service.**

**Lancaster, Palmdale, and Nearby Areas.** The Antelope Valley Transit Authority (AVTA) provides local bus service in the region. AVTA operates 16 routes throughout the cities of Lancaster and Palmdale, and nearby communities. All AVTA transit operations are to the east of the proposed Segment 5 T/L route. The closest AVTA operations near the Segment 5 T/L in Lancaster are Route 7, which extends westward to 60th Street W and runs between Avenues H and L-8, and Route 5, which extends westward along Avenue L-12 to

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the Mayflower Gardens convalescent hospital and 67th Street W. The closest distance between Route 5 and the proposed Segment 5 T/L is approximately 1.25 miles due west.

AVTA also operates commuter bus services between the Lancaster Transfer Center, where connections with local service are available, and employment centers in Los Angeles. Other park-and-ride facilities and a transfer center are located in Palmdale. Service is provided along the transit routes listed in Table 4.16-2.

**TABLE 4.16-2  
TRANSIT SERVICE IN THE VICINITY OF SEGMENT 5**

Route	Route Name	Destination	Jurisdiction Served
785	785 Los Angeles	Downtown Los Angeles	Lancaster, Palmdale, Los Angeles
786	786 Century City/West Los Angeles	Century City – West Los Angeles	Lancaster, Palmdale, Century City, West Los Angeles
787	787 West San Fernando Valley	West San Fernando Valley	Lancaster, Palmdale, West San Fernando Valley

The commuter buses travel via SR 14, which is crossed by proposed Segment 5 T/L route near its southern end.

The Amtrak and Metrolink station in Lancaster is at 44812 N. Sierra Highway, approximately 7 miles to the east of the Antelope Substation. Amtrak operates motor coaches that connect between Bakersfield and Palmdale. Metrolink is operated by the Southern California Regional Rail Authority, and offers commuter rail service to downtown Los Angeles, with stops at cities and communities between there and Lancaster. Another Metrolink Station is located at Vincent Grade/Acton, east of the southerly end of the proposed Segment 5 T/L route. Existing 500 kV and 220 kV lines pass from north to south, just west of the Metrolink Station parking lot, and the proposed new R-O-W would be immediately to the west of the existing lines.

The Union Pacific Railroad line is located approximately 10 miles east of the Antelope Substation, and east of SR 14 through Lancaster. This line carries freight traffic and the Metrolink commuter trains southward from Lancaster, as described above. Amtrak does not use this segment of rail line.

**Los Angeles County Unincorporated Areas.** The MTA provides transit bus service as far north as Sylmar, which is about 30 miles southwest of the southern terminus of the Segment 5 T/L route. The unincorporated areas of north Los Angeles County are served by the

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providers described above. There is no Los Angeles MTA facility or service in the area that would be affected by the Segment 5 T/L route.

***Air Transportation.*** In the Lancaster area, General William J. Fox Airfield is a regional general aviation airport owned by Los Angeles County, and operated under contract by American Airports Corporation. There is no scheduled air service at this airport, but charter service and pilot support services are available. It is located approximately 5 miles northeast of the Antelope Substation.

The joint use Palmdale/Air Force Plant 42 airport is located approximately 15 miles southeast of the Antelope Substation, and about 10 miles northeast of the central portion of the Segment 5 T/L route. Los Angeles World Airports (LAWA) operates the Palmdale Regional Airport Terminal within the shared use facility.

***Local Roadways.***

***City of Lancaster.*** The northern end of the proposed Segment 5 500 kV T/L route traverses the western portion of Lancaster. Beginning at the Antelope Substation through the City of Palmdale to the south, the roadways crossed by the proposed Segment 5 T/L are summarized in Table N-4 in technical Appendix N.

***City of Palmdale.*** The central portion of the Segment 5 T/L route passes through the western area of the City of Palmdale. The residential neighborhoods in Palmdale are generally east of the Segment 5 route, and north of the California Aqueduct. The City of Palmdale streets that are crossed by or near the proposed Segment 5 route are summarized in Table N-4 in technical Appendix N.

Godde Hill Road serves as a major road connecting Palmdale to Elizabeth Lake Road and the Leona Valley community to the southwest. Elizabeth Lake Road is another major connector through the Leona Valley, between the Elizabeth Lake community to the northwest and Palmdale to the east.

***Los Angeles County.*** South of Palmdale, Segment 5 follows the existing T/L corridor and continues towards the southeast through unincorporated Los Angeles County. The area is primarily rural and served by a number of formal and informal unpaved roads and utility access trails. The roadway crossings identified in this area are summarized in Table N-4 in technical Appendix N.

From Table N-4 in technical Appendix N, the key roadways include the paved frontage roads on either side of SR 14. This segment of SR 14 and associated frontage roads, and the UPRR continue west through Soledad Canyon and Soledad Pass. These facilities are key travel

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corridors connecting the greater Los Angeles area and the Santa Clarita Valley from the southwest to the Palmdale and Antelope Valley region to the north.

**4.16.6.2.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 5 of the proposed TRTP. Impacts from construction and use of Segment 5 are essentially the same as noted above for Segment 4 because of similarities in proposed construction activities and general environmental conditions. That is, the proposed Project could potentially cause short-term and temporary traffic related impacts during the construction phase. Implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels. No long-term, operational phase impacts would occur.

***Construction.*** Segment 5 would involve removal of 220 kV T/Ls and construction of a new 500 kV T/L in their place. The new T/L would primarily use existing structure locations and roads. New spur roads or spur road extensions would be built from existing access roads to the new tower sites, where necessary.

T/L roads would consist of two types – access roads and spur roads. Access roads are through roads that run between tower sites and form the main transport route along the major extent of the T/L. Spur roads are roads that lead from the access road and dead-end or loop around one or more tower sites. Most of Segment 5 would be built on existing R-O-Ws where access and spur roads already exist; thus, necessary access already exists.

In addition, the following items of work may be necessary:

- Re-grading and repair of existing access and spur roads. These roads would be cleared of vegetation, blade-graded to remove potholes, ruts, and other surface irregularities, and re-compacted to provide a smooth and dense riding surface capable of supporting heavy construction equipment. The graded road would have a minimum drivable width of 12 feet (preferably with 2 feet of shoulder on either side).
- Drainage structures such as wet crossings, water bars and overside drains, and pipe culverts would be installed to allow for construction traffic usage, as well as prevent road damage due to uncontrolled water flow.
- Slides, washouts, and other slope failures would be repaired and stabilized by installing retaining walls or other means necessary to prevent future failures. The type of structure to be used would be based on specific site conditions.

***Freeways and State Highways.*** The project would involve construction adjacent to SR 14, and construction operations (placement of the conductors on towers) across the highway. This operation would temporarily delay traffic, and could affect normal operations of the

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highway for short periods. This type of construction is not unique, and APMs TRA-1 through TRA-5 list standard procedures used by SCE to avoid and minimize potential impacts on traffic.

Those measures, combined with the fact that the construction and stringing operation at any one location would be short-term in nature, would reduce the effect of potential traffic disruptions to a less than significant level.

**Transit and Rail Service.**

**Lancaster and Palmdale Areas.** Since the project components for Segment 5 are remotely located in relation to the existing transit and rail facilities in the Lancaster area, it is anticipated that there would be no significant transportation and traffic impacts associated with project construction.

The proposed project includes a marshalling yard that would be located in the vicinity of the Antelope Substation. It is currently anticipated that the majority of construction materials (e.g., 500 kV T/L tower components, conductor, and substation modification components for the Antelope Substation) would be transported via truck to the primary marshalling yard.

**Los Angeles County.** The Vincent Grade/Acton Metrolink station is immediately to the east of the existing T/L R-O-W between Antelope and Vincent containing the existing Midway-Vincent # 3 500 kV lines, Midway-Vincent # 1 500 kV lines, and other lines. The southern third of the new Antelope-Vincent 500 kV R-O-W would be located adjacent to the current R-O-W. Construction of the Segment 5 T/L would cross the driveway leading to the Vincent Substation parking lot from Sierra Highway, and would cross the UPPR line just south of the Metrolink station.

Construction across railroad tracks would be performed with appropriate measures and protections (see APM TRAFFIC-3 in Section 4.16.5) to minimize conflicts with Segment 5 construction. These measures would serve to avoid or minimize effects to the users of the Metrolink station at Vincent Grade/Acton.

