5.16 TRAFFIC AND TRANSPORTATION

5.16.1 Significance Criteria

This section addresses potential traffic and transportation related effects associated with construction and operation of Segments 2 and 3 of the proposed Antelope Transmission Project. The proposed project would result in short-term traffic related impacts during the construction phase. No long-term, operations phase impacts would be expected to occur. In accordance with Appendix G of the CEQA guidelines, project related impacts relative to traffic and transportation would be considered to be potentially significant if they would result in the following:

- Generation of substantial additional vehicular movement
- Effects on existing parking facilities, or demand for new parking
- Substantial impact upon existing transportation systems
- Alterations to present patterns of circulation or movement of people and/or goods
- Alterations to waterborne, rail or air traffic
- Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians

Estimated average construction trips per day and total project trips (by road type) are presented in Table 5.16-1, by segment.

5.16.2 Segment 2 – Antelope to Vincent

5.16.2.1 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 highway for short periods. This type of construction is not unique, and there are several procedures used by SCE to avoid and minimize potential impacts on traffic (refer to Section 3.0).

All construction within or adjacent to roadway R-O-Ws would be coordinated with the appropriate government agency – Caltrans for state highways, and local public works departments for city and county streets. All such construction 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.

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

TABLE 5.16-1
ESTIMATED AVERAGE CONSTRUCTION TRIPS PER DAY

Segment/Component and Task	Average Trips Per Day on Each Type of Road					Number of Vehicles	Duration in Days	Total Project Trips
	Interstate	Primary	Secondary	Unimproved	R-O-W			
Segment 2: Antelope to Vincent								
G.O. Staff (Managers, Engineers, Survey)	0.2	0.2	0.2	0.2	0.2	3	300	900
Site Construction Management	1	1	1	1	1	1	300	1,500
Inspection Services	1	1	1	1	1	1	215	1,075
Division Personnel	1	1	1	1	1	1	215	1,075
Construction Workers (personal auto)	1	1	1	0	0	42	215	27,090
Mobilization (equipment delivery)	0.5	0.5	0.5	0	0	125	1	188
Mobilization (yard setup)	1	1	1	0	0	3	5	45
Material Recovery	0	1	1	1	0	1	60	180
Material Delivery/Returns (steel, wire, hardware)	1	1	1	0	0	2	65	390
Road Construction/Maintenance	0	0	1	1	2	6	201	4,824
Foundation Materials	1	1	1	1	1	7	60	2,100
Foundation Construction	0	0	1	1	2	16	60	3,840
Steel Construction (Assembly phase)	0	0	1	1	2	23	77	7,084
Steel Construction (Erection phase)	0	0	1	1	1	4	135	1,620
Guard Pole Installation	0	0	0.2	0.5	0.5	4	15	36
Conductor & Static Installation	0	0	1	1	2	19	63	4,788
Cleanup & Demobilization	1	1	1	1	1	7	15	525
Demobilization (equipment returns)	0.5	0.5	0.5	0	0	125	1	188

TABLE 5.16-1(CONTINUED)
ESTIMATED AVERAGE CONSTRUCTION TRIPS PER DAY

Segment/Component and Task	Average Trips Per Day on Each Type of Road					Number of Vehicles	Duration in Days	Total Project Trips
	Interstate	Primary	Secondary	Unimproved	R-O-W			
Segment 3: Antelope to Substation One to Substation Two								
G.O. Staff (Managers, Engineers, Survey)	0.2	0.2	0.2	0.2	0.2	3	335	1,005
Site Construction Management	1	1	1	1	1	1	335	1,675
Inspection Services	1	1	1	1	1	1	270	1,350
Division Personnel	1	1	1	1	1	1	270	1,350
Construction Workers (personal auto)	1	1	1	0	0	42	270	34,020
Mobilization (equipment delivery)	0.5	0.5	0.5	0	0	136	1	204
Mobilization (yard setup)	1	1	1	0	0	3	5	45
Material Recovery	0	1	1	1	0	1	60	180
Material Delivery/Returns (steel, wire, hardware)	1	1	1	0	0	4	65	780
Road Construction/Maintenance	0	0	1	1	2	6	244	5,856
Foundation Materials	1	1	1	1	1	7	133	4,655
Foundation Construction	0	0	1	1	2	16	133	8,512
Steel Construction (Assembly phase)	0	0	1	1	2	32	104	13,312
Steel Construction (Erection phase)	0	0	1	1	1	8	116	2,784
Guard Pole Installation	0	0	0.2	0.5	0.5	4	52	125
Conductor & Static Installation	0	0	1	1	2	19	88	6,688
Cleanup & Demobilization	1	1	1	1	1	7	15	525
Demobilization (equipment returns)	0.5	0.5	0.5	0	0	136	1	204

- Coordination with Caltrans and local agencies and 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.
- Implementation of a California Highway Patrol (CHP) controlled continuous traffic break while stringing operations are performed.

