3.14 Visual Resources

3.14.1 Introduction

This section describes effects on Visual Resources that would be caused by implementation of the TRTP. The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts for a range of Project alternatives, and recommends measures to reduce or avoid adverse impacts anticipated from Project construction and operation. In addition, existing laws and regulations relevant to Visual Resources are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with the implementation of the Project.

The information and analysis that is presented in this section has been derived from the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report* (2008). While this section presents the findings of the *Visual Resources Specialist Report*, please refer to that report for more detailed information on Project effects on Visual Resources.

Scoping Issues Addressed

During the scoping period for the EIR/EIS (August-October 2007), a series of scoping meetings were conducted with the public and government agencies, and written comments were received by agencies and the public that identified issues and concerns. The following issues related to Visual Resources that were raised during scoping are addressed in this section:

- Concern that Project may be inconsistent with Puente Hills Landfill Native Habitat Preservation Authority (PHLNHPA) Resource Management goals and policies for visual resources.
- Question regarding proposed use of lattice steel towers (LSTs) versus tubular steel poles (TSPs).
- Request that the document analyze visual impacts from the perspective of the hiker, cyclist, or horseback rider. Colima Road, Hacienda Road, and Harbor Boulevard are proposed as scenic corridors in the most recent update to the County of Los Angeles General Plan.
- Concern that Project will significantly impact aesthetic quality of the Puente Hills from a recreationists' perspective. The Los Angeles County Shabarum Trail, a National Park Service recreational historic route of Juan Bautista De Anza, runs underneath or near the lines throughout the jurisdiction of the PHLNHPA. Of particular concern is the new line within eastern portion of Powder Canyon will bisect a currently undisturbed vista area and would be directly visible upon entrance into the Preserve and before reaching the public parking area.
- Concern that the current route through Chino Hills has a strong negative impact. The proposed route slices through the heart of this community and creates a significant blemish on the aesthetics of the city. Taller towers would block view of the mountains and would ruin the views from homes.
- General concerns with the visual quality and aesthetics of the transmission lines and towers. Project will impact community character, especially for those within a close proximity to the existing corridor.
- Concern that River Commons at the Duck Farms was planned around existing towers, and that moving or enlarging the towers will have a potentially significant adverse aesthetic impact from the permanent alteration of the site's scenic integrity, and by blocking and or partially blocking views. Construction impacts, larger towers, new sources of light and glare, new or expanded substations, and new access roads would potentially degrade the aesthetic quality of the River Commons.
- Concern that it is already unsightly to see the transmission towers on the mountains across Colima Road. Adding bigger towers is not acceptable especially if it does not benefit Hacienda Heights.
- General concerns regarding taller towers, and the associated visual impacts to neighborhoods in Diamond Bar.

- Concern that additional power lines will increase blight, particularly in Segments 4 and 5, around the Antelope Substation, and west of Antelope Valley Freeway.
- The City of Ontario recommends the use of TSPs instead of "skeletal design" to mitigate aesthetic impacts created by the Project. The City also recommends use of TSPs for the 220kV towers that will be placed close to existing or planned residential developments.
- Suggested use of TSPs in Hacienda Heights area unless the towers are twice as tall as existing structures; requested use of simulated photos (from different viewing points) to compare impacts of structure types. Concerns the effects of visual impacts on wildlife corridors.
- Recommendation that the EIR/EIS consider the style of towers to be used within the Pacific Crest Trail corridor to minimize the effect of the view, and the scar on the surrounding land.
- Concern that Project has the potential to substantially degrade the visual quality of County of Los Angeles parks and trails. Request that mitigation measures include realignment of the transmission lines and vegetation or other screening at the base of the towers up to 10 to 12 feet in height.

Summary and Comparison of Alternatives

Table 3.14-1, on the following page, presents some key factors related to visual resources for each alternative. It is important to note that the "Environmental Issues" indicated in Table 3.14-1 are not impact statements, but rather selected information items that provide a comparison between the alternatives. Specific impact statements that have been identified for the Project and alternatives, in accordance with the significance criteria introduced in Section 3.14.4.1 (Criteria for Determining Impact Significance), are described in Sections 3.14.5 through 3.14.11.

3.14.2 Affected Environment

Based on the description of SCE's proposed Project and alternatives, and in consultation with the CPUC and Forest Service, the Visual Resources Technical Team defined the Study Area for the visual resource analysis as the viewsheds from which the proposed Project and alternatives might be seen, including immediate foreground, foreground, middleground, and background viewing distances. Viewing distance is distance between the viewed object and viewer. When a viewer is closer in proximity to a viewed object, more detail can be seen and there is greater potential influence of the object on visual quality. For this analysis, four viewing distances were used:

- Immediate foreground (approximately between 0 and 300 feet from viewers)
- Foreground (approximately between 300 feet and 0.5mile)
- Middleground (approximately between 0.5 and 4 miles)
- Background (beyond approximately 4 miles)

To facilitate the visual resource analysis, and to be compatible with the recreation and wilderness analysis, the Visual Resources Study Area was divided into three sub-areas:

North Area: The North Area extends from the Windhub Substation (Milepost [MP] 0.0 of the proposed Project's Segment 10) to the Vincent Substation (MP 17.8 of the proposed Project's Segment 5). The North Area includes proposed Project Segments 4, 5, 9, and 10 and traverses parts of southern Kern and northern Los Angeles Counties, as well as the incorporated cities of Lancaster and Palmdale. The Windhub, Cottonwood, Whirlwind, Antelope and Vincent Substations are situated in the North Area.

Table 3.14-1. Summary Comparison of Environmental Issues – Visual Resources

Environmental Issues	Alternative 1 (No Project/Action)	Alternative 2 (SCE's Proposed Project)	Alternative 3 (West Lancaster)	Alternative 4 (Chino Hills)	Alternative 5 (Partial Underground)	Alternative 6 (Max. Helicopter in ANF)	Alternative 7 (66-kV Subtransmission)
Temporary visual contrast resulting from construction activities and equipment	In the short term, existing visual conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	Project construction activities including road improvements, heavy equipment use, and helicopter staging areas would be visible from sensitive receptor locations as strong visual contrasts.	*Slightly less than Alt. 2 due to minor re-route.* Construction activities along Segment 4 would not be visible in the foreground of 110th Street West for two miles.	*Greater than Alt. 2 due to effects in the CHSP.* Construction activities would be visible within the Chino Hills State Park (CHSP), including from Carbon Canyon Rd and other roads and trails near and within the CHSP. Impact V-1 would not occur on S8 from MP 19.2 to 35.2.	*Greater than Alt. 2 due to underground const*. The underground portion of S8 would introduce the following visual contrasts: large earth-moving and boring equipment; truck trips to remove excavated materials; and large areas of land for disposal of excavated materials.	*Greater than Alt. 2 due to helicopter visibility.* Within the ANF, less spur road improvement would occur and associated visual contrast would be less; however, helicopter use would be more intense (construction of 143 towers via helicopter vs. 33 for Alt. 2) and temporary visual contrast would be substantial.	*Slightly greater than Alt. 2 due to 66-kV re-route in South Area.* Temporary visual contrast of equipment for underground construction would be greater in and near Whittier Narrows and the Duck Farm (South Area).
Visual contrast due to introducing T/L structure(s) where none currently exist	In the short term, existing visual conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	Construction in new ROW (S10, S4, S8A) would modify existing landscape character from "natural" (S4, S10) and "urban park" (S8A) to "industrial"; in these areas, new T/L towers would be the tallest structures in the landscape, creating skyline interference to landscape views.	*Slightly less than Alt. 2 due to minor re-route.* Direct alternation of landscape views would be less along 110th Street West in Lancaster (S4).	*Greater than Alt. 2 due to effects in the CHSP.* Adverse effects would not occur along S8A, MP 19.2 to 35.2. Routes 4C and 4D be in new ROWs near and within CHSP, introducing the tallest structures in the landscape and creating skyline interference to landscape views	*Slightly less than Alt. 2 due to underground.* In the long-term the underground portion of Alt. 5 would result in fewer overhead structures being installed.	*Same as Alternative 2.*	*Slightly greater than Alt. 2 due to re-routed subtransmission lines.* A new 66-kV subtransmission line would be introduced along San Gabriel Boulevard and Durfee Road, which are currently characterized as urban landscape character.
Visual contrast due to increasing T/L structure size and/or type where T/L structures currently exist	In the short term, existing visual conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	Double-circuit 500-kV T/L structures would be larger than existing structures and result in the following visual contrasts: increased prominence and industrial character; structure skylining; increased background landscape obstruction; lower scenic integrity conditions in the ANF;	*Same as Alternative 2.*	*Greater than Alt. 2 due to effects in the CHSP.* Each route would introduce new and/or larger structures in and/or near the CHSP.	*Slightly less than Alt. 2 due to underground.* A transition station would be installed at each end of the underground portion, but new overhead T/L structures (LSTs) would not be introduced along the underground segment.	*Less than Alt. 2 due to better compliance with Forest Standard ANF S1.* In the ANF, a TSP (vs LST) would be used at the PCT Trailhead at Mill Creek Summit, thus allowing the current trail location to remain and better complying with Standard ANF S1; a	*Less than Alt. 2 due to undergrounding 66-kV.* The underground installation of subtransmission lines through Whittier Narrows and the Duck Farm would decrease adverse visual effects.

Table 3.14-1. Summary Comparison of Environmental Issues – Visual Resources

Environmental Issues	Alternative 1 (No Project/Action)	Alternative 2 (SCE's Proposed Project)	Alternative 3 (West Lancaster)	Alternative 4 (Chino Hills)	Alternative 5 (Partial Underground)	Alternative 6 (Max. Helicopter in ANF)	Alternative 7 (66-kV Subtransmission)
		Forest Plan amendment for Standard ANF S1 (PCT).				Forest Plan amendment would not be required in this one location.	
Visual contrast due to clearing and grading activities	In the short term, existing visual conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	Roads (access / spur) in the ANF would be improved, resulting in substantial adverse visual effects including strong soil color contrasts. Visual effects from spur road improvement would not occur for 33 structures that would be constructed via helicopter. Twelve helicopter staging areas would be cleared / graded in the ANF and would result in visual scarring and contrast similar to roads.	*Same as Alternative 2.*	*Slightly greater than Alt. 2 due to effects in the CHSP.* Adverse visual effects would be introduced to the CHSP as a result of clearing and grading activities for Routes A through D; these effects would not occur along S8A from MP 19.2 to MP 35.2.	*Temporary contrast would be greater than Alt. 2 due to u/g const.* Substantial earthwork would be required for installation of underground infrastructure and would introduce temporary adverse visual effects.	*Less than Alt. 2 due to fewer spur road improvements.* Fewer spur roads would be constructed due to increased helicopter construction (143 vs. 33 for Alt.2); adverse visual effects of spur roads would not occur for the 143 helicopter-constructed towers. Other roads, such as West Fork Bikeway, would not be widened or result in visual contrast. One less helicopter staging area (11 vs. 12 for Alt. 2) would be cleared.	*Same as Alternative 2.* Vegetative clearing and earthwork associated with the underground portions of Alternative 7 and pulling/splicing locations for the new overhead line would temporarily affect existing landscape character and visual quality in the vicinity of Whittier Narrows and the Duck Farm.
Sunlight reflection and glare from new metal surfaces	In the short term, existing visual conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	When viewed from higher vantage points, such as a mountain road, or crest trail, sunlight reflecting off new conductors and towers would cause color and texture contrasts.	*Same as Alternative 2.*	*Slightly less than Alt. 2 due to non-build along Segment 8A.* Routes 4A through 4D would have new conductors that could be viewed from ridgetop trails in CHSP; however, no new towers would be installed along S8A from MP 19.2 to MP 35.2, thereby lessening the amount of new metal surfaces.	*Same as Alternative 2.*	*Same as Alternative 2.*	*Same as Alternative 2.*
Long-term loss or degradation of	In the short term, existing visual	Would traverse and/or be visible from multiple	*Same as Alternative 2.*	*Slightly greater than Alt. 2 due to effects to*	*Same as Alternative 2.*	*Less than Alt. 2 due to decreased road const.*	*Same as Alternative 2.*

Table 3.14-1. Summary Comparison of Environmental Issues – Visual Resources

Environmental Issues	Alternative 1 (No Project/Action)	Alternative 2 (SCE's Proposed Project)	Alternative 3 (West Lancaster)	Alternative 4 (Chino Hills)	Alternative 5 (Partial Underground)	Alternative 6 (Max. Helicopter in ANF)	Alternative 7 (66-kV Subtransmission)
scenic viewshed(s)	conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	designated or eligible scenic highways and trails, thereby directly degrading and causing the long-term loss of scenic quality of the viewsheds.		*Carbon Canyon Rd.* Routes 4A through 4D would traverse Carbon Canyon Road (SR 142), which is an Eligible State Scenic Highway.		*in the ANF.* Fewer spur roads would be constructed or improved in the ANF. Helicopter staging area #5 would be visible at background distances from the PCT along Santa Clara Divide; however, no helicopter staging areas would be visible from the Angeles Crest Scenic Highway, I-210, West Fork National Scenic Bikeway Trail, or State Highway 39.	
Non-compliance with established visual resource management plans or landscape conservation plans [1]	In the short term, existing visual conditions and landscapes would not be affected. However, there will continue to be a need for T/L project(s) to be implemented somewhere. The specific visual impacts of future T/L project(s) are not known.	Would be inconsistent with Forest Standard ANF S1, LMP Part 3 Aesthetic Standards ANF S9 & S10, the High Scenic Integrity Objective of NFS lands, and Goal Visual-1 and Objective Visual-1.2 of the PHLNHPA Resource Management Plan.	*Same as Alternative 2.*	*Greater than Alt. 2 due to conflict with the CHSP General Plan.* Routes 4A through 4D would be in conflict with the CHSP General Plan's goals for visual resource management.	*Same as Alternative 2.*	*Less than Alt. 2 due to compliance with Forest Standard S1.* Use of a TSP at the PCT Trailhead at Mill Creek Summit would provide consistency with Forest Standard S1 and would not require an amendment to the Forest Plan.	*Same as Alternative 2.*

[1] Following are the Forest Plan Standards that apply to visual resource management on the ANF:

- ANF S1 - Pacific Crest Trail - Protect scenic integrity of foreground views as well as from designated viewpoints. Where practicable, avoid establishing nonconforming land uses within the viewshed of the trail (Liebre-Sawmill, Santa Clara Canyons, Soledad Front Country and Angeles High Country). (p. 76)
- ANF S9: Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.
- ANF S10: Scenic Integrity Objectives will be met with the following exceptions: Minor adjustments not-to-exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.
- Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

The Forest Supervisor may approve a project in the ANF that would lower the Scenic Integrity Objectives level without a Forest Plan amendment, as long as the decrease would not be greater than one SIO level (for instance if a project would achieve a Moderate SIO in an area designated for a High SIO). See the detailed discussion of SIOs achieved by mileposts (MP) for Segments 6 and 11 under Alternatives 2 and 6. A drop of more than one level of SIO would require a Forest Plan amendment.