The MTA bus service does not provide service in the areas near the Segment 5 alignment; therefore, no significant effects on MTA bus service or facilities would be expected to occur.

**Air Transportation.** No elements of Segment 5 would be at or near general aviation or larger airports. Since the existing T/L route has historically posed no constraints to existing air traffic patterns, no adverse effect to air transportation is anticipated.

**Local Roadways.**

**Lancaster and Palmdale.** Construction work for Segment 5 would involve the use of local roadways generally on the west side of City of Lancaster and Palmdale. Primary and secondary marshalling yards and various staging areas would be chosen to provide convenient storage and access for construction work.

In the general area west of Lancaster and Palmdale, some of the roadways that could be potentially affected by Segment 5 construction activities include Goode Hill and Elizabeth Canyon Roads. Both of these roads would be crossed by the T/L and would be used by construction worker and equipment traffic.

Traffic volumes on the majority of the streets in this area are relatively low. Based on these reasons, the anticipated effects of construction of Segment 5 on local roadways would be expected to be less than significant.

**Los Angeles County.** For the most part, the Segment 5 Antelope-Vincent route passes through vacant land or areas with very little development. Near its southern end, however, the proposed Segment 5 crosses several roads that carry regular traffic. These include the frontage roads adjacent to SR 14 (Forest View Road and Sierra Highway), and West Carson Mesa Road. There is little or no development near these roadways, but construction activities would involve the use of these streets, and in some cases might necessitate temporary encroachments or other activities requiring specific permission from the county (or Caltrans where frontage roads are within the Caltrans R-O-W). The primary effect of construction would be temporary delays in local traffic. Depending on the specific location and nature of construction activities, it is also possible that overweight vehicles or other direct impacts could affect some streets.

**Operation.** Operation of Segment 5 would generate minimal tripmaking and would not adversely impact the surrounding transportation system, as the route is required to be driven for visual inspection typically only once per year.

**4.16.6.2.3 Summary.** The summary of impact findings for Segment 4 in Section 4.16.6.1.2 is essentially the same for Segment 5 because construction activities would be comparable on both and, from a transportation stand point, both have similar environmental conditions. Construction-related impacts to transportation and traffic would be temporary and would be reduced to a less than significant level with implementation of APMs. Operational impacts would be negligible and less than significant.

**4.16.6.2.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 5 would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.2.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 5 would be less than significant.

### **4.16.6.3 Segment 6**

**4.16.6.3.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 6 are identified and described in Appendix N, Tables N-5 and N-6.

**Freeways and State Highways.** Approximately 17 miles south of the Vincent Substation, the proposed Segment 6 T/L route crosses State Route 2 (refer to Figure 3.1-1 and Figures P.1-2 and P.1-73 in Appendix P). This segment of SR 2 is a 2-lane undivided highway, with an AADT volume of 1,100 vehicles. SR 2 is located near the San Gabriel Wilderness area above Pasadena, which connects to the Pacific Crest Trail. Table N-5 in technical Appendix N summarizes the state highway crossings associated with proposed TRTP Segment 6.

#### **Transit and Rail Service.**

**Los Angeles County.** The MTA provides transit bus service in Monrovia, near the terminus of the proposed Segment 6 T/L route. The unincorporated areas of Los Angeles County north of the terminus of Segment 6 are served by the agencies and facilities described above. There is no Los Angeles MTA facility or service in the area that is traversed by the proposed Segment 6 T/L route.

**Air Transportation.** There are no general aviation or large airports within the immediate vicinity of the proposed Segment 6 T/L route.

#### **Local Roadways.**

**Los Angeles County.** The majority of the Segment 6 500 kV T/L route passes through the Angeles National Forest (ANF). Los Angeles County roadways that are crossed by the proposed Segment 6 T/L are summarized in Table N-6 in technical Appendix N.

The roadways within the ANF are primarily two-lane rural roads, or rural collectors, generally carrying less than 2,000 AADT.

**City of Duarte.** The southerly portion of the proposed Segment 6 T/L route passes through the City of Duarte. Residential neighborhoods generally border both sides of the

Segment 6 route. The streets that are crossed by or near the proposed Segment 6 route within or near City of Duarte limits are summarized in Table N-6 in technical Appendix N.

**City of Monrovia.** The southerly alignment of the proposed Segment 6 500 kV T/L route traverses the northeastern area of the City of Monrovia within the Angeles National Forest. The roadways crossed by the proposed Segment 6 T/L route are summarized in Table N-6 in technical Appendix N.

**4.16.6.3.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 6 of the proposed TRTP. The proposed Project could potentially cause short-term and temporary traffic related impacts during the construction phase. Implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels. No long-term, operational phase impacts would occur.

**Construction.**

**Freeways and State Highways.** The proposed Project would involve construction across SR 2 and construction operations (installation of the conductors on towers) across the highway. Project construction would include work activities adjacent to the highway, for the erection of towers, guard structures, and/or staging areas. These activities would temporarily affect the highway for a brief period. This type of construction is not unique, and SCE would implement APMs (e.g., APM TRA-3) to avoid and/or minimize adverse effects on traffic. These measures, combined with the fact that the construction and stringing operation at any one location would be short-term in nature, would reduce the effect of potential traffic disruptions to a less-than-significant level.

**Transit and Rail Service.**

**Lancaster and Palmdale Areas.** Since the project components for Segment 6 are remote from transit and rail facilities in the Lancaster area, no adverse effects would occur.

**Los Angeles County.** Project components for Segment 6 are remotely far from transit and rail facilities in the Los Angeles County area, therefore no significant adverse effects on transit and rail services from construction activities would occur. The Los Angeles Metropolitan Transit Authority (MTA) bus service does not extend northward into the areas that would potentially be affected by the project, so no effects on MTA bus service or facilities would be expected to occur.

**Air Transportation.** No elements of proposed TRTP Segment 6 are near general aviation or larger airports; therefore, no adverse effects are anticipated. Work in some remote areas

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would involve the use of helicopters. Adherence to FAA regulations and coordination with appropriate air traffic control authorities would serve to avoid any effects on other air transportation services in the Project area. The proposed 500 kV towers are of a height similar to existing T/L towers along the R-O-W. No adverse effects on air traffic safety would be expected to occur.

**Local Roadways.**

**Los Angeles County.** For the most part, the Segment 6 T/L route passes through vacant land or areas with very little development. There is little or no development near roadways crossed by Segment 6, but construction activities would involve the use of these streets and, in some cases, may necessitate temporary encroachments or other activities requiring specific permission from the County (or Caltrans if the frontage roads are within Caltrans R-O-W). The primary effect of construction would be temporary delays in local traffic. Depending on the specific location and nature of construction activities, it is also possible that overweight vehicles or other direct impacts could affect some streets. The APMs presented in Section 4.16.6.1.3 would reduce potential adverse effects to less-than-significant levels.

**Operation.** Operation of Segment 6 is anticipated to generate minimal tripmaking and would not adversely impact the surrounding transportation system, as the route would be required to be driven for visual inspection once per year. Thus, operational phase impacts would be less than significant.

**4.16.6.3.3 Summary.** The summary of impact findings for Segment 4 in Section 4.16.6.1.2 is essentially the same for Segment 6. Construction-related impacts to transportation and traffic would be temporary and would be reduced to a less than significant level with implementation of APMs. Operational impacts would be negligible and less than significant.

**4.16.6.3.4 Mitigation Measures.** APMs have been incorporated into the Project design and potentially significant impacts have been avoided or reduced; thus, no mitigation measures are required.

**4.16.6.3.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 6 would be less than significant.

**4.16.6.4 Segment 7**

**4.16.6.4.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 7 are identified and described in Appendix N, Tables N-7 and N-8.

**Freeways and State Highways.** Approximately 2.5 miles south from S7 MP 0.0, the proposed T/L route crosses Interstate 210. This segment of Interstate 210 is a 5-lane divided highway, with a high occupancy vehicle (HOV) lane and an AADT volume of 270,000 vehicles. Segment 7 also parallels Interstate 605 just after crossing Interstate 210. Interstate 605 is a 4 lane divided highway with an AADT volume of 257,000 vehicles. Interstate 605 is a major Interstate serving connecting the San Gabriel Valley to the coastal cities of Seal Beach and Long Beach. Near the Interstate 605 and Interstate 10 interchange Segment 7 then crosses Interstate 10 and heads west. This segment of Interstate 10 is a 5 lane divided highway with an HOV lane and an AADT volume of 307,000 vehicles. Segment 7 also crosses SR 60 in two places. The first crossing is approximately 0.25 mile to the west of the SR 60/Interstate 605 interchange, with the second crossing approximate located 0.25 mile east of the existing SCE Mesa Substation. SR 60 is a 5 lane divided highway with an AADT volume of 251,000 vehicles. Table N-7 in technical Appendix N summarizes the state highway crossings for Segment 7.