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 level that is less than significant.

5.16.2.2 Transit and Rail Service

5.16.2.2.1 Lancaster and Palmdale Areas. Since the project components for Segment 2 are remote from transit and rail facilities in the Lancaster area, no effects would be anticipated from their direct construction.

The proposed project includes a primary 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. No use of rail lines is planned, thus no project-related impacts to rail lines would occur associated with delivery of materials.

5.16.2.2.2 Los Angeles County Unincorporated Areas. 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 2 line would cross the driveway leading to the Vincent Substation parking lot from Sierra Highway, and would cross the Union Pacific Railroad line just south of the Metrolink station.

Just as with roadways, the crossing of the driveway, rail line, or other property associated with the Metrolink station would have to 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 and Union Pacific and 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 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 conductors or other work.

These measures would serve to avoid or minimize effects to the users of the Metrolink station at Vincent Grade/Acton.

The Los Angeles Metropolitan Transit Authority (MTA) bus service does not extend northward into the areas that would be affected by the project, so no effects on MTA bus service or facilities would be expected to occur.

5.16.2.3 Air Transportation

No elements of Segment 2 for the project are near general aviation or larger airports; therefore, no adverse effects are anticipated. Work in some remote areas may involve the use of helicopters. Adherence to Federal Aviation Administration 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 500 kV towers along the R-O-W. No adverse effects on air traffic safety are expected due to the high visibility of the 500 kV T/L facilities.

5.16.2.4 Local Roadways

5.16.2.4.1 Lancaster and Palmdale. Construction work for Segment 2 of the project would involve the use of City of Lancaster and Palmdale roadways generally on the west side of these cities. Primary and secondary marshalling yards and various staging areas would be chosen to provide convenient storage and access for construction work. If any work requires modifications or activities within local road R-O-Ws, then the appropriate local permits would be obtained. This process would involve the preparation of traffic management plans and provisions to ensure local streets are not damaged, or that any damage is repaired.

In the general area west of Lancaster and Palmdale, some of the potentially affected roadways are major streets that connect other unincorporated communities. These include Goode Hill and Elizabeth Canyon Roads. Both of these roads would be crossed by the T/L and would be used by construction workers and traffic during work in these areas.

In general terms, traffic volumes on all of the streets in this area are relatively small. If any construction work would affect public streets, either the larger roads or local residential streets, the local permit process would require the preparation and approval of a traffic management and/or detour plan to ensure that potential delays are minimized and only short term. For these reasons, the anticipated effects of construction of Segment 2 on local roadways would be expected to be less than significant.

5.16.2.4.2 Los Angeles Unincorporated Areas. For the most part, the Segment 2 Antelope-Vincent route passes through vacant land or areas with very little development. Near its southern end, however, it would cross 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 may necessitate temporary encroachments or other activities requiring specific permission from the County (or Caltrans if the 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 some streets could be affected by overweight vehicles or other direct impacts. The mitigation measures presented in Section 5.16.6 would be expected to minimize potential effects to levels that are less than significant.

5.16.3 Modifications to Antelope and Vincent Substations

The existing SCE Antelope and Vincent Substations would undergo minor modifications for electrical tie-ins associated with Segment 2 of the proposed Antelope Transmission Project. No adverse traffic and transportation related impacts would occur associated with these modifications.

5.16.4 Segment 3 – Antelope to Substations One and Two

5.16.4.1 Freeways and State Highways

Each of the alternative routes for the Segment 3 500 kV T/L crosses SR 138 in northern Los Angeles County. In Kern County, other than normal traffic use, the only portion of the Segment 3 construction that would involve a state highway is the Alternative C 220 kV T/L route that would cross SR 58 to reach Alternative Substation 2B, about 0.5 mile north of the highway. Thus, the construction of Segment 3 facilities would involve crossing SR 138, and possibly SR 58 (if Substation 2B were selected).

The effects of project construction would include disruptions 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. This construction will temporarily delay traffic, and could affect normal

operations of the highway for short periods. This type of construction is not unique, and there are several procedures used by SCE to avoid and minimize effects on traffic.

Steps and techniques to avoid or minimize the potential effects on traffic movement include those discussed in Section 5.16.2.1 for Segment 2.