Center Area: The Center Area is located between the Vincent Substation (MP 0.0 of the proposed Project's Segments 6 and 11) and the southern boundary of the ANF (MP 24.5 of the proposed Project's Segment 11 and MP 26.9 of the proposed Project's Segment 6). The majority of the Center Area falls within the jurisdictional boundaries of the ANF and includes all of the proposed Project's Segment 6 and approximately 70 percent of Segment 11. The Gould Substation, part of Segment 9, is located just outside of the ANF's jurisdictional boundaries, but was included as part of the Center Area because of its visual context to the ANF.

South Area: The South Area extends from the southern boundary of the ANF (MPs 0.0 and 24.5 of the proposed Project's Segments 7 and 11, respectively) to the Mira Loma Substation (MPs 35.2, 6.8 and 6.4 of the proposed Project's Segments 8A, 8B and 8C, respectively). The South Area includes the Goodrich, Rio Hondo, Mesa, Chino, and Mira Loma Substations and traverses lands within Los Angeles and San Bernardino Counties, as well as multiple incorporated cities.

3.14.2.1 Baseline Data Collection Methodology

For all segments of the proposed Project and its alternatives, baseline data were collected using an approach that incorporated a combination of information review, agency consultation, analysis of aerial photographs and satellite imagery, review of maps, field reconnaissance, site analysis, and on-site photography. Existing information was used to the extent possible and appropriate, including the Proponent's Environmental Assessment that was prepared by SCE and the Visual Resource Report prepared by CH2M-Hill for SCE (SCE, 2007a).

Baseline data were collected for the environmental setting using the following methodology:

- A general overview and site reconnaissance was conducted for each route segment and alternative route.
- Locations of sensitive receptor locations were mapped on existing USGS topographic maps and/or aerial photographs showing freeways, streets, roads, residences, trails, and recreation areas.
- Viewpoints were identified from which the proposed Project and/or alternatives would be seen.
- From all of these viewpoints, the most critical views were selected as "possible key observation points" (Possible KOPs).
- From all Possible KOPs, the most critical were selected as KOPs for analysis, based on their ability to exemplify visual resource impacts at a particular location. KOPs that were analyzed are representative of visual resource impacts to a particular landscape unit. See Figure 3.14-1 – Key Observation Points in the Map & Figure Series Volume (Map & Figure Series Volume)
- Color photographs of existing conditions and corresponding visual simulations are found in the Map & Figure Series Volume.
- More detailed information about these baseline data may be found in the *Visual Resource Specialist Report*.

For each KOP analyzed in the EIR/EIS, a photograph and simulation has been printed on 11 by 17 inch-paper. If the reader stands at the exact location of the KOP looking in the direction the photo was taken, each photograph and simulation will appear "life-size" when held approximately 18-inches away from the viewer's eyes. In the Sections 3.14.2.3 through 3.14.2.8, the existing visual situation is described in detail for each KOP. In the Impact Analysis (Sections 3.14.5 through 3.14.11), future visual effects of the proposed Project were predicted for each KOP by using the computerized visual simulations. Please see the Map & Figure Series Volume for a map of all the KOPs, as well as "life-size" pairs of before and after photographs and simulations.

The multi-jurisdictional nature of the proposed Project required a highly integrated, dual-faceted approach to the visual analysis. Specifically, on National Forest System Lands (NFS lands) the visual analysis

compared predictions of future visual conditions with the Desired Condition and Scenic Integrity Objectives (SIOs) described in the 2005 ANF Land Management Plan (Forest Plan) and in the Nationwide Forest Service Scenery Management System (SMS). Scenic integrity is defined as the state of naturalness, or conversely, the state of disturbance, created by human activities or alterations. Integrity is stated in degrees of deviation from existing or desired landscape character.

For non-National Forest System (non-NFS) lands, the visual analysis used the Visual Sensitivity/Visual Change (VS/VC) method to assess the visual effects of the proposed Project on existing landscapes. This dual methodology approach was necessary because the SMS analysis must be used for NFS lands, however, SMS classifications with established management objectives cannot be applied on private lands (non-NFS lands). For non-NFS lands, VS/VC criteria were ascertained from the County and City General Plans that have criteria for visual resource management, and from state and county scenic highway standards. Regardless of jurisdiction, visual simulations were prepared in order to show future visual conditions after Project completion.

While these two methodologies – SMS and VS/VC – are similar in several respects, there are some differences, as explained below. The approach of this visual analysis was to seamlessly integrate the methodologies so that the overall presentation of information, analysis, and conclusions are consistent and easy for the reader to understand and follow.

Visual Sensitivity/Visual Change Methodology (VS/VC)

The VS/VC methodology used to analyze the proposed Project and its alternatives included a characterization of the visual sensitivity of existing landscapes and the characteristics of existing visual changes apparent in the landscape. At each KOP, existing conditions of the landscape and viewing circumstances were described, leading to a conclusion about the viewpoint's overall visual sensitivity.

Visual sensitivity consists of three components: visual quality; viewer concern; and, viewer exposure. The description of visual quality notes the existing natural landscape features and built structures that contribute to overall visual quality. Viewer concern can be described as the expectations for the landscape that are held by the viewing public. These concerns were elicited during scoping and from planning documents. Viewer concern is often reflected in public policy documents that identify landscapes of special concern (vista points, scenic trails, ridgeline protection ordinances, etc.) or roadways with special scenic status (scenic highways). Viewer exposure also affects a landscape's overall visual sensitivity. Landscapes that have very low viewer exposure (based on landscape visibility, viewing distance, number of people who view the landscape, or duration of time that the landscape can be viewed) will tend to be less sensitive to overall visual change in the context of human experience of visual impacts. Landscapes with higher viewer exposure are more sensitive to overall visual changes.

Project-induced visual change was determined for each KOP based on field studies of anticipated visual contrast, Project dominance, and the potential for view impairment, that is, potential of the proposed structure to block, obstruct, or impair the view of the backdrop landscape, skyline, or higher quality landscape features. Project-induced visual change can result from aboveground facilities, vegetation removal, landform modification, Project component size or scale relative to existing landscape characteristics, and the placement of Project components relative to developed features. The experience of visual change can also be affected by the degree of available screening by vegetation, landforms, architecture and other structures; distance from the observers; atmospheric conditions; and angle of view.

As described in detail above, computerized visual simulations were prepared to aid in the assessment of visual change and overall impact significance, which was arrived at by evaluating the extent of visual change in the context of the existing visual sensitivity.

For the North and South Areas (non-NFS lands), in order to accommodate the various State, county and city regulations presented in Section 3.14.3 and in Appendix C of the *Visual Resources Specialist Report*, the visual analysis used a single methodology to determine the degree of impact significance, after considering two factors – overall visual sensitivity and visual change. Table 3.14-2 illustrates the general relationship between visual sensitivity and visual change. This table was used primarily as a consistency check between individual KOP evaluations. Determinations of visual sensitivity and visual change were based primarily on analyst experience and site-specific circumstances at each KOP.

The relationships presented in Table 3.14-2 are intended as a guide only, recognizing that site-specific circumstances may warrant a different conclusion. However, it is reasonable to conclude that lower visual sensitivity ratings combined with lower visual change ratings will generally correlate well with lower degrees of impact significance. Conversely, higher visual sensitivity ratings combined with higher visual change ratings will tend to result in higher degrees of visual impact occurring at the site.

Table 3.14-2. General Guidance for Review of Visual Impact Significance for Non-NFS Lands

Visual Sensitivity	Visual Change				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	Not Significant [1]	Not Significant	Adverse but Not Significant [2]	Adverse but Not Significant	Adverse but Not Significant
Low to Moderate	Not Significant	Adverse but Not Significant	Adverse but Not Significant	Adverse but Not Significant	Adverse and Potentially Significant [3]
Moderate	Adverse but Not Significant	Adverse but Not Significant	Adverse but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant
Moderate To High	Adverse but Not Significant	Adverse but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant [4]
High	Adverse but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant	Significant

Table Notes:
Not Significant – Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.
Adverse but Not Significant – Impacts are perceived as negative but do not exceed environmental thresholds.
Adverse and Potentially Significant – Impacts are perceived as negative and may exceed environmental thresholds depending on Project and site-specific circumstances.
Significant – Impacts with feasible mitigation may be reduced to levels that are not significant or avoided all together. Without mitigation, significant impacts would exceed environmental thresholds.

Implicit in this rating methodology is the acknowledgment that for a visual impact to be considered significant, two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers; and (2) the perceived incompatibility of one or more elements or characteristics of the proposed Project tends toward the high extreme, leading to a substantial reduction in visual quality.

USDA Forest Service Scenery Management System (SMS) Methodology

In 1995, the Forest Service updated its nationwide Visual Management System and renamed it the Scenery Management System (SMS) (USDA Forest Service, 1995). In 2005, the Pacific Southwest (PSW) Region of the Forest Service adopted new Forest Plans for its four Southern California National Forests, and implemented the SMS for the Los Padres, Angeles, San Bernardino, and Cleveland National Forests. The purpose of SMS is to methodically inventory, manage, and monitor visual and scenic resources on National Forest System lands. The goal of the Forest Service SMS is to manage NFS lands to attain the highest possible visual quality of landscape aesthetics and scenery for the public in perpetuity, commensurate with other appropriate public uses, costs, and benefits.

The TRTP visual resource analysis used the Forest Service SMS methodology to evaluate SCE's proposed Project and its effects on landscape aesthetics and visual quality in the ANF and to ascertain compliance with the Forest Plan for all NFS lands that would be crossed by SCE's proposed Project or its alternatives.

For planning purposes, the ANF has been divided by the Forest Service into a series of geographic units, each of which is called a "Place." The ANF Forest Plan assigned Place designations to 11 areas throughout the ANF. Of the 11 Places, five would be crossed by the proposed Project (see Map & Figure Series Volume, Figure 3.14-2 - Angeles National Forest Landscape Places and Scenic Integrity Objectives Segment 6 and 11). They are, from north to south:

- Soledad Front Country
- Angeles High Country
- Angeles Uplands West
- Big Tujunga Canyon (only a tiny corner)
- The Front Country

These Landscape Places are described in more detail in the *Visual Resource Specialist Report* with excerpts from the Forest Plan descriptions for these five Places. The Forest Plan established standards for each Place, including a theme, setting, desired condition and program emphasis section. These four descriptions provide visual resource management direction of the ANF.

- **Theme -** refers to images of the landscape that can be defined with a brief set of physical, visual or cultural attributes that encapsulate the sense of place.
- **Setting -** provides a description of the landscape character of the Place. The Forest Service describes landscape character as "an overall visual and cultural impression of landscape attributes; the physical appearance and cultural context of a landscape that gives it an identity and 'sense of place'" (USDA Forest Service, 1995).
- **Desired Condition -** paints a picture of what the Place could be as the national forest implements activities to move toward the overall forest-wide desired conditions.
- **Program Emphasis -** identifies priority activities the national forest will emphasize in the next three to five years.

The Forest Service SMS uses Theme, Setting, Desired Condition, Program Emphasis, and Scenic Integrity Objectives to evaluate, manage, and monitor visual resources, landscape aesthetics, and scenery on NFS lands. Desired Condition expresses the highest quality goal for a given landscape. A Scenic Integrity Objective (SIO) defines the minimum level of visual quality to which any National Forest landscape should be subjected, in other words, the minimum acceptable standard for visual quality for an

area (see Map & Figure Series Volume, Figure 3.14-2). The following paragraphs describe these two key components of the SMS.

Desired Condition (Maximum Standard)

With regard to attaining the highest possible visual quality, the 2005 Angeles Forest Land Management Plan established a maximum standard of Desired Condition for each landscape "Place."

- Desired Condition expresses the maximum level of desired condition for each given landscape Place.
- Desired Condition captures the function of the landscape to be maintained and the landscape character and attributes that visitors have come to appreciate and expect to see.
- Desired Condition represents the sustainable image pursued by the Forest Service for each landscape Place.
- Combined, the elements of Desired Condition and SIO succinctly capture the landscape's sense of place.

Scenic Integrity Objective or SIO (Minimum Standard)

In order to define the degrees of deviation from the natural or natural-appearing landscape character that may occur at any given time, the Forest Service uses Scenic Integrity Objectives or SIOs. SIOs represent the minimum standard of scenic integrity to which landscapes are to be managed. All land management activities, including TRTP, must ensure that these minimum levels are achieved. The 2005 Forest Plan allows for a project to achieve one level below the established SIO(s), but only with the Forest Supervisor's approval. Temporary drops of more than one SIO level are allowed during and immediately following the implementation of the project provided that the SIO level(s) are met within a three year period (maximum).

SIOs were established and mapped for the ANF in the 2005 Land Management Plan for Southern California Forests. There are five SIOs, and additionally, there is a sixth level of landscape alteration that is excessive, where human-caused deviations are extremely dominant and inappropriate for NFS lands. This level of scenic integrity is never used as a management objective; however, it is useful for inventorying existing visual conditions or for predicting future scenic conditions of proposed projects such as TRTP. Table 3.14-3 presents the five Scenic Integrity Objectives, with definitions for each Scenic Integrity Level.

Table 3.14-3. Scenic Integrity Objectives and Definitions for NFS Lands

Scenic Integrity Objective (SIO)	Definition
Very High SIO	Landscapes where the valued landscape character "is" intact with only minute if any visual deviations. The existing landscape character is expressed at the highest possible level.
High SIO	Landscapes where the valued landscape character "appears" intact. Visual deviations (human-made structures) may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.
Moderate SIO	Landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Low SIO	Landscapes where the valued landscape character "appears moderately altered." Visual deviations (human-made structures) begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.
Very Low SIO	Landscapes where the valued landscape character "appears heavily altered." Visual deviations (human-made structures) may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However, visual deviations (human-made structures) must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

Table 3.14-3. Scenic Integrity Objectives and Definitions for NFS Lands	
Scenic Integrity Objective (SIO)	Definition
For Inventory and Scenic Effect Prediction Purposes Only	
Unacceptably Low Scenic Integrity [1]	A scenic integrity level (never an objective) where human activities of vegetation and landform alterations or human-made structures are excessive and totally dominate the natural or natural-appearing landscape character. Landscapes where the valued landscape character being viewed appears extremely altered. Visual deviations are extremely dominant and borrow little if any form, line, color, texture pattern or scale from the natural landscape character. Landscapes of this level of integrity need rehabilitation. Unacceptable alterations are "what not to do to any landscape," regardless of the distance from which the activity may be observed.

[1] According to the SMS, there is a level of landscape alteration that is excessive, where deviations are extremely dominant. This level of scenic integrity is to be used for inventory purposes only – it must not be used as a management objective. This level of scenic integrity, "Unacceptably Low Scenic Integrity" or "Unacceptably Altered," is useful for inventorying existing facilities, and for predicting future scenic integrity of proposed projects and activities.