**Transit and Rail Service.**

**Los Angeles County.** The Los Angeles MTA provides transit bus, transitway, and Metrolink service to the cities of Monrovia, Duarte, Baldwin Park, South El Monte, Montebello, East Los Angeles area and Monterey Park within the immediate vicinity of the proposed Segment 7 T/L corridor. Segment 7 crosses the San Bernardino Metrolink line at S7 MP 8.2. Key transit service routes serving the area are provided in Table 4.16-3.

The proposed Segment 7 T/L route would not affect Los Angeles MTA facilities or services in the area.

**Air Transportation.** Approximately 1 mile north of the city of El Monte, El Monte Airport is a regional general aviation airport owned by Los Angeles County, and operated under contract by American Airports Corporation. There is no scheduled air service at this airport, but charter service and pilot support services are available. It is located approximately 4 miles southwest of the existing SCE Rio Hondo Substation.

Approximately 8 miles south of the Rio Hondo Substation is Shepherd Field. Shepherd Field is defined as being inactive by the October 2004 FAA Airport/Facility Directory Data.

**TABLE 4.16-3  
TRANSIT SERVICE IN THE VICINITY OF SEGMENT 7**

Route	Destination
68	W Washington Blvd. – Caesar Chavez Ave.
78	Huntington Dr. – Main St. – Las Tunas Dr.
170	Montebello Town Center – Rosemead – S. El Monte – El Monte
260	Atlantic Ave. – Fair Oaks Ave.
264	Altadena Dr. – Foothill Blvd. – Baldwin Ave. – Duarte Rd. – City of Hope
265	Lakewood – Paramount Blvd. – Pico Rivera – Montebello Town Center
266	Rosemead Blvd – Lakewood Blvd. – SM Villa Station
268	El Monte Station – Baldwin Ave. – Washington Blvd. – Altadena – JPL
270	Monrovia – El Monte – Santa Fe Springs – Norwalk Metro
287	Sierra Madre Villa – Sierra Madre Blvd. – Santa Anita – EL Monte Station
378	Huntington Dr. – Main St. – Las Tunas Dr.-
484	Cal Poly Pomona – La Puente – Valley Blvd – LA Expo
490	Cal Poly Pomona – Walnut – Covina – Baldwin Park – Ramona Blvd – LA Expo
577X	El Monte – Norwalk – E. Long Beach – VA Med Center – via I-605 Freeway Expo

**Local Roadways.**

**City of Duarte.** The Segment 7 T/L route passes through the central area of the City of Duarte. Residential neighborhoods flank both sides of the proposed Segment 7 T/L R-O-W.

**City of Irwindale.** The Segment 7 500 kV T/L passes through the City of Irwindale near the I-210 and I-605 freeway interchange, across the Santa Fe Dam Recreational Area and parallels the I-605 southbound towards Baldwin Park and South El Monte. The areas traversed are primarily industrial and recreational use.

**Cities of Baldwin Park and Industry.** The Segment 7 500 kV T/L passes through the eastern area of the City of Baldwin Park and parallels Interstate 605 through the City of Industry.

**City of South El Monte.** Segment 7 traverses the southern area of the city and generally parallels State Route 60.

**Los Angeles County.** The Segment 7 500 kV T/L passes through areas of unincorporated Los Angeles County across Lexington-Gallatin Road, and through the Whittier narrows

recreational area, across Rosemead Boulevard on a westerly direction towards the existing SCE Mesa Substation.

**City of Montebello.** The Segment 7 500 kV T/L passes through northeast Montebello just south of the Montebello Town Center, across SR-60 Freeway towards the City Monterey Park limits and to the Mesa Substation.

**City of Monterey Park.** The final leg of the proposed Segment 7 500 kV T/L passes through the southeastern portion of Monterey Park across Greenwood Avenue towards the Mesa substation. The local roadways that are crossed by or near the proposed Segment 7 route are summarized in Table N-8 in technical Appendix N.

**4.16.6.4.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 7. Segment 7 of the proposed Project could potentially cause short-term and temporary traffic related impacts during the construction phase. No long-term, operational phase impacts to traffic and transportation would occur.

**Rail Impacts.** Similar to roadways, the crossing of rail lines or other facilities associated with the train facilities, including Metrolink stations, will be coordinated with the appropriate authorities. Measures similar to those described above for state highways would be incorporated into the construction plans. These measures would include the following:

- In accordance with APMs TRA-2 and TRA-4, SCE would coordinate with Metrolink, the UPRR, and other rail line owners associated with the preparation of a traffic management plan as part of the Project construction plans. The traffic management plan would include provisions for signage and noticing, as appropriate, to inform the public about work before any disruptions occur, temporary detour routes, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling work during periods of minimum traffic flow.
- In accordance with APM TRA-3, temporary guard poles, structures and/or netting would be installed to protect the underlying roadways, rail line, or other structures during the stringing of T/L conductors or other work.

**Construction.** Construction of Segment 7 would involve removal of all existing 220 kV structures on the Rio Hondo – Vincent No. 2 220 kV T/L and the Antelope – Mesa 220 kV T/L from the southern boundary of the Angeles National Forest to the Mesa Substation would be removed. In addition, double-circuit 66 kV lattice towers would be removed. Construction would also involve installation of new TSPs and LSTs in the existing R-O-W. To the extent feasible, existing access and spur roads would be reopened and rehabilitated for

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use during Segment 7 construction and operation. Some structure sites might require access roads and spur roads to be extended from existing roads to access the new structure locations adjacent to the existing structures. Implementation of APMs would reduce all impacts to less than significant levels.

**Operation.** Operation of Segment 7 would generate minimal tripmaking and would not adversely impact the surrounding transportation system. Thus, no significant operational phase impacts would occur.

**4.16.6.4.3 Summary.** The summary of impact findings for Segment 4 in Section 4.16.6.1.2 is essentially the same for Segment 7 as construction and operation activities and general environmental conditions are similar. Construction-related impacts to transportation and traffic would be temporary and would be reduced to a less than significant level with implementation of APMs. Operational impacts would be negligible and less than significant.

**4.16.6.4.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 7 would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.4.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 7 would be less than significant.

**4.16.6.5 Segment 8A**

**4.16.6.5.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 8A are identified and described in Appendix N, Tables N-9 and N-10.

**Freeway and State Highways.** Near its western terminus, approximately 1.1 mile east of the Mesa Substation, the proposed Segment 8A T/L route crosses the State Route 60 (SR-60) freeway (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). This segment of SR-60 is a 10-lane divided freeway, with an AADT volume of 221,000 vehicles. SR-60 connects San Bernardino and Los Angeles counties including the San Gabriel Valley cities of Diamond Bar, Hacienda Heights, Industry, Monterey Park, Rowland Heights, Whittier and other communities.

The proposed Segment 8A T/L route crosses State Route 19 (SR-19) approximately 2.8 miles east of the Mesa Substation. This segment of SR-19 is a 4-lane divided highway, with an AADT volume of 44,000 vehicles. SR-19 serves as a major highway connecting Pasadena and Los Angeles Area to the San Gabriel Valley region.

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Approximately 4.4 miles east of Mesa Substation, the proposed Segment 8A T/L route crosses Interstate 605 (I-605) freeway. This segment of I-605 is an 8-lane freeway with carpool lanes with an AADT volume of 258,000 vehicles. I-605 connects the foothills of the San Gabriel Mountains to Los Angeles and north Orange County.

Approximately 3.5 miles northeast of the SCE Olinda Substation and 17 miles east of the Mesa Substation, the proposed T/L route crosses State Route 57 (SR-57) freeway. This segment of SR-57 is 8-lane freeway with carpool lanes, with an AADT volume of 216,000 vehicles. SR-57 connects south Orange County and the San Gabriel Valley to the north.