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 level that is less than significant.

5.16.4.2 Transit and Rail Service

5.16.4.2.1 Lancaster Area. Since the project components for Segment 3 are remote from transit and rail facilities in the Lancaster area, no effects are anticipated from their direct construction.

5.16.4.2.2 Los Angeles County Unincorporated Areas. There are no MTA or Metrolink facilities in the vicinity of any portion of Segment 3, including the T/L route alternatives and the substation locations and their alternatives. Therefore, no effects on Los Angeles County transit facilities are expected with Segment 3.

5.16.4.2.3 Kern County and Tehachapi. The proposed Segment 3 500 kV T/L (and alternatives) cross a rail spur that connects to the Cal Cement facility (see Figure 3-1). Additionally, the alternate 220 kV T/L to alternate Substation 2B crosses the Union Pacific Railroad north of SR 58. With implementation of the mitigation measures presented in Section 5.16.6, short-term construction impacts would be less than significant.

5.16.4.3 Air Transportation

No elements of Segment 3 for the project are near general aviation or larger airports; therefore, no adverse effects are anticipated. Edwards AFB is located approximately 8-9 miles to the east of the majority of the Segment 3 500 kV T/L route between Antelope and Substation One (refer to Figure 3-1). Based on a preliminary review by Edwards AFB and NAVAIR personnel in 2004, the proposed Antelope Transmission Project would not have significant impacts on the military mission in the area (refer to correspondence in Appendix C of this PEA).

5.16.4.4 Local Roadways

5.16.4.4.1 Lancaster Area. Construction work for Segment 3 of the project would involve the use of City of Lancaster roadways. Secondary marshalling yards and various staging areas would be chosen to provide convenient storage and access for construction work. Based

on current City Limits, paved city roadways that would be directly affected by crossing or adjacent construction are: W. Avenue J and W. Avenue G. Several other unpaved roads in Lancaster would also be affected by construction. Like any construction project, the Segment 3 work could cause some disruption of local traffic and the use of heavy trucks and equipment could cause some damage to the roadways.

5.16.4.4.2 Los Angeles Unincorporated Areas. For the most part, the Segment 3 route passes through vacant land or areas with very little development. Long stretches of each Segment 3 alternative run north-south along existing roads. For the proposed route, Alternative A, and Alternative B, these roads are 105th Street W., 100th Street W., and 110th Street W., respectively. 110th Street W. is paved in some areas, the other two are unpaved. Construction of the middle portions of the Segment 3 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 affected by Segment 3 crossings. Paved County roads that would be crossed include: W. Avenue C and W. Avenue B. Roadways crossed by the Segment 3 construction could suffer minor traffic delays and damage from the use of heavy trucks and equipment during construction.

5.16.4.4.3 Kern County and Tehachapi. Paved roadways within Kern County that would be crossed by Segment 3 construction or are located near the proposed route or one of its alternatives include: Gaskell Road, West Rosamond Boulevard, Tehachapi-Willow Springs Road, Oak Creek Road, and East Tehachapi Boulevard (crossed by Alternative C only). Construction across or adjacent to these roadways could cause temporary delays of traffic and the use of heavy trucks and equipment could cause some damage to the roads. There are also several dozen unpaved and unimproved roads within Kern County that could be similarly affected.

All of the Segment 3 facilities would be outside of the Tehachapi City limits, and no significant impacts are anticipated. 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.

5.16.5 Segment 3 Substations

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

The proposed and alternate (1A and 1B) locations for Substation One are all south of Oak Creek Road. Construction traffic would use this roadway, but there would be no direct construction effects on it. The same statement is true for Substation Two and Highline Road, alternate Substation 1C and Cameron Canyon Road, and Substation 2B and Williamson

Road. Since the substation locations are relatively close to each of these roadways, it is possible that construction may cause temporary traffic delays. There should be no other impacts from the substation construction.

5.16.6 Mitigation Measures

For all potential direct and indirect effects on highways and local roadways, whether from work on the Segments 2 and 3 T/L routes or from substation installation or improvements, the following mitigation measures would be implemented to minimize impacts to traffic and transportation to a less than significant level:

APM Traffic-1. Construction activities would be designed to minimize work on or use of local streets.

APM Traffic-2. When local streets must be used for more than normal traffic purposes, an encroachment permit or similar authorization would be obtained from the County (or other agency, as applicable).

APM Traffic-3. 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 Traffic-4. Traffic control and other management plans will be prepared where necessary to minimize project impacts on local streets.

APM Traffic-5. Any damage to local streets would be repaired, and streets would be restored to their pre-project condition.