As described in Section 2.2.14 (Alternative 2 – Forest Service Permits and Plan Amendments), it is expected that amendment(s) to the 2005 Forest Plan would be required under the proposed Project, which would include altering SIOs along the Project route. Table 3.14-4, below, provides the SIOs which are currently assigned to Forest lands that would be traversed by the proposed Project (Segment 11 and Segment 6) in the ANF, presented geographically by Milepost (MP), from the north to the south.

Table 3.14-4. Scenic Integrity Objectives by Mile for Alternative 2 (SCE's Proposed Project)		
MP (Proposed Project)	SIO	Definition
Segment 11 MP 1.5 to 6.8 MP 6.9 to 8.7 MP 9.9 to 11.3 MP 11.5 to 15.2 MP 15.3 to 19.7 MP 19.8 to 24.5	High	Landscapes where the valued landscape character "appears" intact. Visual deviations (human-made structures) may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.
Segment 11 MP 6.8 to 6.9 MP 8.7 to 9.9 MP 11.3 to 11.5 MP 15.2 to 15.3 MP 19.7 to 19.8	Moderate	Landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Segment 6 MP 1.4 to 10.6 MP 10.8 to 12.1 MP 12.3 to 13.5 MP 13.6 to 26.9	High	Landscapes where the valued landscape character "appears" intact. Visual deviations (human-made structures) may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.
Segment 6 MP 10.6 to 10.8 MP 12.1 to 12.3 MP 13.5 to 13.6	Moderate	Landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.

The Direct, Indirect, and Cumulative Effects Analysis for Alternatives 2 through 7 are described in detail in Sections 3.14.6 through 3.14.11. The anticipated effects of construction and operation of the proposed Project or an alternative to the Project would result, in most cases, in conditions that would be inconsistent with the existing SIOs described in Table 3.14-4. Therefore, an amendment to the 2005 Forest Plan specific to SIOs would be necessary to change SIO levels to be consistent with conditions expected after implementation of the Project. Table 3.14-5 provides a description of how the existing SIOs would need to be changed in the 2005 Forest Plan for the proposed Project and each alternative to the Project, organized by Milepost (MP), from north to south.

Table 3.14-5. Scenic Integrity Objective Amendments to the 2005 Forest Plan	
Forest Plan Elements	Scenic Integrity Objective (SIO)
Alternative 1 No Project/Action	No Changes Required to Existing Scenic Integrity Objectives
Alternative 2 SCE's Proposed Project (Changes required inside rights of way in ANF for Segments 11 and 6)	Segment 11: High SIO to Unacceptably Low SI for a total of 10.45 Miles (from MP 1.5 to 2.25, MP 3.0 to 4.25, MP 11.5 to 14.75, MP 19.2 to 19.7, and MP 19.8 to 24.5) High SIO to Very Low SIO for a total of 3.4 Miles (from MP 4.75 to 6.8 and MP 6.9 to 8.25) High SIO to Low SIO for a total of 6.2 Miles (from MP 8.25 to 8.7, MP 9.9 to 11.3, MP 14.75 to 15.2, and MP 15.3 to 19.2) High SIO to Moderate SIO for a total of 0.75 Miles (from MP 2.25 to 3.0) [1] Segment 11: Moderate SIO to Unacceptably Low SI for a total of 0.1 Mile (from MP 19.7 to 19.8) Moderate SIO to Very Low SIO for a total of 0.1 Mile (from MP 6.8 to 6.9) Moderate SIO to Low SIO for a total of 1.5 Miles (from MP 8.7 to 9.9, MP 11.3 to 11.5, and MP 15.2 to 15.3) [1] Segment 6: High SIO to Unacceptably Low SI for a total of 11.0 Mile (from Mile MP 1.4 to 8.0, MP 13.1 to 13.5, and MP 13.6 to 17.6) High SIO to Very Low SIO for a total of 3.7 Mile (from 8.0 to 10.6, MP 10.8 to 11.5, MP 17.6 to 18.0) High SIO to Low SIO for a total of 6.6 Mile (from MP 11.5 to 12.1, MP 12.3 to 13.1, MP 19.0 to 21.4, and MP 24.1 to 26.9) High SIO to Moderate SIO for a total of 3.7 Mile (from MP 18.0 to 19.0 and MP 21.4 to 24.1) [1] Segment 6: Moderate SIO to Unacceptably Low SI for a total of 0.1 Mile (from MP 13.5 to 13.6) Moderate SIO to Very Low SIO for a total of 0.2 Mile (from MP 10.6 to 10.8) Moderate SIO to Low SIO for a total of 0.2 Mile (from MP 12.1 to 12.3) [1]
Alternative 3 West Lancaster Alternative (Changes required inside rights of way in ANF for Segments 11 and 6)	Same changes as Alternative 2
Alternative 4 Chino Hills Route Alternatives (Changes required inside rights of way in ANF for Segments 11 and 6)	Same changes as Alternative 2
Alternative 5 Partial Underground Alternative (Changes required inside rights of way in ANF for Segments 11 and 6)	Same changes as Alternative 2
Alternative 6 Maximum Helicopter Construction in the ANF (Changes required inside rights of way in ANF for Segments 11 and 6)	Segment 11: High SIO to Unacceptably Low SI for a total of 5.2 Miles (from MP 19.2 to 19.7 and MP 19.8 to 24.5) High SIO to Very Low SIO for a total of 2.0 Miles (from MP 1.5 to 2.25 and MP 3.0 to 4.25) High SIO to Low SIO for a total of 12.85 Miles (from MP 4.75 to 6.8, MP 6.9 to 8.25, MP 8.25 to 8.7, MP 9.9 to 11.3, MP 11.5 to 14.75, MP 14.75 to 15.2, and MP 15.3 to 19.2) High SIO to Moderate SIO for a total of 0.75 Mile (from MP 2.25 to 3.0) [1]

Table 3.14-5. Scenic Integrity Objective Amendments to the 2005 Forest Plan	
Forest Plan Elements	Scenic Integrity Objective (SIO)
	Segment 11: Moderate SIO to Unacceptably Low SI for a total of 0.1 Mile (from MP 19.7 to 19.8) Moderate SIO to Very Low SIO for a total of 0.1 Mile (from MP 6.8 to 6.9) Moderate SIO to Low SIO for a total of 1.5 Miles (from MP 8.7 to 9.9, MP 11.3 to 11.5, and MP 15.2 to 15.3) [1] Segment 6: High SIO to Unacceptably Low SI for a total of 11.0 Miles (from Mile MP 1.4 to 8.0, MP 13.1 to 13.5, and MP 13.6 to 17.6) High SIO to Very Low SIO for a total of 3.7 Miles (from 8.0 to 10.6, MP 10.8 to 11.5, and MP 17.6 to 18.0) High SIO to Low SIO for a total of 4.2 Miles (from MP 11.5 to 12.1, MP 12.3 to 13.1, and MP 24.1 to 26.9) High SIO to Moderate SIO for a total of 6.1 Miles (from MP 18.0 to 19.0, MP 19.0 to 21.4, and MP 21.4 to 24.1) [1] Segment 6: Moderate SIO to Unacceptably Low SI for a total of 0.1 Mile (from MP 13.5 to 13.6 MP) Moderate SIO to Very Low SIO for a total of 0.2 Mile (from MP 10.6 to 10.8) Moderate SIO to Low SIO for a total of 0.2 Mile (from MP 12.1 to 12.3) [1]
Alternative 7 66-kV Subtransmission Alternative (Changes required inside rights of way in ANF for Segments 11 and 6)	Same changes as Alternative 2

Note: It is predicted that Alternatives 2, 3, 4, 5, and 7 would achieve the Very Low SIO in areas designated as Moderate SIO for Segments 11 and 6 because topographic screening would not hide these tall new T/L structures.

[1] The Forest Supervisor may approve a project in the ANF that would lower the Scenic Integrity Objectives level without a Forest Plan amendment, as long as the decrease would not be greater than one SIO level (for instance if a project would achieve a Moderate SIO in an area designated for a High SIO).

The suggested SIO changes shown in Table 3.14-5 assume that all relevant mitigation measures recommended for visual resource management in this EIR/EIS will be implemented. If visual resource mitigation measures are not implemented by the decision makers at the CPUC and/or FS, then the predicted SIO levels in Table 3.14-5 will not be attained. Viewsheds of affected landscapes may be greater than the utility corridor's 1,000-foot width or the ROW width of a few hundred feet.

3.14.2.2 Regional Setting

From a visual resource perspective, the proposed Project and its alternatives span a wide variety of landscapes, including: rugged mountains of the Tehachapi Wind Resource Area in Southern Kern County; flat valley floors with desert scrub or agricultural fields in the Antelope Valley in Southern Kern and Northern Los Angeles Counties; barren, rolling foothills south of Vincent Substation; remote, rugged landscapes of the ANF; and rapidly developing urban and suburban landscapes of the Los Angeles Basin and Inland Empire of Western San Bernardino County and Northern Orange County.

Near the Tehachapi Wind Resource Area (TWRA) and in the Antelope Valley, vegetation is generally low, dry scrub and grasses, or agricultural fields that provide little or no vegetative screening for transmission lines, substations, and other utility infrastructure. Travelways in the TWRA are paved, two-lane roads that twist and turn through the rugged topography. Existing wind turbine generators (also called wind farms) dominate the visual character in the mountains and gentle slopes of the TWRA. In the Antelope Valley, travelways are primarily unpaved agricultural field roads and paved access roads on a

one-mile grid. Scattered ranch houses, outbuildings, and windbreaks are located along paved, gravel and dirt roads that follow the one-mile grid pattern in the Antelope Valley. Existing transmission line corridors and substations are visually evident in the Antelope Valley.

The Pacific Crest National Scenic Trail (PCT) would be crossed by the proposed Project in three locations; once in the North Area and twice in the Center Area. The PCT is 2,650 miles long, extending from Mexico to Canada and running generally along the north-south oriented mountain ridges of California (Sierra Nevada), Oregon, and Washington (Cascade Range). It is the westernmost of the National Scenic Trails and has the greatest elevation change of all, extending from low desert valleys in Southern California, along the Sierra Nevada, and into rainforests of the Pacific Northwest (SCE, 2007a). The Pacific Crest Trail Association (PCTA) is a non-profit membership group dedicated to the preservation and protection of the trail. Use of the PCT is limited to non-mechanized means of travel. Every year, thousands of hikers and horseback riders use some portion of the PCT and approximately 300 through-hikers attempt to complete the entire trail in a single season (PCTA, 2007). In 1993, the PCTA signed a Memorandum of Understanding (MOU) with the Forest Service and other land management agencies including the US Department of Interior (DOI), the National Park Service (NPS), and the Bureau of Land Management (BLM). This MOU identifies the PCTA as the federal government's "major partner" in the management of the PCT (PCTA, 2007). As described in the PCTA's Strategic Plan, which was approved on July 15, 2006, the PCTA's mission is to "…protect, preserve, and promote the Pacific Crest National Scenic Trail as an internationally significant resource for the enjoyment of hikers and equestrians, and for the value that wild and scenic lands provide to all people".

The PCT crosses through the North Area in a south-to-north direction. Although the PCT is usually situated on ridgelines, it is routed off ridges in several places within the North Area due to a lack of necessary easements through private property (see Map & Figure Series Volume, Figure 3.14-1). In the vicinity of Segment 4, the PCT does not have its own trail tread, but rather, generally follows access roads associated with the Los Angeles Aqueduct (SCE, 2007a). Although most of the PCT is situated to follow ridgelines, it has been diverted northeast of the nearest ridgeline in the area of Segment 4 due to the location of private property (Tejon Ranch) where easements for the trail have not been granted. Segment 4 would traverse the PCT at S4 MP 2.7.

The PCT crosses through the Center Area in an east-to-west direction. In the Center Area, the PCT is located on ridgelines, consistent with the vision for a "crest" trail (see Figure A-2 – Angeles National Forest Landscape Places and Scenic Integrity Objectives Segments 6 and 11 in Appendix A). East of Segment 6, the PCT is situated on the north side of the mountains, providing views to the Mojave Desert to the north, as it traverses undeveloped landscapes dominated by oak and pine vegetation covering steep mountainsides. As the PCT approaches Mill Creek Summit, the visual environment becomes dominated by three paved parking lots at the trailhead, a Forest Service fire station, and a day use recreation site. At the PCT trailhead, the trail is situated directly downhill from an existing 220-kV LST that would be replaced with a new 500-kV LST. Segment 6 would traverse over the PCT at S6 MP 7.3. Leaving Mill Creek Summit, the PCT then crosses the Angeles Forest Highway and proceeds west along the south side of the Santa Clara Divide. This location provides panoramic views to viewsheds in a southern direction, into the Tujunga Creek watershed. West of Mill Creek Summit, the PCT crosses the Mount Gleason Road (Santa Clara Divide Road) at a saddle, and then proceeds on the north side of the mountains, heading west toward Segment 11. Therefore, the PCT provides numerous viewing opportunities to the north and south into different viewsheds. Segment 11 would traverse over the PCT at S11 MP 7.6, just southwest of Big

Buck Campground. The landscape in this vicinity is dominated by natural appearing forests of pine, cedar, and oak trees.

Throughout the Center Area, in the ANF, dense shrubs and tall conifer trees cover steep mountainsides leading down into narrow canyons, providing some vegetative and landform screening. Water features are mostly absent in this landscape, except along major rivers in canyon bottoms and at the Big Tujunga Reservoir, which is not accessible for recreationists. Narrow, twisting, two-lane paved mountain roads wind through the ANF in a north-south direction (Angeles Forest Highway) and east-west direction (Angeles Crest Highway) and TRTP would cross over both of these highways at different locations. These two major roads, along with the Upper Big Tujunga Canyon Road, provide scenic viewing opportunities, opportunities for "driving for pleasure," and access linkages between the Antelope Valley and the Los Angeles Basin. The Pacific Crest Trail, Big Tujunga Canyon Trail (12W02), Clear Creek Trail, Alder Creek Trail (11W05), Silver Moccasin National Recreation Trail (11W06), Gabrieleno National Recreation Trail (11W14), Rincon-Red Box OHV Trail (2N23), Upper and Lower Winter Trail to Mount Zion (11W15 & 11W14A), Silver Fish Trail (1N29), and the San Gabriel River National Scenic Bike Trail (2N25.1) are all popular recreation trails, designed and managed specifically for pedestrian, equestrian, bicyclists, and/or OHV-users. They provide access, recreation, and scenic viewing opportunities within the ANF. SCE's proposed Project would be visible from these trails. Additionally, the proposed Project would be visible from several developed and undeveloped recreation areas, including Mill Creek Summit Picnic Area, PCT Trailheads at Mill Creek Summit and Mount Gleason Road, Monte Cristo Campground, Vetter Mountain Lookout, Silver Moccasin Trailhead, Rincon/Shortcut OHV Trailhead, Messenger Flats Campground, Gould Mesa Campground, and Millard Campground. Additional vantage points where the proposed Project would be viewed include Mount Wilson, Cobb Estate, Mount Lowe, Mount Disappointment, and Strawberry Peak.