Towards its eastern terminus and approximately 2 miles southwest of the SCE Chino Substation, the proposed Segment 8A T/L route crosses State Route 71 (SR-71) freeway. This segment of SR-71 is a 6-lane freeway plus carpool lanes, with an AADT volume of 85,000 vehicles. SR-71 connects Los Angeles and San Bernardino counties to the Chino Valley to the south.

Approximately 1.5 miles east of Chino Substation, Segment 8A T/L route crosses State Route 83 (SR-83) Highway. This segment of SR-83 is a 4-lane divided highway, with an AADT volume of 22,000 vehicles. Table N-9 in technical Appendix N summarizes the state highway crossings for Segment 8A.

**Transit and Rail Service.**

**San Gabriel Valley Region.** Bus service is provided by the Los Angeles MTA, Foothill Transit, and local transit providers. MTA, Foothill Transit, and Montebello Municipal Bus Lines operate several routes throughout the San Gabriel Valley Region, and nearby communities. The majority of MTA and Foothill Transit operations run east and west from the San Gabriel Valley Region to downtown Los Angeles. The MTA and other municipal Routes operating across the proposed Segment 8A T/L route include 68, 265, 266, 270, 577X, 684, and NW1. Foothill Transit Routes that cross the proposed Segment 8A T/L are routes FT269, FT274, and FT285 which run from La Habra to West Covina. The routes and destinations are summarized in Table 4.16-4.

The Metrolink station in Montebello at 2000 Flotilla Street is approximately 2.5 miles southwest of the SCE Mesa Station. The Riverside line runs parallel with the SR-60 in the San Gabriel Valley Region, near the western terminus of the proposed Segment 8A T/L. Metrolink is operated by Southern California Regional Rail Authority, and offers commuter rail service to Los Angeles Union Station, with stop at cities and communities between there and downtown Riverside.

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TRANSIT SERVICE IN THE VICINITY OF SEGMENT 8A**

Route	Route Name	Destination	Jurisdiction Served
68	W Washington Bl- Cesar E Chavez Av	Downtown Los Angeles	South El Monte, Los Angeles
265	Lakewood-Paramount Bl-Pico Rivera- Montebello Town Center	Montebello Town Center	Montebello, Lakewood
266	Rosemead Bl-Lakewood Bl-SM Villa Station	Sierra Madre Villa Station	Montebello, South El Monte
270	Monrovia-El Monte-Whittier-Santa Fe Springs-Norwalk Metro Rail Station	El Monte Station	Montebello, South El Monte
577X	El Monte-Norwalk-E Long Beach-VA Med Ctr via I-605 Fwy Express	VA Medical Center	South El Monte, Whittier, Montebello
684	Brea Mall-Lanterman Dev Ctr-Cal Ply Pomona-Pomona TransCenter	Brea Mall	Diamond Bar
NW1	Rio Hondo-Norwalk-Bellflower	Rio Hondo College	Whittier
OC757	Pomona Fairplex/ Diamond Bar/Brea/ Orange/ Santa Ana	Pomona Fairplex	Diamond Bar
OC758	Chino/Diamond Bar/Brea/Irvine	Chino	Chino, Diamond Bar
FT269	El Monte Station-Montebello Town Center	El Monte Station	Montebello, South El Monte
FT274	West Covina- Industry-Whittier	West Covina	West Covina, Industry, Whittier
FT285	Puente Hills Mall-La Habra via Colima Road	Puente Hills Mall	Hacienda Heights
Riverside Line	Metrolink Riverside Line	Union Station and Riverside Downtown	Montebello
Sunset Limited	Amtrak Sunset Limited	Union Station and Orlando, Florida	Montebello, San Bernardino County
FT497	Chino Park/Ride-Industry Park/Ride-LA Express	Chino Park	Chino
65A	Montclair-Chino Hills	Chino Hills	Chino Hills
65B	Chino-Chino Hills	Chino Hills	Chino Hills

The UPRR line is located on the southeast corner of I-605 and SR-60 connector and approximately 4.6 miles east of the SCE Mesa Substation. This line carries freight traffic, the Metrolink Riverside Line and Amtrak Sunset Limited commuter trains eastward from Los Angeles.

**San Bernardino County.** Bus service is provided by the Omnitrans, Foothill Transit, and other local transit providers. Omnitrans operates several routes throughout the San Bernardino County and nearby communities. The majority of Omnitrans operations run east and west from San Bernardino County to the San Gabriel Valley region. The transit routes that cross the proposed Segment 8A T/L include Routes 65A and 65B. Foothill Transit crosses the proposed Segment 8A T/L with Route FT497, which runs from Chino to City of Industry. The routes and destination are summarized in Table 4.16-4.

**Air Transportation.**

**LA/Ontario International Airport.** The LA/Ontario International Airport (ONT) is a regional and international airport owned and operated by Los Angeles World Airports (LAWA). It is located in the Inland Empire approximately 3.8 miles to the northwest of the Segment 8A T/L corridor and approximately 35 miles east of downtown Los Angeles. The airport serves San Bernardino and Riverside counties, north Orange County, and east Los Angeles County as well as surrounding communities including Chino, Chino Hills, and Ontario and provides daily scheduled air service.

**Chino Airport.** Chino Airport is a regional aviation airport owned and operated by County of San Bernardino. It is located in the Inland Empire approximately 2 miles to the south of the Segment 8A T/L corridor and 2.5 miles southeast of the SCE Chino Substation. There is no scheduled air service at this airport, but it provides general aviation services.

**Local Roadways.**

**City of Monterey Park.** The western end of the Segment 8A T/L route traverses the southern area of the City of Monterey Park and continues east toward Olinda Substation located in the City of La Habra. Segment 8A begins at the Mesa Substation, located at the intersection of Potrero Grande and Markland Drive. Segment 8A passes through the southern area of Monterey Park with land uses that are generally open space/parks and industrial use including manufacturing and warehousing.

**City of Montebello.** Segment 8A passes through the northern area of Montebello comprised generally of open space/parks, and crossed by a number of major and minor roads.

The proposed T/L Segment 8A route crosses Paramount Boulevard, Town Center Drive, Montebello Boulevard, and Plaza Drive, which are primarily four to five lane-divided arterials. Paramount Boulevard serves as a major road connecting Montebello to San Gabriel Boulevard and Montebello Boulevard and the City of South El Monte to the northeast. Town Center Drive and Plaza Drive are local roads connecting Montebello Town Center Mall to San Gabriel Boulevard and Montebello Boulevard.

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**Cities of Pico Rivera and Whittier.** East of Montebello, the proposed Segment 8A T/L passes through the northern area of Pico Rivera. The City of Pico Rivera adjoins the City of Montebello and Whittier. The area is generally open space/parks, and the route is crossed by local 2-lane paved roadways within the City of Pico Rivera.

**City of Industry.** South of the City of El Monte, the proposed Segment 8A T/L route passes through the southwestern portion of the City of Industry. This area is a mixture of industrial uses, institutional and open space/parks. Segment 8A T/L crosses the UPRR line within the City of Industry.

**County of Los Angeles.** The central portion of Segment 8A is located in an unincorporated area of Los Angeles County just north of the cities of Whittier and La Habra Heights. The area is generally rural in nature with open space and parks and traverses Puente Hills and the area north of Rose Hills Memorial Park. Roadways in these areas are typically formal and informal unpaved roads, fire prevention, utility access trails, and local roads.

Within unincorporated west Los Angeles County, the route crosses Workman Mill Road, Turnbull Canyon Road, and Colima Road. Workman Mill Road serves as a major road connecting to Peck Road and the San Gabriel Valley Region. Turnbull Canyon Road is another major connector through Puente Hills, between Whittier to the southwest and Hacienda Heights to the northeast. Colima Road is another major road connecting to Hacienda Boulevard and the City of Hacienda Heights within the San Gabriel Valley region.

Within the eastern area of unincorporated Los Angeles County, the T/L route crosses Tonner Canyon Road. Tonner Canyon Road serves as a major road connecting to Brea Canyon Road and the City of Brea to the south and the City of Diamond Bar to the north.

**City of La Habra Heights.** Segment 8A T/L traverses the northern area of La Habra Heights along the Puente Hills. This area is generally rural in nature, and is crossed by a number of formal and informal unpaved roads, utility access trails and local roads. These roads generally have low average daily traffic.