The Angeles Crest Highway (State Highway 2) through the ANF is a National Scenic Byway and a State Scenic Highway as it winds along the spine of the San Gabriel Mountains. "America's Byways®" is the umbrella term used for marketing the collection of 125 distinct and diverse roads designated by the U.S. Secretary of Transportation. America's Byways include the National Scenic Byways and All-American Roads (http://www.byways.org). The proposed Project's Segment 6 and Segment 11 would cross over the Angeles Crest Highway in four different locations (at approximately S11 MP 16.0, 17.7, and 18.4 for Segment 11 and at S6 MP16.8 for Segment 6). Portions of Segments 6 and 11 would be visible at foreground and middleground viewing distances from the Angeles Crest Highway. The proposed Project would also would be visible at foreground, middleground, as well as background viewing distances from the Angeles Forest Highway (County Highway N3) and the Upper Big Tujunga Canyon Road (Forest Service Road 3N19.2), which are both heavily used Forest roadways.

Viewing distances help determine how the proposed Project will affect scenic quality. Foreground views provide a high degree of discernible detail, including unobstructed close-up views of landscape features. Middleground views provide a moderate degree of discernable detail, and also allow the viewer to judge visual elements within the context of the overall landscape composition. Although background views provide a muted degree of detail, at a background distance (greater than 4 miles) viewers can distinguish vegetative changes, large openings or disturbances, and large rock outcrops. Texture disappears and colors flatten at this distance, but landform ridgelines and horizon lines are dominant visual characteristics. The role of background in providing scenic quality lies mainly in its capacity as a contrasting and softened backdrop, or in scenic vista or overlook situations.

There are numerous gravel turnouts and informal viewpoints along the aforementioned roadways and near the proposed Project ROW where motorists frequently stop and from which they can enjoy panoramic views of the Mojave Desert to the north, the San Gabriel Mountains in the ANF, and the San Gabriel and Pomona Valleys to the south. There are very few locations where the proposed Project would be completely screened from view. This fact is demonstrated by the extensive areas of High SIO and the relatively small and scattered locations designated with Moderate Scenic Integrity Objective from the Forest Plan's SIO map for the ANF (see Figure 3.14-2 in the Map & Figure Series Volume).

In the South Area, the urban and suburban areas of Los Angeles and San Bernardino Counties, vegetation is both low-growing native grasses and shrubs, or culturally introduced street-tree plantings and residential/commercial landscapes. Topography ranges from flat valley floors to rolling hills to steep hillsides. Natural drainages are almost non-existent, as most urban rivers and streams have been modified with concrete channels. Urban infrastructure, including freeways, existing transmission lines, electric substations, drainage channels, plus single-story and multi-story buildings dominates the South Area. A multitude of scenic viewing opportunities of the proposed Project and its alternatives are provided by the numerous freeways, State highways, arterial roads, and literally thousands of residential streets in these urban and suburban areas. Additionally, many county, city, and regional parks and trails offer scenic viewing opportunities. The State has designated portions of the Orange Freeway (State Highway 57) as "Eligible" to become a State Scenic Highway where it traverses largely undeveloped hills between Brea and Diamond Bar, and TRTP would cross State Highway 57 in this vicinity. Colima Road, Hacienda Road, and Harbor Boulevard are proposed as scenic corridors in the most recent update to the County of Los Angeles General Plan. Los Angeles County has designated several other roads as Priority Two Scenic Highways, also indicating a high sensitivity for scenic integrity of landscapes. Portions of Interstate 210 (I-210) and State Highways 39 and 57 are either designated as, or eligible for, State Scenic Highway status and portions of the proposed Project would be visible from these roadways.

Almost the entire extent of the proposed Project's Segments 4 through 11 is visually impacted by existing transmission line infrastructure, with the exception of Segment 10, which involves the establishment of an all new ROW. Although the proposed Project primarily would be located within established utility corridors, any increase in industrial character caused by larger and/or additional transmission towers and conductors and that is noticeable to sensitive viewing populations (e.g., community residents, recreational travelers on local trails, roads, and freeways, equestrians, hikers, picnickers, campers, and back-country recreationists) likely would be perceived as an adverse visual change. Likewise, a new ROW with new transmission lines, such as Segment 10 and various routes as part of the Chino Hills Alternative likely would be perceived as an adverse visual change.

3.14.2.3 Alternative 2: SCE's Proposed Project

Provinces, Landscape Units, and KOPs

In addition to the three geographic areas (North, Center, and South) described above, the landscape can be further subdivided. It is important to identify and map existing landscape character at different scales: macro-scale and micro-scale. At a macro-scale, large geographic areas having consistent existing landscape character are called landscape provinces. At a micro-scale, small distinct landscape areas having consistent existing landscape character are called landscape units. For the proposed Project, a landscape unit is defined as an identifiable transmission line segment or span that contains the view and/or is an area where landscape conditions are generally similar.

Starting in the North Area at Windhub Substation and proceeding through the Center Area to the Mira-Loma Substation in the South Area, the proposed Project route can be subdivided into nineteen (19) landscape units, based on similar landscape conditions and characteristics.

This section documents the existing visual conditions in each of the landscape units through which the proposed transmission line would pass. Please refer to Appendix B of the *Visual Resources Specialist Report* for a set of maps that provide a detailed look at each landscape unit and KOP location, and Appendix D of the *Visual Resources Specialist Report* for photographs of representative views (landscape character photos) in each landscape unit.

North Area: Antelope Valley Landscape Region

The North Area, Antelope Valley Landscape Region, consists of four landscape units (1-4), extending from the Tehachapi Mountains in the north to the Vincent Substation in the south, as shown in the landscape unit maps included in the Map & Figure Series Volume. These maps show major landforms, major streets and roads, and the location of photograph viewpoints for KOPs used as the basis for simulations and analysis in the North Area.

Landscape Unit 1

Landscape Unit 1 extends roughly from the base of the Tehachapi Mountains in the north to just north of the Antelope Substation in the south. Landscape Unit 1 is characterized primarily by its undeveloped nature and its rural/agricultural developments in the desert of Antelope Valley. Views throughout Landscape Unit 1 have the common theme of being expansive, with few view obstructions and many distant mountain views. Vegetation is limited primarily to grasses with low shrubs. Larger trees are notably absent and trees associated with human development are mainly windbreaks. Expansive valley views with distant mountains are the major natural visual features in this landscape unit (refer to Figures B-2, B-3, and B-4 in Appendix B of the *Visual Resources Specialist Report* for maps of Landscape Unit 1).

Land uses in and near Landscape Unit 1 that influence landscape character are largely comprised of utilities (scattered transmission lines throughout) and transportation (paved two-lane roads and local roads on a one-mile grid). With the exception of scattered rural residences, the landscape unit is primarily undeveloped. The far northern end of the landscape unit is dominated by the presence of wind turbines associated with wind development in the Tehachapi Mountains and by the Cal Cement facility. The PCT crosses the northwest corner of Landscape Unit 1 in a southwest-northeast direction. The PCT generally follows access roads and trails associated with the Los Angeles Aqueduct in this vicinity (SCE, 2007a). Although most of the PCT is situated to follow ridgelines, it has been diverted northeast of the nearest ridgeline in this area due to the location of private property (Tejon Ranch) where easements for the trail have not been granted. Segment 4 would traverse the PCT at MP 2.7. Fields devoted to irrigated and un-irrigated field crops are found in the central portion of Landscape Unit 1, particularly in the vicinity of the proposed Whirlwind Substation. Major roads in Landscape Unit 1 include Oak Creek Road at the far north, Tehachapi-Willow Springs Road, Rosamond Boulevard, and Highway 138, all of which are paved roads. There is also a one-mile grid of paved and unpaved local roads throughout the unit. Toward the southern end of Landscape Unit 1, the Antelope Valley California Poppy Reserve, a 1,745-acre California State Park located on the Antelope Buttes at an elevation of approximately 2,600 to 3,000 feet, is an important area of recreational land use, albeit seasonal in the spring.

Important human-made features that can be seen within Landscape Unit 1 include the transmission lines, open pit mine operations, and the grid of paved and unpaved roads. The existing transmission lines are among the most visible human-made features in this landscape area.

Segment 10 would establish a new ROW through the desert and Segment 4 would follow the existing Antelope-Magunden transmission line corridor. There is no existing transmission ROW in the vicinity of Segment 10. The existing transmission ROW throughout Segment 4 varies between 0 and 580 feet in width. Existing transmission structures throughout Segment 4 are a mix of LSTs carrying either 220-kV or 500-kV conductors. The future Windhub Substation was approved as a part of the Antelope Transmission Project, Segment 3 (also known as ATP Segment 3 or TRTP Segment 3). The proposed Whirlwind Substation does not currently exist and is a necessary part of the proposed Project.

Sensitive viewers in Landscape Unit 1 include scattered homeowners with views of the transmission corridor and people driving throughout the unit, particularly on Oak Creek Road, Tehachapi-Willow Springs Road, Rosamond Boulevard, and Highway 138. Sensitive viewers also include seasonal visitors to the Antelope Valley California Poppy Reserve. The level of visual sensitivity varies by type of viewer and view duration and exposure, but is generally considered low-to-moderate for most of Landscape Unit 1, given the limited number of residences, minimal traffic, but high visual exposure and lack of vegetative or landform screening. The exception to this rule is the California Poppy Reserve and surrounding landscapes during poppy blooming season, generally March 31 to May 31 each year. Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 1.

The study corridor in Landscape Unit 1 traverses through Kern and Los Angeles counties jurisdictions. Applicable laws, regulations, and standards relative to scenic quality for transmission lines in Landscape Unit 1 are included in Appendix C of the *Visual Resources Specialist Report*. There are no designated state or local scenic highways located within Landscape Unit 1.

KOP-North-1 – Oak Creek Canyon Road (Segment 10)

KOP-North-1 was established on Oak Creek Canyon Road looking west toward the site of the future Windhub Substation that was approved as part of ATP 2-3. Segment 10 of TRTP would start at the future Windhub Substation, approximately 200 feet south of Oak Creek Canyon Road on a relatively flat desert plain of the Mojave Desert, and approximately one mile east of the Cal Cement Substation access road, and proceed southwest across the desert. At this location, the desert appears flat, but is actually gently sloping, northwest to southeast. Looking west along Oak Creek Canyon Road, the Tehachapi Wind Resource Area is to the north (right) and the undeveloped Mojave Desert is on the south (left) side of the road (see Map & Figure Series Volume, Figure 3.14-3a. (For all KOP figures with pairs of photographs/ simulations, the “a” designates the photograph of existing landscape conditions and the “b” designates the computerized visual simulation). The future Windhub Substation would be a 500/220/66-kV facility. The site of Segment 10 MP 0.0 and the future Windhub Substation is approximately one mile away from this vantage point, a middleground viewing distance. Figure 3.14-3a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground and middleground viewing distances near S10 MP 0.0 to S10 MP 17.

- **Viewer Exposure: moderate-to-high.** Because there is no landscape screening by landforms or vegetation, the proposed TRTP 500-kV single-circuit transmission lines (and future Windhub Substation) would be highly visible in the middleground and foreground from Oak Creek Canyon Road. The number of viewers would be low-to-moderate. For all of these viewers, the duration of view would be brief because of the speed of travel and viewer exposure therefore would be moderate-to-high.

- **Viewer Concern: low.** Many people who travel on Oak Creek Canyon Road work in the wind industry or at Cal Cement and can be expected to have low concern for visual impacts that would be caused by Windhub Substation and the transmission lines. Travelers on this road may be concerned with visual resources, but most are traveling through the area to other, more scenic destinations. Overall, viewer concern is estimated to be low.
- **Visual Quality: low.** The primary focal points in this landscape are the numerous rows of large, white wind turbine generators that occupy the skyline to the north. The axial view created by Oak Creek Canyon Road leads the viewers' eye to secondary focal points – angular landforms of Tehachapi Mountains visible on the skyline. The motion of spinning rotors on existing wind turbine generators adds visual interest, but detracts from the natural-appearing landscape character and changes it to an industrial character landscape, resulting in a low visual quality rating.
- **Overall Visual Sensitivity:** low-to-moderate. For viewers on Oak Creek Canyon Road in general, and from KOP-North-1 specifically, the moderate-to-high viewer exposure, low viewer concern, and low visual quality, lead to a low-to-moderate overall visual sensitivity of the visual setting and viewing characteristics.

KOP-North-2 – Tehachapi Willow Springs Road (Segment 10)

KOP-North-2 was established on Tehachapi Willow Springs Road, looking northwest, at the point where the road turns northwest, after running straight north for many miles in the Mojave Desert. A new 500-kV transmission line would exit Windhub Substation and head south across the flat, undeveloped desert plains. For the proposed Project from S10 MP 0.0 to S10 MP 17.0, the only vantage points of sensitive receptors are Oak Creek Canyon Road (see KOP-North-1), Tehachapi Willow Springs Road (Map & Figure Series Volume, Figure 3.14-4a), and Rosamond Boulevard near 170 Street West.

The proposed Project would cross over the Tehachapi Willow Springs Road at approximately S10 MP 4.3 and would follow along the Los Angeles Aqueduct from approximately S10 MP 7.5 to S10 MP 15.8. The aqueduct is an underground facility, with access roads being the only aboveground feature. As such, the aqueduct is not a landscape feature and does not attract attention. Figure 3.14-4a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground and middleground viewing distances from S10 MP 3.0 to S10 MP 9.0.

- **Viewer Exposure: moderate-to-high.** The proposed Project would vary from zero miles to two miles away from sensitive receptor locations, and therefore, would be classified as foreground and middleground viewing distances. Because there is no landscape screening by landforms or vegetation, the proposed Project would be highly visible in the middleground and foreground from Tehachapi Willow Springs Road, as well as both Oak Creek Canyon Road. The number of viewers on Tehachapi Willow Springs Road would be moderate, and on Oak Creek Canyon Road would be low-to-moderate. For all of these viewers, the duration of view would be moderate-to-brief because of the speed of travel, resulting in a moderate-to-high viewer exposure.
- **Viewer Concern: low.** People could view the transmission line from both Oak Creek Canyon and Tehachapi Willow Springs Roads. Many people who travel these roads work in the wind industry, at Cal Cement, or nearby agricultural operations. They can be expected to have low concern for visual impacts that would be caused by the proposed Project's transmission line. Travelers on these roads may be concerned with visual resources, but most are traveling through the area to other, more scenic destinations. Overall, viewer concern is estimated to be low.
- **Visual Quality: low.** From S10 MP 0.0 to S10 MP 16.8, the landscape is characterized by a gently sloping desert plain, tilted slightly southeast, covered with gray-green creosote bush scrub and widely scattered Joshua trees. Widely spaced, shallow desert washes are obscured by this vegetation and are not visually evident to passers-by. The primary focal points in this landscape are the wind turbine generators on the skyline in the Tehachapi Wind Resource Area. The secondary focal point is the flat desert plain that creates a horizontal line in front of the rugged, barren, wind-swept mountains. The overall visual quality of the affected landscape is low.

- **Overall Visual Sensitivity: low-to-moderate.** For viewers on Tehachapi Willow Springs Road in general, and from KOP-North-2 specifically, the low visual quality, low viewer concern, and moderate-to-high viewer exposure lead to a low-to-moderate overall visual sensitivity.

KOP-North-3 – 170th Street West (Segments 4, 9, 10)

KOP-North-3 was established on 170th Street West, about 1.5 miles south of Rosamond Boulevard, looking north toward the site of the TRTP Whirlwind Substation and two new 220-kV transmission lines of Segment 4 entering the proposed Whirlwind Substation from the northwest and one new 500-kV transmission line of Segment 10 entering from the northeast. Then one new 500-kV transmission line would proceed southeast toward Antelope Substation (see Map & Figure Series Volume, Figure 3.14-5a). The location chosen for the KOP is located just south of the substation and transmission corridor, looking north into the Tehachapi Mountains.

The existing view from this KOP reveals widely scattered tumbleweeds on the immediate foreground plain, a sloping plain covered with dense creosote bush scrub that is contained by rolling hills in the middleground and the Tehachapi Mountains in the background. The PCT traverses the dense creosote brushfield in this landscape, although it is not visible in Figure 3.14-5a. It generally follows access roads and trails associated with the Los Angeles Aqueduct before resuming a trail tread in the mountains to the right, further north. Although most of the PCT is situated to follow ridgelines, it has been diverted northeast of the nearest ridgeline (downhill onto the flats) in this area due to the location of private property (Tejon Ranch) where easements for the trail have not been granted. The two new 220-kV transmission lines of Segment 4 would cross over the PCT at S4 MP 2.7.

Faintly visible against the middleground hills are several existing transmission lines of the Antelope-Magunden corridor. Undeveloped flat lands on the west side of 170th Street give way to agricultural fields on the east side (out of view of Figure 3.14-5a, but visible from this KOP). The human-made elements of these transmission lines become somewhat transparent against the landform backdrop.

- **Viewer Exposure: moderate.** The proposed Project would vary from zero to one mile away from viewers on 170th Street West at KOP-North-3 and from viewers on Rosamond Boulevard, and therefore would be classified as foreground and middleground viewing distances. Because there is no landscape screening by landforms or vegetation, the proposed Whirlwind Substation and dual 220-kV transmission lines would be highly visible in the foreground and middleground from 170th Street and Rosamond Boulevard. The number of viewers on 170th Street is low because it is a rural agricultural road, but is moderate to high for Rosamond Boulevard. For all of these viewers, the duration of view would be moderate-to-brief because of the speed of travel, resulting in a moderate viewer exposure.
- **Viewer Concern: low.** People could view the proposed dual 220-kV transmission lines of Segment 4 as they enter the proposed Whirlwind Substation from the northwest and as the lines proceed southeast away from the Substation. Viewer concern is expected to be low, because the existing transmission lines have not been seen as objectionable by local residents, and no comments were received in scoping that opposed the proposed substation site.
- **Visual Quality: moderate.** The combination of flat desert plain with scattered tumbleweeds, sloping plains leading up to rolling hills, with a mountainous backdrop in a near-natural state, create a visually interesting composition that has moderate-to-high existing visual quality. The presence of existing transmission lines slightly decreases the overall visual quality to an overall moderate level.
- **Overall Visual Sensitivity: low-to-moderate.** For viewers on 170th Street West and Rosamond Boulevard in general, and from KOP-North-3 specifically, the moderate viewer exposure, low viewer concern, and moderate visual quality lead to a low-to-moderate overall visual sensitivity.

KOP-North-4 – California Poppy Reserve (Segment 4)

KOP-North-4 was established at the Antelope Buttes Vista Point within the Antelope Valley California Poppy Reserve, looking northeast (see Map & Figure Series Volume, Figure 3.14-6a). The Poppy Reserve is a day-use park, with a visitor center that is open from March 31 through May of each year to correspond with the typical poppy season. There are eight miles of trails that traverse the Antelope Buttes throughout the park. This KOP was selected because the Poppy Reserve is a heavily-visited destination during poppy season. This specific location is a viewing point identified on the Poppy Reserve trail map and is the viewpoint that is closest to the transmission corridor.

The foreground of KOP-North-4 consists of the rolling hills of the Antelope Buttes, gently sloping down to the valley through which the existing transmission corridor, as seen in the middleground, traverses approximately 1.4 miles in the distance. Due to the distance to the transmission corridor and because the transmission towers are situated with a landform backdrop, they become somewhat transparent and their visibility is relatively low. Also visible in the middleground are scattered residences, while the more urban areas of Lancaster and Palmdale and distant mountains are visible in the background. Most of the area visible from KOP-North-4 is undeveloped, with the low grasses and shrubs typical of Landscape Unit 1.

- **Viewer Exposure: high.** The proposed Project Segment 4 would vary from 1.4 miles to several miles away from sensitive receptors at the Poppy Reserve, making this a middleground view. Visibility to the new transmission line would be high because no landform or vegetative screening is available; however, there would be a landform backdrop as explained above. Large numbers of people would view this landscape during poppy blooming season and because this is a vista point and high point on a hiking trail system that is eight miles long, the duration of view would be long. Therefore, viewer exposure would be high.
- **Viewer Concern: high.** People come to the Poppy Reserve to view poppies in bloom and to experience this unique landscape. Viewers at this KOP have come specifically to see the unique landscape at the Poppy Reserve and viewer concern is high for this valued landscape. New transmission line structures would increase the already industrial character of the transmission line corridor in this otherwise rural and natural-appearing landscape.
- **Visual Quality: high.** The expansive views of the Antelope Buttes' rolling hills and Antelope Valley with mountains in the distance are visually pleasing. The vegetative cover of low grasses has minimal visual variety, but poppies provide much greater visual interest during their short blooming season. At that time, this landscape would have a high visual quality. As depicted in Figure 3.14-6a, existing visual quality during the out-of-bloom season is low, and is further degraded by the visual clutter of existing transmission lines that are marching across the Antelope Valley from north to south. The transmission corridor has LSTs of various sizes and designs, further cluttering the view. Faintly visible residences in the distance and urban areas of Palmdale are minor focal points in this landscape but do not detract from the naturalness of the view as much as the transmission lines. Therefore, taking the worst case scenario during poppy blooming season, this landscape has high existing visual quality.
- **Overall Visual Sensitivity: high.** For visitors to the California Poppy Reserve during poppy-blooming season in general, and from KOP-North-4 specifically, the high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity.

KOP-North-5 – 110th Street at Silverwind Way (Segment 4)

KOP-North-5 was established on 110th Street near its intersection to Silverwind Way, a private road. At this location, 110th Street is a Priority 2 County Scenic Highway. This view is looking northwest across the Antelope Valley toward the Tehachapi Mountains in the background (see Map & Figure Series Volume, Figure 3.14-7a). This location was selected to generally characterize the existing landscape in the North Area in the location of SCE's proposed Project and also the West Lancaster Alternative (see Section 3.14.2.4, Alternative 3). SCE's proposed Project would follow along 110th Street West for

approximately two miles. Views from county roads in this vicinity encompass a predominantly natural-appearing landscape setting with limited development other than the existing roads and a few scattered ranch buildings.

West 110th Street is a straight north-south road that gradually descends in elevation from Portola Ridge into the flat Antelope Valley. Under the proposed Project, new 500-kV transmission lines and LSTs would be located on the east side of the road, right next to the county road ROW. These structures would be very visually evident in the immediate foreground of West 110th Street from S4 MP 15.8 to S4 17.9, a distance greater than 2 miles, and would be very visually evident and incongruent with the natural-appearing scenery.

- **Viewer Exposure: high.** Because there is no landscape screening by landforms or vegetation, the proposed Project would be highly visible in the foreground and middleground of views from KOP-North-5 and all along 110th Street West for more than two miles. Although the duration of view for residents on Silverwind Way is extended, the number of potential viewers is relatively low. The number of viewers on 110th Street West is low-to-moderate, except in spring when the poppies bloom and the number of viewers is high and duration of view is moderate. Viewer exposure is therefore high.
- **Viewer Concern: high.** Visitors and residents enjoy the predominantly natural setting with distant, panoramic sightlines to the Antelope Valley and Tehachapi Mountains. The widely scattered ranches have predominantly horizontal structures (one story buildings) and predominantly horizontal windbreaks of low-growing trees and evergreen shrubs. The vertical character of the existing transmission line structures are visible and contrast with the horizontal nature of the panoramic, open-space landscape. Although residents and visitors also accept the existing electric transmission infrastructure, any increase in industrial character visible from this county scenic highway, or blockage/impairment of skyline views by tower structures in the immediate foreground, would be perceived by viewers as an adverse visible change.
- **Visual Quality: moderate-to-high.** The predominant visual elements of this scene are the horizontal lines of the Antelope Valley and the rugged diagonal lines created by the background mountain ranges. The existing 500-kV transmission lines are prominent vertical features in the middleground. Colors in the landscape include bright orange poppies in spring, green sage and grasses in winter, spring and early summer, and tan grasses in summer and autumn. The existing transmission lines diminish the scenic integrity of this landscape, reducing what would otherwise be a high level of visual quality, especially when viewed in springtime with poppies in bloom, to a moderate-to-high level.
- **Overall Visual Sensitivity: high.** For visitors to Antelope Valley in general and KOP-North-5 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality, lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 2

Landscape Unit 2 consists of the Antelope Substation and extends approximately 1 to 1.5 miles to the north and south of the substation. Landscape Unit 2 is roughly the dividing point in the Antelope Valley between the flat, undeveloped areas to the north and the more developed, hilly areas to the south. Landscape Unit 2 has been designated to capture potential views of the proposed expansion of the Antelope Substation. The area surrounding the Antelope Substation is characteristic of the flat high desert, with low, scrubby vegetation. The landscape gently slopes from south to north, away from the Portola Ridge, with distant Sierra Pelona Mountains further to the south (refer to Figure B-4 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 2).

Photo P-2.2 from Appendix D of the *Visual Resources Specialist Report* shows typical views looking north through Landscape Unit 2. From this location, the landscape slopes gently northward, away from Portola Ridge, with views extending across the high desert plain to the far distant Tehachapi Mountains in the background. Expansive valley views with distant mountains are the major natural visual features in Landscape Unit 2.

Land uses in and near Landscape Unit 2 that influence landscape character are largely comprised of utility and transportation infrastructure (composed of transmission line corridors and the grid of paved and unpaved roads found throughout the Antelope Valley). Residences and homesteads are scattered throughout Landscape Unit 2, but there are no planned residential developments present. The existing transmission corridor is a major human-made feature in Landscape Unit 2. The existing Antelope Substation is approximately 13.8 acres in size, and the upgrade would require approximately 18 additional acres to the southeast (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 2.

Sensitive viewers in Landscape Unit 2 include scattered homeowners with views of the transmission corridors and Antelope Substation. Because these viewers are stationary, the level of visual sensitivity is considered high. The study corridor in Landscape Unit 2 traverses through both the City of Lancaster and Los Angeles County jurisdictions. Applicable laws, regulations, and standards relative to scenic quality for transmission lines Landscape Unit 2 are included in Section 3.14.3 and in Appendix C of the *Visual Resources Specialist Report*. There are no designated state or local scenic highways located within Landscape Unit 2.

KOP-North-6 – Avenue J at Antelope Substation (Segment 9)

KOP-North-6 was established on Avenue J looking southwest at the existing Antelope Substation. The camera location is just slightly east of the proposed expansion area for the Antelope Substation, as shown in Figure 3.14-1 (see Map & Figure Series Volume), the KOP Map. KOP-North-6 was selected to represent views of the substation expansion by travelers driving west on Avenue J and from the scattered residences in the Project vicinity.

The existing view from KOP-North-6 is shown in Figure 3.14-8a (see Map & Figure Series Volume). Avenue J and the flat high desert landscape form the foreground of KOP-North-6, extending toward the existing Antelope Substation and the proposed expansion area for the substation. The view from KOP-North-6 is dominated by the existing substation itself, and existing transmission lines leading into the substation from the northwest (right side of Figure 3.14-8a) and extending from the substation toward the southeast (left side of Figure 3.14-8a). In the middleground is Portola Ridge, which forms the backdrop for this KOP. Faintly visible in the middleground are scattered residences at the base of the Portola Ridge. Present, but not clearly visible, is the California Aqueduct, which follows the base of the Portola Ridge and seen as a horizontal line in the landscape. Vegetation is sparse, typical of Landscape Unit 2. The human-made elements of substation, transmission lines, and Avenue J in KOP-North-6 dominate the view. Where not obscured by the existing Antelope Substation, the backdrop of the Portola Ridge is the primary natural visual feature from this KOP.

- **Viewer Exposure: moderate-to-high.** Because there is no landscape screening by landforms or vegetation, the proposed Antelope Substation expansion would be highly visible in the foreground as seen from Avenue J and middleground from other nearby roads and residences. The number of viewers is currently low-to-moderate; the duration of view would be brief for travelers and long for residents. Therefore, viewer exposure would be moderate-to-high.
- **Viewer Concern: moderate.** KOP-North-6 was selected to represent views from travelers on Avenue J and residents in the vicinity of the Antelope Substation and the concern level for viewers is expected to be moderate.
- **Visual Quality:** low-to-moderate. Rolling hills of Portola Ridge make a visually pleasing backdrop, but low grasses on this flat landscape lack visual interest. Existing transmission lines with a mix of structure types and heights, criss-crossing conductors, and the existing Antelope Substation are major human-made features that

create a major reduction in overall visual quality for this landscape, reducing visual quality to a low-to-moderate level.

- **Overall Visual Sensitivity: moderate.** For viewers on Avenue J in general, and from KOP-North-6 specifically, the moderate-to-high viewer exposure, moderate viewer concern, and low-to-moderate visual quality, lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 3

This landscape unit extends from approximately 1.5 miles south of the Antelope Substation to approximately 1.5 miles north of the Vincent Substation. Much of Landscape Unit 3 lies within the cities of Lancaster and Palmdale, and traverses future developments proposed in areas at the western fringes of these communities. Landscape Unit 3 is characterized by the rolling hills of Portola Ridge, Ritter Ridge, and Sierra Pelona Ridge that divide the high desert of the Antelope Valley in the north from Soledad Canyon and the ANF to the south. Although largely undeveloped currently, multiple large-scale residential developments are proposed and/or underway along some segments of the proposed Project route for Segment 5. For maps showing Landscape Unit 3, refer to Figures B-4 and B-5 in Appendix B of the *Visual Resources Specialist Report*.

The northern portion of Landscape Unit 3 is characterized by a gently increasing slope as the transmission corridor heads south toward Portola Ridge. Vegetation on Portola Ridge is sparse, with low scrub brush. In this location, existing transmission lines are clearly visible on the ridgeline as the transmission corridor drops into Anaverde Valley. The landscape in this vicinity is gently sloping with rounded hills. Vegetation is notably absent in the foreground, as grading for a future residential development is underway, with grasses and low-growing brush on the middleground hills.