**City of Diamond Bar.** East of Chino Hills, the proposed Segment 8A T/L route runs adjacent to the City of Diamond Bar. Brea Canyon Road parallels SR-57 and serves as a major road connecting Diamond Bar and City of Industry to the north.

**City of Chino Hills.** The eastern portion of Segment 8A crosses the City of Chino Hills and continues eastbound toward the existing SCE Chino Substation. The area is generally rural in nature with open space and parks and the roadways in this area are primarily formal and informal unpaved roads, utility access trails, and local roads. These roads generally have

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a low average daily traffic. Towards SR-71 to the east, residential neighborhoods to the north and south of the T/L R-O-W flank the Segment 8A route in Chino Hills.

Within western Chino Hills, the route crosses Peyton Drive and Chino Hills Parkway. Peyton Drive parallels SR-71 and serves as a major road connecting the City of Chino Hills and the City of Chino via Chino Hills Parkway to the east. Chino Hills Parkway is another major road connecting Chino Hills and the City of Brea via Carbon Canyon Road to the southwest.

***City of Chino.*** The Segment 8A T/L route traverses the City of Chino and extends eastward towards SCE's Mira Loma Substation. The area was historically rural in nature (dairy industry and farming) but has undergone more recent development to include retail, warehousing/distribution and light industrial manufacturing uses.

The Segment 8A route crosses Ramona Avenue, Monte Vista, Eucalyptus, Central Avenue, Edison Avenue, Magnolia Avenue, Mountain Avenue, Cypress Avenue, San Antonio Avenue, and Fern Avenue. Edison Avenue and Eucalyptus Avenue are key east-west arterials.

***City of Ontario.*** The eastern portion of Segment 8A T/L traverses the City of Ontario and ends at the existing SCE Mira Loma Substation, located at the intersection of Schaefer Avenue and Cleveland Avenue. The area was historically devoted to the dairy industry and small-scale farming but is now undergoing transition into residential developments. Currently pockets of developed neighborhood and dairy operations are found along the Segment 8A T/L route in this area.

Within the City of Ontario the proposed Segment 8A T/L route crosses Euclid Avenue, Bon View Avenue, Grove Avenue, Walker Avenue, Vineyard Avenue, Ontario Avenue, Archibald Avenue and Haven Avenue. These roads connect the City of Ontario to the City of Rancho Cucamonga to the north and Riverside County to the south.

The local roadways that are crossed by or near the proposed Segment 8A T/L route are summarized in Table N-10 in technical Appendix N.

**4.16.6.5.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of the proposed TRTP Segment 8A. The proposed project could potentially cause short-term and temporary traffic related impacts during the construction phase. Implementation of APMs would reduce all impacts to less than significant levels. No long-term, operational phase impact would occur.

***Construction.*** Segment 8A as proposed would utilize a combination of 500 kV and 200 kV T/Ls as well as undergrounding of 66 kV subtransmission lines in the vicinity of the SCE

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Chino Substation. As described in detail in Section 3.0, Project Description, various T/L interconnections are proposed at or near substations to facilitate the routing of Segment 8A and to minimize conflicts with other T/L routes. Most of the structure sites would require minor grading and new and new or re-developed access and spur roads. Impacts are essentially the same as those discussed in the Segment 4 analysis (see Section 4.16.1.2) and implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels.

**Operation.** Segment 8A operations would generate minimal Project-related traffic and would not adversely impact the surrounding transportation system. Thus, no significant operational phase impacts would occur.

**4.16.6.5.3 Summary.** The summary of impact findings for Segment 4 in Section 4.16.1.2 is essentially the same for Segment 8A. Segment 8A would primarily involve removal of existing 220 kV T/Ls and construction of new 500 kV T/Ls along existing R-O-W with existing access. No additional impacts are identified in this segment.

**4.16.6.5.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 8A would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.5.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 8A would be less than significant.

**4.16.6.6 Segment 8B Chino – Mira Loma 220 kV T/L**

**4.16.6.6.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 8B are identified and described in Appendix N, Tables N-11 and N-12.

**Freeway and State Highways.** The 6.8 mile long Segment 8B from the Chino Substation to the Mira Loma Substation would require the removal of the existing 220 kV T/L on the Chino-Mira Loma #1 line and the construction of a double circuit 220 kV line.

Approximately 1.5 miles east of Chino Substation, the Segment 8B T/L routes crosses State Route 83 (SR-83) Highway (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). This segment of SR-83 is a 4-lane divided highway, with an AADT volume of 22,000 vehicles. SR-83 connects Riverside and San Bernardino areas to the Chino Valley Region. Table N-11 in technical Appendix N summarizes the state highway crossings for Segment 8B.

**Transit and Rail Service.**

**San Bernardino County.** Local bus service is provided by the Omnitrans, Foothill Transit, and other local municipal transit authorities. Omnitrans operates several routes throughout the San Bernardino County region, and nearby communities. The majority of Omnitrans operations run east and west from San Bernardino County to the San Gabriel Valley Region. The transit routes that cross the proposed Segment 8B T/L route are 65A and 65B. Foothill Transit Route FT497, which runs from Chino to the City of Industry, also crosses the proposed T/L route. The routes and destination are summarized in Table 4.16-5.

**TABLE 4.16-5  
TRANSIT SERVICE IN THE VICINITY OF SEGMENT 8B**

Route	Route Name	Destination	Jurisdiction Served
FT497	Chino Park/Ride-Industry Park/Ride-LA Express	Chino Park	Chino
65A	Montclair-Chino Hills	Chino Hills	Chino Hills
65B	Chino-Chino Hills	Chino Hills	Chino Hills

**Air Transportation.** Discussion of the air transportation facilities related to Segment 8B is as previously discussed in Section 4.16.6.5 (Segment 8A).

**Local Roadways.**

**City of Chino.** The proposed Segment 8B route begins at the SCE Chino Substation, located at the intersection of Edison Avenue and Oaks Avenue, in the City of Chino and extends eastward toward the Mira Loma Substation. The streets within the City of Chino that are crossed by or near Segment 8B route are summarized in Table N-12 in technical Appendix N.

The route crosses roadways that run north-south including Oaks Avenue, Magnolia Avenue, Mountain Avenue, Cypress Avenue, San Antonio Avenue, and Fern Avenue.

**City of Ontario.** The eastern portion of Segment 8B traverses the City of Ontario and ends at the Mira Loma Substation, located at the intersection of Schaefer Avenue and Cleveland Avenue. The streets within the City of Ontario that are crossed by Segment 8B route are summarized in Table N-12 in technical Appendix N.

The proposed Segment 8B T/L route crosses Euclid Avenue, Bon View Avenue, Cucamonga Avenue, Grove Avenue, Walker Avenue, Vineyard Avenue, Ontario Avenue, Archibald

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Avenue and Haven Avenue. These roads connect the City of Ontario to the City of Rancho Cucamonga to the north and Riverside County to the south.

**4.16.6.6.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 8B of the proposed TRTP. The proposed Project could potentially cause short-term and temporary traffic related impacts during the construction phase. No long-term, operational phase impacts would occur.

**Construction.** Construction of Segment 8B would be primarily within the R-O-W of the existing Chino-Mira Loma #1 220 kV T/L. Traffic-related impacts are generally the same as those discussed in the Segment 4 analysis (see Section 4.16.1.2) and implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels.

**Operation.** Proposed Segment 8B operation and maintenance activities would generate minimal tripmaking and would not adversely impact the surrounding transportation system, as the route would be required to be driven for visual inspection once per year. Thus, no significant operational phase impacts would occur.

**4.16.6.6.3 Summary.** Segment 8B would involve removal of existing 220 kV T/Ls and construction of new 220 kV T/Ls along existing R-O-W with existing access. The summary of impact findings for Segment 4 in Section 4.16.1.2 is essentially the same for Segment 8B. Implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels.

**4.16.6.6.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 8B would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.6.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associate with implementation of Segment 8B would be less than significant.

**4.16.6.7 Segment 8C**

**4.16.6.7.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 8C are identified and described in Appendix N, Tables N-13 and N-14.

**Freeway and State Highways.** Originating just east of the Chino Substation, Segment 8C runs parallel with Segment 8A until about 0.5 mile west of the Mira Loma substation where Segment 8A runs north then east towards the Mira Loma substation, Segment 8C continues east towards its terminus at the southwestern corner of the Mira Loma substation.