A number of residences are visible at the base of Sierra Pelona Ridge, which has the same low scrubby vegetation as the other mountain ridges in Landscape Unit 3. Existing land uses in Landscape Unit 3 that influence landscape character are primarily comprised of utility (transmission lines) corridors and scattered residences and homesteads at the base of the mountain ridges throughout the unit. Future proposed land uses in Landscape Unit 3 include the major residential developments of Anaverde, Ritter Ridge, and Quail Valley. The study transmission corridor is a major human-made feature in Landscape Unit 3. Existing ROW cross-sections for Segment 5 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW associated with Segment 5 is 200 feet wide. The existing transmission ROW in Segment 5 varies between 380 and 920 feet wide. Existing transmission structures along Segment 5 are a mix of LSTs carrying either 220-kV or 500-kV conductors and tubular steel towers carrying 220-kV conductors (SCE, 2007a).

Sensitive viewers in Landscape Unit 3 include residents with views of the transmission corridor, and travelers on the roads that cross the ridgelines in the vicinity of Landscape Unit 3, particularly Elizabeth Lake Road and Godde Hill Road. The level of visual sensitivity ranges from moderate (for travelers) to high (for residents). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 3.

The study corridor in Landscape Unit 3 traverses through jurisdictions that include the cities of Lancaster and Palmdale and Los Angeles County. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 3 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated State scenic highways located within Landscape Unit 3, but several roads are called out as Priority 2 County Scenic Highways in

the County of Los Angeles General Plan (including 110th Street, Johnson Road, Elizabeth Lake Road, and Bouquet Canyon Road) (County of Los Angeles, 2005).

KOP-North-7 – Avenue L Near Olive Grove (Segment 5)

KOP-North-7 was established on Avenue L near an existing homestead with an olive grove, looking southeast. The proposed Project would traverse the flat desert plain of Antelope Valley, following multiple existing transmission lines in the Antelope-Vincent Corridor (see Map & Figure Series Volume, Figure 3.14-9a). Segment 5 would remove two existing 220-kV lines and replace them with one new 500-kV line in the same alignment. Additionally, Segment 2 of the already approved Antelope Transmission Project would remove the line of wooden 66-kV transmission poles and replace them with 75-foot-tall, light-weight, direct-buried TSPs, 180 feet west of and parallel to the existing alignment of the existing wooden structures. Following this relocation, Segment 2 will construct the proposed 500-kV LSTs in the location of the existing 66-kV transmission poles. Figure 3.14-9a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground and middleground viewing distances from S5 MP 0.0 to S5 MP 4.4.

- **Viewer Exposure: moderate-to-high for residences, moderate for roads.** The proposed Project would be highly visible from nearby residential properties at KOP-North-7. Sensitive receptors also would be located on Avenue L, 70th Street West, and at the residential developments just east of the utility corridor and north and south of Avenue M. The proposed Project would be vary from zero miles to 0.5 miles away, and therefore, would be classified as foreground viewing distances. Currently, the number of viewers is low at these widely scattered residences, but from each, the duration of view is extended, resulting in high viewer exposure. From roads that cross the Study Area, the number of viewers is low-to-moderate and duration of view is brief because of travel speeds, resulting in moderate viewer exposure.
- **Viewer Concern: low for residences, high for roads.** From roads throughout the Study Area, viewer concern is the same as described for KOP-North-6 above for most of the year. For a few weeks in spring, viewer concern is high when poppies are in bloom. From residences within this portion of the Study Area, viewer concern is low, based on the fact that many houses and homesteads have been built immediately adjacent to the Antelope-Vincent utility corridor and existing transmission lines.
- **Visual Quality: low.** Looking southeast, the primary focal point in this landscape is Portal Ridge, a fairly horizontal grass-covered ridgeline with scattered evergreen shrubs. The secondary focal point is the horizontal line formed by the desert plain as it meets the foot of Portal Ridge. The California Aqueduct runs along the lower slopes, and is visible as a faint horizontal line, but does not attract attention. Within the Study Area from S5 MP 0.0 to S5 MP 4.4, the visual quality of this landscape is low because of the lack of topographic features, water features, or interesting vegetation on the desert floor, and the presence of multiple transmission lines that visually clutter the landscape.
- **Overall Visual Sensitivity: low-to-moderate for residences, moderate for roads.** For residents living near the proposed Project at S5 MP 0.0 to S5 MP 4.4, and from KOP-North-7 specifically, the moderate-to-high viewer exposure, low viewer concern, and low visual quality lead to a low-to-moderate overall visual sensitivity. For travelers on nearby roads, the moderate viewer exposure, high viewer concern, and low visual quality lead to a moderate overall visual sensitivity for the current situation.

KOP-North-8 – Avenue N at Agena Road (Segment 5)

KOP-North-8 was established on Avenue N at Agena Road, looking south (see Map & Figure Series Volume, Figure 3.14-10a). From S5 MP 4.4 to S5 MP 6.4, the proposed Project would cross over the crest of Portal Ridge. Because Portal Ridge forms a landscape backdrop for much of the Antelope Valley and the City of Lancaster, any skylining of additional industrial character structures would be a potential visual impact. There are numerous major roads from which the proposed Project would be viewed with Portal Ridge as a backdrop or with towers seen on the skyline, including 70th Street West, 60th Street West, Avenue M-8, Godde Hill Road, and Avenue N. Numerous minor roads and residential streets also

provide views to the proposed Project for nearby residents and visitors to Lancaster. A new development is currently under construction at the Quartz Hill Water Treatment Plant of the Antelope Valley East Kern (AVEK) Water Agency, in the immediate foreground of KOP-North-8.

- **Viewer Exposure: high.** Because there is no screening by landforms or vegetation, the proposed Project would be highly visible on the slopes of Portal Ridge at foreground and middleground viewing distances from S5 MP 4.4 to S5 MP 6.4, and specifically as seen from KOP-North-8. The duration of view would be extended from these residential neighborhoods, and the number of potential viewers would be high; therefore the overall viewing exposure would be high.
- **Viewer Concern: moderate.** Visitors and residents enjoy the predominantly rural setting with panoramic sightlines to Portal Ridge on the west side of Lancaster. Nearby residents enjoy the natural-appearing backdrop to their homes and neighborhoods, with panoramic vistas to the round landforms and mottled vegetation. Because residents are familiar with and accepting of existing transmission lines in the Antelope-Vincent corridor, viewer concern is determined to be moderate.
- **Visual Quality: low-to-moderate.** The primary focal point in this landscape is now the new construction in the immediate foreground, plus the skyline ridge, which forms an extensive vertical backdrop against the flat desert plain and flat residential neighborhoods of Lancaster. Secondary focal points are the vertical lines and angular forms of the various transmission line structures in the Antelope-Vincent Corridor, which are seen crossing Portal Ridge in this view. The California Aqueduct forms a horizontal line crossing the lower slopes of Portal Ridge throughout this portion of the Study Area, and in the foreground of this view, a chain link fence surrounds the Antelope Valley East Kern (AVEK) Water Treatment Facility that is undergoing new construction. Portal Ridge in its natural state exhibits a moderately high degree of intactness and coherence of form and character with moderate visual variety. But the presence of transmission lines and the aqueduct has introduced an industrial character to this otherwise natural-appearing landscape, lowering visual quality to a low-to-moderate level. Figure 3.14-10a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground and middleground viewing distances from S5 MP 4.4 to S5 MP 6.4.
- **Overall Visual Sensitivity: moderate.** For residents and visitors to western Lancaster in general and KOP-North-8 specifically, the high viewer exposure, moderate viewer concern, and low-to-moderate visual quality lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

KOP-North-9 – Godde Hill Road (Segment 5)

At approximately S5 MP 6.4, the proposed Project would cross over Godde Hill Road, just downhill on the north side of Godde Pass on Portal Ridge. KOP-North-9 was established on Godde Hill Road at the center of the existing utility corridor, looking southeast. There is a turnout at this location along the twisting, two-lane paved road. During site investigations, it was noted at several times that people were stopped at the turnout, looking at the five existing transmission lines that cross the road at this location (see Map & Figure Series Volume, Figure 3.14-11a).

- **Viewer Exposure: moderate-to-high.** The proposed Project Segment 5 would be situated in the middle of this utility corridor, and would replace two existing 220-kV lines with one 500-kV line. This utility corridor is visible from zero miles to 0.5 miles away, resulting in foreground viewing distances. Figure 3.14-11a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground viewing distances from S5 MP 6.3 to S5 MP 6.7. Because there is no screening by landforms or vegetation, Segment 5 would be highly visible on the slopes of Portal Ridge at foreground viewing distances as seen from KOP-North-9. The duration of view would be brief on this twisting mountain road, and the number of potential viewers would be high; therefore the overall viewing exposure would be moderate-to-high.
- **Viewer Concern: moderate.** No residences are located along Godde Hill Road in the vicinity of KOP-North-9. While driving over Godde Pass, visitors and residents enjoy the predominantly rural setting with panoramic sightlines to the City of Lancaster on the north and Leona Valley to the south. During public meetings held in Quartz Hill for the already approved Antelope-Pardee Transmission Project, Segment 1 (TRTP 1), residents of Leona Valley spoke in opposition to the Antelope-Pardee Alternative 5 in their Leona Valley neighborhoods, but did not speak in opposition to the proposed crossing of Godde Hill Road or refer to visual impacts in this vicinity (Aspen, 2006a). Because residents are familiar with and accepting of existing

transmission lines in the Antelope-Vincent corridor, viewer concern is determined to be moderate at Godde Hill Road.

- **Visual Quality: low-to-moderate.** The primary focal points in this landscape are the industrial character transmission line towers and conductors that punctuate the skyline view of Portal Ridge and the different tower configurations of each line. Secondary focal points are the scattered dark-green and gray-green shrubs on the gently rolling, grass-covered hillsides. Access and spur roads are present in the landscape, but have revegetated to such an extent that they are not visually evident. The interesting landforms and vegetative patterns have moderate visual quality, but the presence of these industrial character structures lowers visual quality to a low-to-moderate level.
- **Overall Visual Sensitivity: moderate.** For residents and visitors traveling over Portal Ridge and Godde Pass on Godde Hill Road, and as seen from KOP-North-9 specifically, the moderate-to-high viewer exposure, moderate viewer concern, and low-to-moderate visual quality lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

KOP-North-10 – Elizabeth Lake Road (Segment 5)

KOP-North-10 was established on Elizabeth Lake Road (a Second Priority County Scenic Highway) near several existing rural ranchettes, looking north (see Map & Figure Series Volume, Figure 3.14-12a). From S5 MP 6.7 to S5 MP 7.9, the proposed Project would be visible from Elizabeth Lake Road and these residential ranchettes. The proposed Project Segment 5 would replace two existing 220-kV lines with one 500-kV line and would pass near one uninhabited and three inhabited residences in this vicinity, which includes the AV Buffalo Ranch. At approximately S5 MP 7.5, the proposed Project would enter property owned by Ritter Ranch Development, a large planned development currently under construction. Figure 3.14-12a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground viewing distances from S5 MP 6.7 to S5 MP 7.9.

- **Viewer Exposure: high.** The proposed Project would be highly visible from these residential properties because it would cross directly behind existing houses. As seen from Elizabeth Lake Road, the proposed Project would be highly visible on the slopes of Portal Ridge at foreground viewing distances from S5 MP 6.7 to S5 MP 7.9, and specifically as seen from KOP-North-10. The duration of view would be extended from these residential neighborhoods, and the number of potential viewers would be moderate. With the development of Ritter Ranch, immediately adjacent to this KOP, the number of viewers is predicted to be high. Therefore the overall viewing exposure would be high.
- **Viewer Concern: high.** During scoping meetings held in Rosamond and Palmdale for the already approved Antelope Transmission Project, Segment 2 (ATP 2), residents of the three occupied houses spoke in opposition to the proposed Segment 2 route based on visual impacts, housing, and land use impacts (Aspen, 2006b). Residents suggested possible realignments but did not oppose the proposed Project; their primary concern related to the desire to protect existing homes. Neighbors along Elizabeth Lake Road also spoke in opposition of the proposed alignment and in support of their friends and neighbors. The road is less than 0.5 mile from the proposed Project, and three houses are directly adjacent to the utility corridor, making this a foreground landscape view. Based on the intensity of comments during scoping, viewer concern is determined to be high.
- **Visual Quality: moderate-to-high.** The primary focal points in this landscape are its unique wildlife (American Bison) and the horizontal skyline backdrop formed by Portal Ridge. Additional focal points are created by the large, industrial transmission line structures of various designs and configurations – tall, narrow, gray LSTs, wider, shorter, gray LSTs, and white TSPs. Secondary focal points are the houses and ranch buildings, fence lined driveways, and residential landscaping. Newly graded earth is exhibited in the immediate foreground and Elizabeth Lake Road is being widened and straightened by the Ritter Ranch Developers. Without the transmission lines on the skyline, this rural, pastoral landscape would exhibit high visual quality, but the introduction of these towers and conductors has lowered the visual quality to a moderate-to-high level.

- **Overall Visual Sensitivity: high.** For residents of Elizabeth Lake Road in general and KOP-North-10 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-North-11 – Sierra Pelona Ridge from Avenue S (Segment 5)

KOP-North-11 was established on Avenue S looking southwest at Sierra Pelona Ridge. As before, two existing 220-kV lines would be replaced by one 500-kV line in this vicinity leading into the Vincent Substation south of the Antelope Freeway (I-14). Visual characteristics of the landscape are similar from approximately S5 MP 14.8 to S5 MP 20.2. This KOP is typical of views from many different vantage points, including new residential streets in the Anaverde and Palmdale 1000 Developments, existing residential streets in Palmdale and Acton, Tuckerway Ranch Road, Peaceful Valley Road, and Avenue S (see Map & Figure Series Volume, Figure 3.14-13a). Currently under construction, the Anaverde Development is visible on the right in Figure 3.14-13a and the proposed Palmdale 1000 Development would be constructed on vacant lands to the left side in Figure 3.14-13a.

- **Viewer Exposure: high.** Because there is no screening by landforms or vegetation, the proposed Project would be highly visible on the slopes of Sierra Pelona Ridge at foreground and middleground viewing distances from S5 MP 14.8 to S5 MP 20.2 in general, and specifically as seen from KOP-North-11. The duration of view would be brief from Avenue S, but long for residents and the number of potential viewers would be high; therefore the overall viewing exposure would be high.
- **Viewer Concern: high.** Visitors and residents enjoy the predominantly rural setting with panoramic sightlines to the eastern end of Sierra Pelona Ridge in the City of Palmdale. Nearby residents enjoy the natural-appearing backdrop to their homes and neighborhoods, with panoramic vistas to the grass-covered, rounded landforms. Because residents are familiar with and accepting of existing transmission lines in the Antelope-Vincent corridor and because many comments were received about visual impacts during scoping meetings, viewer concern is determined to be high.
- **Visual Quality: moderate.** The primary focal points in this landscape are the rounded landforms that create a strong horizon line at Sierra Pelona Ridge, the rolling, grass-covered foothills beneath, and the communication towers on the skyline. Secondary focal points are the transmission lines with various structure designs and configurations (LSTs and TSPs) and the row of wooden poles at the sub-transmission line along Avenue S. Because of the multitude of existing and new streets near this segment of the proposed Project, it would be seen at foreground and middleground viewing distances. From approximately S5 MP 14.8 to S5 MP 20.2, the proposed Project would be located at a midslope location, below the skyline, and new towers and conductors therefore would not be seen in silhouette from most vantage points, and would not degrade the visual quality. Figure 3.14-13a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground and middleground viewing distances from S5 MP 14.8 to S5 MP 20.2. The overall visual quality of this portion of the proposed Project is moderate.
- **Overall Visual Sensitivity:** moderate-to-high. For residents and visitors who travel along Avenue S looking at Sierra Pelona Ridge in Palmdale and other vantage points described above, and KOP-North-11 specifically, the high viewer exposure, high viewer concern, and moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 4: Soledad Pass

This landscape unit is centered on the Vincent Substation and includes parts of Soledad, Kentucky Springs, and Aliso Canyons. It is situated between Landscape Unit 3 to the north and the ANF and Landscape Unit 5 to the south. This landscape unit is entirely located within unincorporated Los Angeles County. Segments 6 and 11 pass through this landscape unit and the expansion of Vincent Substation, Segment 9, is located here. For a map of Landscape Unit 4, refer to Figure B-6 in Appendix B of the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*.

Landscape Unit 4 is surrounded by a series of rounded low hills covered with arid vegetation consisting mostly of grasses and low shrubs. Hillsides and canyons contain patches of larger shrubs and trees such as junipers and oaks. Several of the intermittent streams found in the unit are lined with sparse riparian vegetation.

Land uses in and near this area that influence landscape character include utility, transportation, residential, and some scattered areas of commercial and light industrial. The Vincent Substation and the transmission lines that feed into and out of it are the most visible human-made elements in the unit. A number of transmission corridors pass through the unit from numerous directions and all are quite visible. Transportation features are also highly visible and influence landscape character. The most visually dominant is Highway 14 (the Antelope Valley Freeway) which follows the west side of Soledad Canyon and is the backbone of a major transportation corridor that includes the Union Pacific railroad track (which is used for transporting freight and commuter trains), the Metrolink Light Rail train station, Buffalo Ridge Road, Soledad Canyon Road, Carson Mesa Road, and the Sierra Highway. The Angeles Forest Highway runs through the unit in a north-south direction and provides access to the substation and ANF beyond. In addition to the transportation elements mentioned, numerous local public and private roads, generally unpaved, are scattered throughout the unit. They provide access to residential areas and isolated residences. Additionally, the Metrolink station is located on the west side of the tracks in this unit and faces east. Residential areas include the community of Soledad, a subdivision west of the substation that is centered on Foreston Road, an area near the Vincent Fire Station (west of Highway 14), and scattered rural residences accessed from the Angeles Forest Highway and Aliso Valley Road.

Sensitive viewers in this landscape unit include homeowners who can view the substation and transmission corridors, residents in the general vicinity of the unit, people waiting at the Metrolink station, and people driving on the freeway, highways, and roads. The level of visual sensitivity varies by type of viewer and view duration, and distance zone. Residents have views of long duration and varying distance zones. They are quite familiar with the nearby landscape and their concern level is assumed to be high. Drivers and commuters have shorter duration views and are assumed to have a moderate level of visual concern.

Existing ROW cross-sections for Segments 5, 6, and 11 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW associated with Segment 5 varies from 200 to 680 feet wide; with Segment 11, the existing ROW is between 200 to over 400 feet wide; and with Segment 6, it is 200 to 400 feet wide. Some portions of the existing transmission ROW in Segment 5 is 680 feet wide. In some locations along Segments 11 and 6, the ROW is up to 1,090 feet wide where the transmission lines diverge from one another. Existing transmission structures throughout this area are a mix of LSTs and TSPs at varying heights carrying either 220-kV or 500-kV conductors. The existing Vincent Substation is approximately 13.4 acres in size (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 4.

The study corridor in Landscape Unit 4 traverses through Los Angeles County jurisdiction. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 4 are included as part of a comprehensive table included in Section 3.14.3 and in Appendix C of the *Visual Resources Specialist Report*. There are no designated state or local scenic highways located within Landscape Unit 4.

KOP-North-12 – Sierra Highway and Antelope Valley Freeway (Segment 5)

KOP-North-12 was established on the Sierra Highway looking northeast at the Antelope Valley Freeway corridor. At approximately S5 MP 20.4 to S5 MP 20.6, the proposed Project would cross over the Antelope Valley Freeway (a six-lane highway), the Sierra Highway (a two-lane highway), and the

Acton/Vincent Grade Metrolink railroad (two-tracks) (see Map & Figure Series Volume, Figure 3.14-14a).

- **Viewer Exposure: high.** Because there is no screening by landforms or vegetation, the proposed Project would be highly visible in the foreground and middleground as seen from KOP-North-12. The duration of view would be brief for travelers on the Sierra Highway and Antelope Valley Freeway, moderate for commuters at the train station, and high for residents in the Hidden Valley area, just to the left (north) of Figure 3.14-14a. The number of viewers would be high, considering the volume of traffic on all three travel routes, leading to a high viewer exposure rating.
- **Viewer Concern: moderate-to-high.** Because of the multitude of existing transportation routes in this segment, the proposed Project would be seen at foreground and middleground viewing distances. From approximately S5 MP 20.2 to S5 MP 20.9 as represented in Figure 3.14-14a (see Map & Figure Series Volume), the proposed Project would be visible against the skyline from many different angles and views, and therefore, new towers and conductors would be seen in silhouette from various vantage points. Figure 3.14-14a is representative of existing conditions seen at foreground and middleground viewing distances from S5 MP 20.2 to S5 MP 20.9. Travelers on the Sierra Highway and Antelope Valley Freeway enjoy the panoramic views of Soledad Pass that are portrayed in this view, but the primary use on both of these thoroughfares is for commuting. Therefore, the concern with scenic attributes of the landscape would be moderate for commuters, but would be high for residents, leading to an overall moderate-to-high rating. Any blockage or impairment of views to the skyline, such as would occur with the new transmission line in the proposed Project, may be seen as an adverse visible change.
- **Visual Quality: low.** The primary focal points in this landscape are the rounded landforms that create a strong horizon line as Sierra Pelona Ridge terminates at Soledad Pass in the center of Figure 3.14-14a, multiple LSTs and TSPs of various transmission lines crossing the highways, and on the right, the rolling, grass-covered foothills of the San Gabriel Mountains that create enclosure for this view. The proposed Project Segment 5 would replace two 220-kV lines with one 500-kV line, as seen in the center of Figure 3.14-14a, and the new transmission line would cross this view from left to right on its way to the Vincent Substation. Existing visual quality of the undeveloped landscape in this view was low-to-moderate and the introduction of the freeway, highway, railroad, and transmission lines has lowered visual quality to a low level.
- **Overall Visual Sensitivity: moderate.** For travelers on the Sierra Highway, Antelope Valley Freeway and railroad in general, and KOP-North-12 specifically, the high viewer exposure, moderate-to-high viewer concern, and low visual quality lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

KOP-North-13 – Acton/Vincent Grade Metrolink Park and Ride (Segment 5)

KOP-North-13 was established at the Acton/Vincent Grade Metrolink Park and Ride access road, looking south to the Vincent Substation. The proposed Project would be located approximately 0.1 mile west of the Acton/Vincent Grade Metrolink Park and Ride and looking south from this facility, the Vincent Substation and a multitude of transmission lines are visible (see Map & Figure Series Volume, Figure 3.14-15a). Looking between the two LSTs in the center of Figure 3.14-15a, the viewer can see a multitude of parallel transmission lines exiting the Vincent Substation and heading south over the San Gabriel Mountains into Landscape Unit 5. The proposed Project would remove two existing 220-kV lines and replace them with one 500-kV line that would lead into the substation. Figure 3.14-15a is representative of the proposed Project from S5 MP 20.5 to its terminus at S5 MP 21.6 in the substation. The Angeles Forest Highway is approximately 0.25 mile east of this location, and it runs parallel to the transmission line, thereby affording foreground views to the proposed Project.

- **Viewer Exposure: high.** Because there is no screening by landforms or vegetation, the proposed Project would be highly visible in the foreground as seen from KOP-North-13. The duration of view would be moderate for commuters at the train station. The number of viewers would be high, considering the volume of traffic, leading to a high viewer exposure rating.

- **Viewer Concern: moderate.** Commuters at the Park and Ride enjoy the panoramic views of Soledad Canyon, as portrayed in this view, on their way to Los Angeles. However, the primary use at the Park and Ride is for commuting. Therefore, the concern with scenic attributes of the landscape would be moderate.
- **Visual Quality: low.** The focal points in this landscape are all of the industrial character transmission lines, towers, and conductors that dominate the landscape. Many of the towers and lines are seen in silhouette against the skyline, furthering their visual contrast with the natural landscape. Natural vegetation in the area consists of native grasses, sagebrush, scrub pine, and junipers, all of which provide little-to-no vegetative screening for the large industrial character structures. The existing Vincent Substation is located on a small knoll surrounded by hills at the upper end of Soledad Canyon near Soledad Pass and south of the City of Palmdale. Figure 3.14-15a (see Map & Figure Series Volume) is representative of existing conditions seen at foreground and middleground viewing distances from S5 MP 20.5 to its terminus at the existing Vincent Substation at S5 MP 21.6. The resulting visual quality of this landscape is low.
- **Overall Visual Sensitivity: moderate.** For commuters at the Acton/Vincent Grade Metrolink Park and Ride in general, and KOP-North-13 specifically, the high viewer exposure, moderate viewer concern, and low visual quality lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

Center Area: San Gabriel Mountains Landscape Region

The Center Area (San Gabriel Mountains Landscape Region) consists of Landscape Units 5 through 8. All of TRTP Segment 6 and approximately 46 percent of Segment 11 would occur inside the ANF boundary, the Center Area. As discussed in Section 3.14.2.1, the landscape units selected to represent the ANF in this analysis are based upon "Places" identified in the ANF Forest Plan.

The Center Area (San Gabriel Mountains Landscape Region) crossed by SCE's proposed Project would include the northern half of Segment 11 (to the west) and all of Segment 6 (to the east). The proposed Project would traverse portions of five Landscape Places, as described in the Forest Plan (see Map & Figure Series Volume, Figure 3.14-2). These five Landscape Places are, from north to south:

- Soledad Front Country Landscape Place (Landscape Unit 5)
- Angeles High Country Landscape Place (Landscape Unit 6)
- Angeles Uplands West Landscape Place (Landscape Unit 7)
- Big Tujunga Canyon Landscape Place (a very tiny corner of this Place is crossed by Segment 11)
- The Front Country Landscape Place (Landscape Unit 8)

As described in Section 3.14.2.1, the Forest Service has developed statements of Desired Condition and mapped SIOs for public lands it administers. See Table 3.14-4 for a list of the SIOs by mile for the proposed Project (Segment 11 and Segment 6) in the ANF. (These same elements of visual resource management are not available for non-NFS lands in either the North or South Areas, where the Visual Sensitivity/Visual Change methodology was used for this analysis.) Because the Forest Service has specific scenic management direction in the Forest Plan, the Forest Service SMS was used for the analysis of visual resources in the Center Area. As previously mentioned, visual resource factors that are discussed in the Center Area include Desired Condition, SIOs, as well as existing scenic integrity. Existing scenic integrity is defined as the current scenic condition of the landscape considering previous human alterations. And in order to better assess the existing scenic conditions, it is essential to know the "Places" on the Forest that the Project would cross. The proposed Project would traverse portions of five Landscape Places, as described in the Forest Plan: the Soledad Front Country; the Angeles High Country; the Angeles Uplands West; a tiny corner of the Big Tujunga Canyon; and the Front Country.

Landscape Unit 5: Soledad Front Country

The northern edge of this unit abuts the southern edge of Landscape Unit 4 and the boundary of the ANF. Although most of the unit is located within the ANF, there are in-holdings of private land that are surrounded by the ANF and are part of unincorporated Los Angeles County. Both Segments 6 and 11 pass though this landscape unit. For a map showing Landscape Unit 5, refer to Figure B-6 in Appendix B of the *Visual Resources Specialist Report*.

This landscape unit is a transition zone between the lower elevations with more highly developed Soledad Canyon – Antelope Valley area and the much less developed ANF. It includes a variety of terrain from rolling hills in the northern portion to steeper and more enclosed terrain of the southern parts. The lower (northern) portions of the landscape unit are relatively open in appearance and include the bottoms of Kentucky Springs Valley and Bear Canyon. The canyon bottoms contain streams (most of which are intermittent) and washes. Traveling south through Landscape Unit 5 on Angeles Forest Highway and Aliso Canyon Road brings viewers into steeper, higher, and more rugged terrain. Views in the southern (higher) portions of the landscape unit are more confined by the steep topography than in the northern (lower) parts. Nearby vegetation is composed of shrubs of varying sizes (mixed chaparral) which is present on most slopes and is seen as patterns of dense patches with large openings. Coniferous trees such as pine and juniper are found at higher elevations. Various species of oaks, sycamores, and other vegetation are present in dense woodlands along shaded slopes and in the canyons. Some streams and washes contain riparian vegetation. Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 5.

Human use of areas near (but outside of) the landscape unit is changing the unit's appearance and areas nearby the unit. As stated in the ANF Forest Plan:

> *"The cultural landscape of the Soledad Front Country is rapidly converting from rural to urban due to the development of housing tracts along the national forest boundary. Human influences, such as urban development, intensive use areas, transportation corridors, utility corridors, sand and gravel mining, road cuts and flood control channels are creating strong visual contrasts and user conflicts within this Place. Most facilities and trails are located along drainages, ridge tops or cut into hillsides. Urban development is affecting access to National Forest System roads and trails, and residents of adjacent developments are creating social trails on national forest land. Encroachment has increased due to urbanization resulting in problems of trespass, fire, and resource damage."*

Existing human-made features within Landscape Unit 5 that are readily apparent to the general public include the Angeles Forest Highway (which is an important route into and through the ANF), Aliso Canyon Road, numerous dirt roads and fuel breaks, and three major transmission corridors. Several areas of in-holdings along Aliso Canyon Road and Angeles Forest Highway contain scattered residences and associated buildings that are both within and near the landscape unit.

Existing ROW cross-sections for Segment 6 (Figures 2.2-10 to 2.2-18) and Segment 11 (Figures 2.2-56 to 2.2-63) are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW associated with Segment 6 varies from 200 to 800 feet wide. For Segment 11, the existing ROW varies from 180 to 560 feet wide. Existing transmission structures throughout all Segments 6 and 11 are a mix of LSTs and TSPs at varying heights, carrying either 220-kV or 500-kV conductors (SCE, 2007a).