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Approximately 1.5 miles east of Chino Substation, Segment 8C T/L routes crosses State Route 83 (SR-83) Highway (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). This segment of SR-83 is a 4-lane divided highway, with an AADT volume of 22,000 vehicles. Table N-13 in technical Appendix N summarizes the state highway crossings.

**Transit and Rail Service.** The rail and transit facilities related to Segment 8C are as discussed previously in Section 4.16.6.6 (under Segment 8B).

**Air Transportation.** The air transportation facilities related to Segment 8C are as discussed previously under Section 4.16.6.5 (Segment 8A).

**Local Roadways.** The local roadway crossings related to Segment 8C are as previously discussed in Section 4.16.6.6 (Segment 8B). The local streets crossed by or near Segment 8C route are summarized in Table N-14 in technical Appendix N.

**4.16.6.7.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 8C of the proposed TRTP. The proposed Project could potentially cause short-term and temporary traffic related impacts during the construction phase. No long-term, operational phase impacts would occur.

**Construction.** Construction of Segment 8C would occur within existing SCE R-O-W. The construction-related daily trips would be minimal, as discussed previously in Section 4.16.6.5.2. Traffic-related impacts are generally the same as those discussed in the Segment 4 analysis (see Section 4.16.1.2) and implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels.

**Operation.** Segment 8C operation and maintenance activities would generate minimal tripmaking and would not adversely impact the surrounding transportation system, as the route is required to be driven for visual inspection once per year. Thus, no significant operational phase impacts would occur.

**4.16.6.7.3 Summary.** Segment 8C would involve the removal and construction of 220 kV T/Ls along existing R-O-W with existing access. The summary of impact findings for Segment 4 in Section 4.16.6.1.2 is essentially the same for proposed TRTP Segment 8C. That is, implementation of APMs would reduce all impacts to less than significant levels.

**4.16.6.7.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 8C would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.7.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 8C would be less than significant.

**4.16.6.8 Segment 9**

**4.16.6.8.1 Environmental Setting.** Segment 9 of the TRTP includes the construction of the proposed new Whirlwind Substation, expansion of the Antelope and Vincent substations, and upgrades to the existing Mesa, Gould, and Mira Loma substations within existing fencelines.

**4.16.6.8.2 Impact Analysis.** The proposed Project could potentially cause short-term and temporary traffic-related impacts during the construction phase related to substation facilities. No long-term, operational phase impacts would occur, since the operational workforces are minimal at the existing substations and the proposed Whirlwind Substation would be unmanned.

The estimated construction worker needs, duration of work activity, and forecast trips per day are presented in Section 3.0, Project Description. As noted in Section 4.16.6.1.2, construction schedules of all segments would overlap to some degree, and the overall TRTP workforce (all segments combined) would average approximately 155 workers per day between April 2009 and November 2013. Given that these workers would be dispersed throughout the proposed Project area, construction worker trips during substation construction are expected to have a less than significant impact on regional and local transportation and traffic.

**Construction.** The substation construction efforts would occur in accordance with an SCE construction specification, Institute of Electrical and Electronic Engineers, American Concrete Institute, and other accepted construction industry standards.

The alternative locations for Whirlwind Substation are located along Holiday Avenue. Construction traffic would use this roadway, but implementation of APMs would reduce all impacts that could affect transportation and traffic to less than significant levels.

Construction traffic for work at the Antelope Substation would access the property via W. Avenue J, but construction-related traffic would not significantly affect local roadways.

The existing SCE Vincent Substation would be expanded to the south and west and undergo minor modifications for electrical tie-ins. The Vincent Substation is located off of the Angeles Forest Highway, approximately 1.5 miles south of its interchange with SR 14. The substation is accessed on a short driveway off of the Angeles Forest Highway. Rockyford Road and a series of service trails provide access around the perimeter of the substation. As

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part of the Vincent Substation expansion a section of an existing road on SCE property would be relocated to the west to maintain access during the construction and operational TRTP phases. No significant impacts are anticipated.

The Gould Substation is located north of Greenridge Drive, and east of the Angeles Crest Highway, about 1 mile northeast of the center of La Canada-Flintridge. The substation is accessed on a local road off of the Angeles Crest Highway. A series of service trails provide access around the perimeter of the substation. All of the modifications proposed at the Gould Substation are within the property; no expansion of the substation is proposed.

The Mesa Substation is located north of State Route 60 and east of Markland Drive, about 1 mile north of the center of Montebello. The substation is accessed on a driveway off of Potrero Grande Drive. Greenwood Avenue and a series of service trails provide access around the perimeter of the substation. All of the modifications proposed at the Mesa Substation are within the existing property fenceline; no expansion of the substation is proposed.

**Freeways and State Highways.** Where Segment 9 related construction activities require transport of oversized loads on public roadway R-O-Ws, such activities would be coordinated with the appropriate government agency – Caltrans for state highways, and local public works departments for city and county streets. When construction operations require an encroachment or entry permit, SCE would obtain all necessary permits (APM TRA-2) and the applicable governmental agency would place conditions on the permit to ensure that the work does not cause excessive traffic delays.

**Transit and Rail Service.**

**Kern County.** The proposed new Whirlwind Substation location is far from existing transit and rail facilities; therefore, no significant adverse effects on transit and rail facilities in the Kern County area would occur from the construction of the Whirlwind Substation. Any impacts would be less than significant.

**Los Angeles County.** The project components/activities for Segment 9 substations in Los Angeles County (i.e., Vincent, Antelope, Gould, and Mesa) are located within or directly adjacent to existing SCE property or R-O-W, and no significant adverse effects on transit and rail facilities in the Los Angeles County area would occur from the construction-related expansions and/or upgrade activities at the aforementioned substations. Any impacts would be less than significant.

**San Bernardino County.** The proposed substation upgrade activities at the existing SCE Mira Loma Substation would be located within the existing substation boundary, and no

significant adverse effects on transit and rail facilities in the San Bernardino County area would occur. Any impacts would be less than significant.

**Air Transportation.** The Whirlwind Substation alternative locations are located within 2 miles of the Skyotee Ranch, a private airfield. The existing Antelope Substation is located within a mile of Bohunks Park, another private airfield. Neither the new Whirlwind Substation nor upgrades to the existing Antelope substation would result in structures that would exceed FAA height restrictions. Helicopter trips during construction would slightly increase regional air traffic but all flights would be conducted in accordance with FAA rules and regulations. Impacts, if any, would be less than significant.

**Local Roadways.**

**Kern, Los Angeles, and San Bernardino Counties.** The local streets serving or near the Segment 9 substation facilities were summarized above. As discussed, no significant impacts on local roadways associated with construction activities for Segment 9 substation facilities would be expected. Any impacts would be less than significant.

**Operation.** Segment 9 substation facilities would not require substantial increases in personnel during the operational phase. Operation and maintenance of the substations would involve periodic maintenance visits and minimal tripmaking. Potential operational phase impacts would be less than significant.

**4.16.6.8.3 Summary.** The proposed Segment 9 substation facility construction and operation activities would occur at or near existing SCE substation facilities and/or T/L R-O-Ws with existing access. Implementation of APMs TRA-1 through TRA-5 would reduce all impacts to less than significant levels.

**4.16.6.8.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation, and Segment 9 would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.8.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 9 would be less than significant.

**4.16.6.9 Segment 10**

**4.16.6.9.1 Environmental Setting.** Roads that would be crossed by Segment 10 and Alternatives 10A, and 10B are identified and described in Appendix N, Tables N-15 through N-17.

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Proposed Segment 10 starts at the previously permitted Windhub Substation located on Oak Creek Road approximately 6 miles west of SR-14 (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). Segment 10 ends at the proposed Whirlwind Substation near the intersection of Holiday Avenue and 170th Street. Beginning at the Windhub Substation, Segment 10 travels southwest approximately 4 miles to Laguna Avenue and 110th Street. It then heads south 4 miles along 110th Street to Backus Road, and then heads southwest to its terminus at the Whirlwind Substation. Alternative Segment 10A follows the same alignment as Segment 10 but diverges at Backus Road and 125th Street. Alternative 10A connects to 170th Street approximately 3.0 miles north of the Whirlwind Substation before traveling directly south on 170th Street. Alternative 10B also differs from proposed Segment 10 by traveling directly west on 125th Street and Backus Road. Alternative 10B then travels directly south on 160th Street then connecting back into Alternative 10A.

**Freeways and State Highways.** Proposed Segment 10 and the two project alternative alignments (Alternatives 10A and 10B) do not cross or parallel any freeways or state highways. SR 14 is located approximately 5 miles to the east of the previously permitted Windhub Substation.

**Transit and Rail Service.** There are no existing transit or rail service facilities operating within the immediate vicinity of Segment 10 and its two alternative alignments.

**Air Transportation.** Several privately owned airport facilities and one major airport are located within the vicinity of Segment 10 and the alternative alignments 10A and 10B. Approximately 2 miles south of Segment 10's terminus at the Whirlwind Substation is Skyotee Ranch near Rosamond. Skyotee Ranch owns and operates a privately owned airport. Pontious Airport is a privately owned and operated airport near Rosamond is located approximately 2 miles southeast of the Windhub Substation. Lloyd's Landing Airport is another privately owned and operated airport near Rosamond. It is approximately 10 miles southwest of the Segment 10 terminus at the proposed Windhub Substation.

Two skyparks at Rosamond and Quail Lake are also within the vicinity of Segment 10, and Alternatives 10A and 10B. Rosamond Skypark is located in Rosamond and is approximately 11 miles south of the Windhub Substation. Quail Lake Skypark is approximately 14 miles southwest of the proposed Whirlwind Substation.

The Mojave Spaceport is located approximately 6 miles east of the Windhub Substation. Besides being a general-use public airport, Mojave has three main areas of activity, flight-testing, space industry development, and aircraft heavy maintenance and storage. It is licensed for horizontal launches of reusable spacecraft. Along with being a spaceport, it is also a civilian aerospace test center and test pilot school. This airport is also used as storage

for numerous large commercial airliners such as Boeing, McDonnell Douglas, Lockheed, and Airbus.

**Local Roadways.**

**Kern County.** Segment 10 crosses paved and unpaved roads. Roads that are crossed or nearby Segment 10 are summarized in Table N-15 in technical Appendix N. Segment 10 parallels General Petroleum Road over the majority of its length. Roads that are crossed by or near Alternative 10A are summarized in Table N-16 in technical Appendix N. Roads that are crossed by or near Alternative 10B are summarized in Table N-17 in technical Appendix N.

**4.16.6.9.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 10 and its two project alternatives. The proposed project could potentially cause very short-term and temporary traffic related impacts during the construction phase. No long-term, operational phase impacts are expected.

**Construction.** Segment 10 would require construction of new single-circuit 500 kV transmission line facilities using single-circuit LSTs. Construction activities would include establishment of marshalling yards for staging of material and equipment, and completion of required access roadwork. As noted for all other segments, implementation of APMs would reduce all potential traffic and transportation-related impacts from construction of Segment 10 to less than significant levels.

**Operation.** Operation and maintenance of Segment 10 (or its alternatives) would require minimal workforce and associated periodic (e.g., annual) maintenance trips. Operational phase impacts would be less than significant.

**4.16.6.9.3 Summary.** Potential construction- and operation-related impacts for Segment 10 and its alternatives are generally analogous to those discussed previously for Segment 4, because the location of Segment 10 is remote and there are limited transportation related facilities that could be impacted. Additionally, the construction workforce is small and the temporary and transient nature of T/L construction activities would result in minimal impacts. APMs incorporated into the Project design would reduce all construction-related impacts to less than significant levels. Operational impacts would be less than significant.

**4.16.6.9.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation and Segment 10 would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.9.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 10 (including Alternatives 10A and 10B) would be less than significant.

**4.16.6.10 Segment 11**

**4.16.6.10.1 Environmental Setting.** Freeways, highways and local roads that would be crossed by Segment 11 are identified and described in Tables N-18 and N-19.

***Freeways and State Highways.*** Near its southern end, approximately 3 miles north of the Mesa Substation, the proposed Segment 11 T/L route crosses the Interstate 10 freeway (refer to Figure 3.1-1, and Figures P.1-2 and P.1-73 in Appendix P). Through this portion of I-10, the freeway cross-section is 8 lanes with carpool lanes, with an AADT volume of 230,000 vehicles. I-10 connects the San Bernardino and Los Angeles areas to the San Gabriel Valley region through the cities of Arcadia, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, Temple City and other cities to the west of the San Gabriel Valley.

Immediately south of the existing SCE Goodrich Substation, the proposed T/L route crosses Interstate 210 freeway. The I-210 freeway segment cross-section is 10 lanes plus a carpool lane with an AADT volume of 270,000 vehicles. I-210 connects the San Gabriel Valley region to the San Fernando Valley region. The Metro Gold, which runs in the center median of the I-210, is also crossed by Segment 11 of the TRTP.

The proposed Segment 11 T/L route crosses the winding Angeles Crest Highway, State Route 2 multiple times near its midway point north of the Gould Substation. This segment of the Angeles Crest Highway is a 2-lane undivided highway, with an AADT volume of 1,050 vehicles. The Angeles Crest Highway is located in the canyons of the San Gabriel Mountains and connects the San Gabriel Valley region to the Victor Valley Region. Table N-18 in technical Appendix N summarizes the state highway crossings for Segment 11.

**Transit and Rail Service.**

**San Gabriel Valley Region.** The Los Angeles MTA, Foothill Transit, and other local transit providers provide bus service in the study area for Segment 11. The MTA and Foothill Transit operate several routes throughout the San Gabriel Valley Region, and nearby communities. The majority of MTA and Foothill Transit operations run east and west from the San Gabriel Valley Region to downtown Los Angeles. The MTA Routes that cross the proposed Segment 11 T/L route are 70, 76, 78, 79, 176, 268, 370, 376, 378, and 487. Foothill Transit Route FT690, which runs from Montclair to Pasadena along the I-210 freeway, also crosses the proposed Segment 11 T/L route. The routes and their destinations are summarized in Table 4.16-6.

**TABLE 4.16-6  
TRANSIT SERVICE IN VICINITY OF SEGMENT 11**

Route	Route Name	Destination	Jurisdiction Served
70	Garvey Avenue	Downtown Los Angeles	Monterey Park, Los Angeles
76	Valley Blvd – N Main St	Downtown Los Angeles	Rosemead, Los Angeles
78	Huntington Dr-Main St-Las Tunas Drive	Downtown Los Angeles	San Gabriel, Los Angeles
79	Huntington Drive	Downtown Los Angeles	San Gabriel, Los Angeles
176	Glassell Park-Highland Park-South Pasadena-Alhambra-San Gabriel-El Monte Station	Glassell Park/El Monte Station	San Gabriel, Rosemead
268	El Monte Station-Baldwin Av-Washington Bl-Altadena-JPL	El Monte Station	Pasadena, San Gabriel
370	Garvey Av Limited	El Monte Station/USC	Monterey Park
376	Valley Bl Limited	Downtown LA/El Monte Station	Rosemead
378	Huntington Dr-Main St-Las Tunas Dr Limited	Arcadia/USC	San Gabriel
487	Sierra Madre Villa-San Gabriel Bl-Del Mar Av-LA Express	Sierra Madre Villa/LA Express	Pasadena
FT690	Montclair-Pasadena Express	Montclair/Pasadena	Pasadena
Gold	Metro Rail Gold Line	Union Station and Sierra Madre Villa	Pasadena, Los Angeles
San Bernardino Line	Metrolink San Bernardino Line	Union Station and San Bernardino	San Gabriel, Los Angeles

The Metrolink station located at Cal State Los Angeles at 5150 State University Drive, is approximately 3 miles northwest of the existing SCE Mesa Station. Metrolink is operated by the Southern California Regional Rail Authority, and offers commuter rail service to downtown Los Angeles, with stops at cities and communities between there and El Monte.

The San Bernardino line runs parallel with the I-10 freeway in the San Gabriel Valley, and would be crossed by the proposed Segment 11 T/L route near its southern terminus.

The Metro rail station (identified as the Gold Line) in Pasadena is located at Sierra Madre Villa at 149 N. Halstead, approximately 0.5 mile to the east of the existing SCE Goodrich Substation. Metro rail is operated by the Los Angeles County MTA, and offers commuter rail service to downtown Los Angeles, with stops at cities and communities between downtown Los Angeles and Pasadena. A Southern Pacific Railroad (SPRR) line is located approximately 5.5 miles north of the Mesa Substation and 1.5 miles north of the I-10

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freeway. This line carries freight traffic and the Metrolink San Bernardino Line and Amtrak commuter trains eastward from Los Angeles.

**Los Angeles County Unincorporated Areas.** The Los Angeles MTA provides transit bus service as far north as Sylmar, which is about 20 miles northwest of the southern terminus of the Segment 11 T/L route. There is no Los Angeles MTA facility or service in this part of unincorporated Los Angeles County that would be affected by the Segment 11 T/L route.

**Air Transportation.**

**El Monte Airport.** In the San Gabriel area, El Monte Airport is a regional aviation airport owned by Los Angeles County, and operated under contract by American Airports Corporation. There is no scheduled air service at this airport, but charter service and pilot support services are available. It is located approximately 4 miles northeast of the SCE Mesa Substation.

**Bob Hope Airport.** Bob Hope Airport is a regional and national airport owned by the Burbank-Glendale-Pasadena Airport Authority. It is located approximately 7 miles southwest of the existing SCE Gould Station. The airport serves the Los Angeles area including Glendale, Pasadena, and the San Fernando Valley and it provides daily scheduled air service.

**Local Roadways.**

**Los Angeles County Unincorporated Areas.** The northern part of the proposed Segment 11 500/220 kV T/L route traverses the northerly areas of the Angeles National Forest and extends southward toward the Gould Substation located in the City of Pasadena. Segment 11 begins at the Vincent Substation, located near the intersection of the Angeles Forest Highway and Rockyford Road. Two-lane local roadways with low average daily traffic generally serve the unincorporated areas of northern Los Angeles County, traversed by Segment 11 T/L. Segment 11 T/L local roadway crossings are summarized in Table N-19 in technical Appendix N.

**Angeles National Forest.** South of the SCE Vincent Substation, the Segment 11 500/220 kV T/L route enters the Angeles National Forest and crosses the Angeles Forest Highway and Big Tujunga Canyon Road, which are two lane undivided highways. This segment of the Angeles Forest Highway is a regionally important north-south route across the Angeles National Forest, connecting the east-west corridors of Big Tujunga Canyon Road and SR-2 on the south with Sierra Highway near Palmdale to the north. The Angeles National Forest areas through which Segment 11 passes are generally rural in nature, and crossed by a number of formal and informal unpaved roads and utility access trails. The roadways are two-lane local roads and generally have low average daily traffic. The local roads crossed by

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Segment 11 in the Angeles National Forest area are summarized in Table N-19 in technical Appendix N.

**City of Pasadena.** The Segment 11 500/200 kV T/L route passes through the eastern area of the City of Pasadena and the SCE Goodrich Substation, located at the intersection of Foothill Boulevard and Maple Street. Segment 11 continues along an existing SCE T/L corridor and continues southwest through unincorporated areas within Los Angeles County and the San Gabriel Valley. The local streets crossed by Segment 11 route through the eastern area of the City of Pasadena are itemized in Table N-19 in technical Appendix N.

Segment 11 crosses Sierra Madre Boulevard, Orange Grove Boulevard, Foothill Boulevard, and Colorado Boulevard, which are four to six lane divided primary arterials. Sierra Madre Boulevard serves as a major road connecting Pasadena to Orange Grove Boulevard and the City of Arcadia and Temple City to the southeast. Orange Grove Boulevard serves as a major road connecting Pasadena to Foothill Boulevard and the City of Monrovia to the east. Foothill and Colorado Boulevard are major east-west arterials connecting Pasadena to San Gabriel Boulevard and the City of San Gabriel to the south.

**Los Angeles County.** South of the City of Pasadena, Segment 11 continues along an existing SCE T/L corridor southwest through Los Angeles County. The area is generally open space/parks with adjacent residential to the east and west, and crosses a number of major and minor roads. The local roads crossed by Segment 11 in this area are summarized in Table N-19 in technical Appendix N.

Key local roadway crossings include Del Mar Boulevard, California Boulevard, and Huntington Drive, and are two to eight lanes divided primary arterials. They serve as major roads connecting Pasadena to Rosemead Boulevard and the cities of San Gabriel and Rosemead to the south.

**City of San Gabriel.** Continuing south from unincorporated Los Angeles County, Segment 11 remains along the existing T/L corridor and continues southwest through the City of San Gabriel. Similar to Los Angeles County, the area crossed is generally open space with adjacent residential to the east and west, and includes a number of minor road crossings. The local roads crossed by Segment 11 in this area are summarized in Table N-19 in technical Appendix N.

**City of Rosemead.** The southern portion of Segment 11 traverses the City of Rosemead and continues southbound along the existing T/L corridor. The area is generally open space/parks with adjacent residential neighborhoods to the east and west and is crossed by a number of major and minor roads. The local roads crossed by Segment 11 in this area are summarized in Table N-19 in technical Appendix N.

Local roadway crossings for Segment 11 in this area include Walnut Grove Avenue, Mission Drive, Valley Boulevard, Garvey Avenue and San Gabriel Boulevard, which are four-lane divided minor arterials. They serve as major roads connecting the City of Rosemead to Rosemead Boulevard and the City of Monterey Park to the south.

**City of Monterey Park.** The proposed Segment 11 T/L route passes through the eastern portion of the City of Monterey Park. This portion of the route ends at the existing SCE Mesa Substation, which is located at the intersection of Potrero Grande Drive and Markland Drive. The area is generally open space with adjacent residential to the east and west, and is crossed by a number of local roads. The local roads in this area are summarized in Table N-19 in technical Appendix N.

**4.16.6.10.2 Impact Analysis.** This section addresses potential traffic and transportation related effects associated with construction and operation of Segment 11 of the proposed TRTP. The proposed project could potentially cause short-term and temporary traffic related impacts during the construction phase. No long-term, operational phase impacts to traffic and transportation-related facilities would occur.

The estimated construction worker needs, duration of work activity and forecast trips per day are presented in Section 3.0, Project Description.

The estimated peak daily trips would be less than significant compared to the AADT of 230,000, 270,000, and 1,050 vehicles for I-10, I-210, and SR-2, respectively. The construction and stringing operations at any one location would be short-term in nature, which would minimize the effect of potential traffic disruptions to levels that are less than significant.

**Construction.** Segment 11 would be built primarily along existing T/L R-O-W. Access and spur roads already exist along the existing T/L R-O-W. Depending on their condition, existing access roads would be cleared of vegetation, re-graded, re-compacted and possibly widened to provide a surface capable of supporting heavy equipment. Construction equipment such as graders, backhoes, and crawler tractors would need to be hauled to various areas of the proposed route for access road construction and reconstruction work.

**Rail Impacts.** Similar to roadways, the crossing of rail lines or other facilities associated with the train facilities, including Metrolink stations, would be coordinated with the appropriate authorities. Measures similar to those described above for state highways would be incorporated into the construction plans. These measures would include the following:

- Coordination with Metrolink, the UPRR, and other rail line owners associated with the preparation of a traffic management plan as part of the Project construction plans. The

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traffic management plan would include provisions for signage and noticing, as appropriate, to inform the public about work before any disruptions occur, temporary detour routes, the use of flagmen and/or escort vehicles to control and direct traffic flow, and scheduling work during periods of minimum traffic flow.

- The erection of temporary guard poles, structures and/or netting to protect the underlying roadways, rail line, or other structures during the stringing of T/L conductors or other work.

**Operation.** Segment 11 would not require any additional personnel during the operational phase. Operation and maintenance of Segment 11 would involve periodic inspection via helicopter and/or vehicles where accessible. No potentially significant operational-related impacts to traffic and transportation facilities would occur associated with Segment 11.

**4.16.6.10.3 Summary.** The summary of impact findings for Segment 4 in Section 4.16.6.1.2 are essentially the same for proposed TRTP Segment 11. Potential construction and operation related impacts for Segment 11 would be essentially the same to those of Segment 4 as described previously. Impacts would be less than significant.

**4.16.6.10.4 Mitigation Measures.** APMs have been incorporated into the Project design for Traffic and Transportation and Segment 11 would not result in any significant impacts; thus, no mitigation measures are required.

**4.16.6.10.5 Impact Significance After Mitigation Measure Application.** Traffic and transportation related impacts associated with implementation of Segment 11 would be less than significant.

**4.16.7 References**

Caltrans (State of California, Department of Transportation). 2005. Traffic Volumes on the California State Highway System, available at <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata>.

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