Compared to the other four landscape units in the ANF that are crossed by the proposed Project, Landscape Unit 5 does not have many recreation areas or opportunities. Therefore this Unit does not

receive much public recreation use. It does however, receive considerable vehicle traffic as growing numbers of people use Angeles Forest Highway to enter the Forest or to drive back and forth (and avoid State Highway 14 and Interstate 5) between the greater Antelope Valley area and the San Gabriel Valley-Los Angeles area. These commuters are among the various types of viewers that view the Landscape Unit 5. Viewers primarily include Forest visitors (mainly on weekends), local residents and people driving through the unit. These types of viewers have different concern levels. Nearby residents are considered to have a high concern level, both as property owners and as part of the relatively low numbers of recreationists that use this area. Forest visitors can be included as part of the relatively low numbers of recreationists that use this area, but most drive through this Unit to get to other areas of the Forest further south. However, this Unit is the first section of the Forest they encounter on the way to their final recreation destination. Because of the aforementioned reasons, Forest visitors and general area residents looking at the landscape as they drive through it may be considered to have a moderate concern level for scenery. On the other hand, weekday commuters just passing through the Unit are considered to have a low-to-moderate concern for scenery.

USDA Forest Service Management Direction Relative to Scenic Quality

ANF Forest Plan. The following descriptions of Theme, Setting, Desired Condition and Program Emphasis are cited directly from the ANF Forest Plan for the Soledad Front County Place and are relevant for Landscape Unit 5.

> **Theme:** *"The Soledad Front Country Place functions as a scenic backdrop and transitional landscape between the rapidly urbanizing Mojave Desert and Los Angeles Basin. The flow of people and materials through this transitional landscape links the greater Los Angeles area to the Mojave Desert. The growing communities along California Interstate 14 are transforming this area from rural to urban in character. Residents of these new communities have the scenic views of the San Gabriel Mountains from their homes and travel corridors. The Pacific Crest National Scenic Trail occurs on a portion of the Place."*
>
> **Setting:** *"The Soledad Front Country Place runs northeast to southwest along both sides of California State Highway 14 along the Santa Clara and Soledad Rivers. This landscape is commonly defined as the area between California Interstate 5 at the southern end and the intersection of California State Highway 138 at the northern end. The northwest and southeast boundaries are, in general, defined by the area visible from California Highway 14. There is a Special Interest Area that highlights the heritage resource values of the area."*
>
> *"Elevations in the area range from about 2,100 feet to 3,000 feet. The broad floodplain of the Soledad River (with its various side drainages) dominates this landscape. The broad floodplain (which leads to steep slopes with rounded summits) is the most prevalent landform in this Place."*
>
> **Desired Condition:** *"The Soledad Front Country Place is identified as a "Key Place" for its natural appearing area that functions as a scenic backdrop and transitional landscape. The valued landscape attributes to be preserved over time are the dramatic canyon and rugged mountain views, the presence of pine and juniper stands, and a well-defined age class mosaic with patches in chaparral. Heritage resources are managed to standard under a comprehensive and integrated management plan. Wildlife linkages connecting the San Gabriel Mountains to the Castaic and Santa Susana Mountains are established and functioning. Habitat conditions for threatened, endangered, proposed, candidate and sensitive species are improving over time. Exotic species are reduced and controlled over time.*

Private land between the two mountain ranges is acquired and the Pacific Crest National Scenic Trail is connected."

Program Emphasis: *"Management emphasis is expected to focus on the protection of communities from the threat of fire, the management of high levels of recreation use, and the maintenance of urban and forest infrastructures (facilities). The success of this emphasis is dependent on a sustainable level of development and the delicate balance between the needs of people and the effects of those uses on the plant and animal communities in the national forest. Uses must be balanced to promote the conservation of valuable natural resources and to sustain the needs of people. The significance of the heritage resources in the Place is recognized through the designation of special areas managed for the heritage resource value. Special emphasis will be given to acquiring private land between the San Gabriel and Sierra Pelona Mountain Ranges in order to connect the Pacific Crest National Scenic Trail. The national forest will focus on protection of open space and boundary management in anticipation of future adjacent development."*

Other Plans. The private in-holdings that are located within Landscape Unit 5 are not under the jurisdiction of the ANF. They are in unincorporated Los Angeles County and land use and potential regulations related to aesthetics or scenery are regulated by the County's General Plan (Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*). There are no officially designated State Scenic Highways in Landscape Unit 5.

The TRTP visual analyst and the ANF landscape architect examined the proposed Project on the ground and from sensitive receptor locations during several days of site visits that occurred over a period of months, in order to evaluate and analyze different viewing conditions, times of day, and seasons of the year. In sum, site reconnaissance visits in the ANF occurred between May 2007 and April 2008. From among hundreds of possible key observation points (KOPs) and after careful evaluation, 20 KOPs were selected as typical viewing conditions for the analysis. The best quality photographs taken from each of these KOPs were selected for analysis and simulations of existing and Project-based potential future visual conditions. Of those 20 KOPs the two that best exemplify Landscape Unit 5 are KOP-Center-1 and KOP-Center-2, which are captured in the KOP analyses below:

KOP-Center-1 – Angeles Forest Highway (Segment 6)

KOP-Center-1 (see Map & Figure Series Volume, Figure 3.14-16a) is located on NFS lands along the Angeles Forest Highway, looking south, near the intersection of Mount Emma Road and the Angeles Forest Highway. Looking south along the highway, existing lattice towers of Segment 6 are visible on the skyline to the right side of the photo. Undeveloped hillsides of the ANF are visible in the middleground. Figure 3.14-16a represents the existing condition of the site and displays Segment 6 on the skyline. Existing LSTs are barely visible on the hillside below these skylined structures, because they blend very well with the landform backdrop. Because most proposed Project activities visible from this KOP would occur on federal lands administered by the ANF, the SMS methodology was used for this visual assessment.

The "Existing Conditions" photograph is the same as the "No Project/Action Alternative" for KOP-Center-1, and this is consistent for all KOPs in the Center Area (see Figure 3.14-16a, Existing Conditions for KOP-Center-1).

- **Scenic Integrity Objective: High.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common

to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is a natural appearing area that functions as a scenic backdrop and transitional landscape.

- **Existing Scenic Integrity: High, with Areas of Low.** The landscape visible from the Angeles Forest Highway and Mount Emma Road is common to the area south of the Vincent Substation leading into the ANF. Landforms are typically rolling hills covered with sparse, low-growing vegetation of sagebrush and chemise, giving the landscape a mottled appearance. Vegetation is so short that it does not provide screening, but landforms provide some visual screening. Transmission towers are visible on the skyline, disrupting the horizon. Wooden utility poles follow the highway and create additional visual contrasts. Other than these utility structures, the landscape has high scenic integrity.

  Although the immediate foreground is dominated by the highway itself, NFS lands visible from the Angeles Forest Highway (KOP-Center-1) are predominantly natural-appearing, consisting of middleground and background views to brush-covered hillsides and rounded landforms that contain and enframe the overall composition. The vegetation is finely-textured brushfields with many hues of dark- and medium-green colors and tan-colored, grassy mountainsides in the background. The landscape exhibits a high degree of intactness and coherence of form and character with a moderate amount of visual variety. However, this harmony of form and character is punctuated on the skyline by the dark gray vertical lines and geometric forms of three separate existing 220-kV transmission line towers. Several existing LSTs are situated between the skyline and the viewer; however, they tend to blend with the landform backdrop and are barely visible in this photograph. Still, these back-dropped structures are visually evident from on-the-ground. Overall, the existing scenic integrity of this NFS landscape is high, with no deviations of form, line, color, texture, or scale, however, the existing skylined transmission towers, with their inherent industrial character, attract attention and begin to dominate the valued landscape character being viewed, and they reduce these certain areas of the existing landscape to levels of low scenic integrity.

KOP-Center-2 – Angeles Forest Highway (Segment 6)

KOP-Center-2 (see Map & Figure Series Volume, Figure 3.14-17a) was established during consultation with the ANF landscape architect on the northbound side of the Angeles Forest Highway that leads towards Lancaster. It is located approximately one-mile north of Mill Creek Summit, headed northbound toward Lancaster and Palmdale. The image in Figure 3.14-17a was taken at the approximate boundary between Landscape Units 5 and 6, and looking into Landscape Unit 5, it is representative of the forest landscapes in that unit, with portions of Landscape Units 4 and 3 visible in the background.

- **Scenic Integrity Objective: High.** In the 2005 Forest Plan, the entire landscape in this Unit of the Forest is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is a natural appearing area that functions as a scenic backdrop and transitional landscape.
- **Existing Scenic Integrity: High, with Areas of Unacceptably Low.** Although the immediate foreground is dominated by the highway itself, NFS lands visible from the Angeles Forest Highway (KOP-Center-2) are predominantly natural-appearing, consisting of middleground and background views to brush-covered hillsides and rounded landforms that contain and enframe the overall composition. The vegetation is finely-textured brushfields with many hues of dark- and medium-green colors and tan-colored, grassy mountainsides in the background. The landscape exhibits a high degree of intactness and coherence of form and character with a moderate amount of visual variety. However, this harmony of form and character is punctuated on the skyline by the dark brown and gray vertical lines and geometric forms of the existing 220-kV transmission line towers. Existing transmission lines are visible as discordant visual elements in the foreground along the highway for more than three miles. Overall, the existing scenic integrity of this NFS landscape is high, with very few deviations of form, line, color, texture, or scale. However, the size and scale of existing skylined transmission towers, with their inherent industrial character, are excessive and totally dominate the natural-appearing landscape character. This reduces certain areas of the existing landscape to levels of unacceptably low scenic integrity, as is evident from Figure 3.14-17a at KOP-Center-2.

Landscape Unit 6: Angeles High Country

Landscape Unit 6 begins approximately above the intersection of ANF Highway and Aliso Canyon Road, continues up and over the northern crest of the San Gabriel Mountains, and ends adjacent to Landscape Unit 7. Both Segments 6 and 11 pass though this landscape unit (refer to Figure B-6 and the top portion of Figure B-7 in Appendix B of the *Visual Resources Specialist Report* for maps showing Landscape Unit 6).

Two transmission corridors (Segment 11 – westerly and Segment 6 – easterly) pass through a relatively narrow portion of the Angeles High Country Place at its western extent. Both Segments 6 and 11 would both cross over the PCT in this landscape unit. The LMP description of this landscape Place's Theme, Setting, and Desired Condition states:

> ***Theme:*** *The Angeles High Country Place is characterized by the highest elevations in Los Angeles County including the tallest peak in the county, Mt. Baldy (10,064 feet). The Place functions as a year-round mountain recreation landscape for the greater Los Angeles Area and is associated with winter snowplay, opportunities for solitude, hiking through spectacular big tree-cover vistas and includes historic and scenic mountain resorts. The Pacific Crest National Scenic Trail is located here and traverses the entire width of the Place. It is one of the "Key Places" representing the most picturesque national forest locations, containing its own landscape character.*
>
> ***Setting:*** *The Angeles High Country Place is located at the top of the Angeles National Forest and is regarded by many as the core area of the national forest. Elevations within the Place range from approximately 5,000 feet to approximately 10,060 feet. The area is characterized by steep slopes with sharp to rounded summits surrounding small alpine valleys. The Place exhibits a forested (tree-covered) environment offering community linkages between the national forest and the surrounding urban areas. The area is a truly unique setting where, on a clear day, visitors are offered panoramic views including the urban center of Los Angeles and the Pacific Ocean to the west and the Mojave Desert to the north. …Trees are seen as tight clumps, scattered individuals, or groups on north-facing slopes. The predominant plant communities include Coulter pine and mixed conifer on the south facing slopes and bigcone Douglas fir and Jeffrey pine on the north facing slopes. Oaks are present in dense woodlands along the shaded slopes of the canyons. Deciduous trees and shrubs are typical in riparian areas.*
>
> ***Desired Condition:*** *The Angeles High Country Place is a key place that is valued for its scenic quality and is maintained as a naturally evolving and natural appearing landscape that functions as a year-round forested mountain recreation area. The valued landscape attributes to be preserved over time are large conifer trees in groups and as scattered individual specimens, views of distant landscapes, and oak woodlands along the shaded slopes of the canyons. The built environment portrays a rustic, historic image. Habitat conditions for threatened, endangered, proposed, candidate and sensitive species are improving over time. Exotic species are reduced and controlled over time.*
>
> ***Program Emphasis:*** *Management emphasis is focused on forest health particularly relative to community protection from fire around Wrightwood and large recreation complexes while maintaining the big tree character, vistas and natural appearing landscapes. … The Angeles Crest Scenic Byway Corridor Management Plan (discussed below) is implemented; rural routes showcase key destinations off the Scenic Byway, and the Interforest Transportation Route linking the Scenic Byways of southern California is established. … Management of special-use authorizations will occur along with resolution of water diversion issues. The focus is toward finding a balance that will result in a sustainable level of human use and the sustainability of forest health. Special emphasis on managing*

the Pacific Crest National Scenic Trail and other National Recreation Trails that occur here will also be given.

Landscape Unit 6 generally has a very natural appearance. Human-made features that are visible to the general public include Angeles Forest Highway, Forest Service facilities (buildings, storage, parking, picnic area) at Mill Creek Summit, Mount Gleason Road, Camp Louis Routh Camp 5 (a Los Angeles County Department of Corrections facility), communication towers on Mount Gleason, utility corridors, fuel breaks, unpaved Forest roads, trails, and campgrounds. As mentioned above, the Angeles Crest Scenic Highway and Byway also traverses portions of the Angeles High Country Place, and this will be discussed later, in Landscape Units 7 and 8.

Existing ROW cross-sections for Segment 6 and Segment 11 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 6 is 200 to 800 feet, and with Segment 11, it is 200 to over 400 feet. Existing transmission structures throughout all the segments are a mix of LSTs and TSPs at varying heights, carrying either 220-kV or 500-kV conductors (SCE, 2007a). The primary viewers of this landscape unit are people recreating in it or people driving through it to reach attractions in the Forest or locations beyond it. Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 6.

Recreationists are considered to have high concern for scenery and people driving through the unit are generally either commuters with low-to-moderate concern levels or people driving for pleasure who would have moderate-to-high levels of concern.

KOP-Center-3 – Mount Gleason Road (Segment 6)

KOP-Center-3 (see Series Volume, Figure 3.14-18a) was established on Mount Gleason Road, about 3 miles west of Mill Creek Summit, looking southeast, down to Segment 6. The existing utility corridor that encompasses Segment 6 is very visible against the dark green, uniform textured, chaparral-covered mountainsides in the Angeles High Country. Existing 220-kV and 500-kV LSTs have a landform backdrop and are barely visible in Figure 3.14-18a, but by connecting the lines created by sunlight reflecting off existing conductors, it is possible to distinguish and locate the transmission line structures. These conductors were specified to be "non-reflective and non-refractive" but in actuality they are quite visually evident during certain lighting conditions, such as shown in this mid-afternoon photograph depicted in Figure 3.14-18a.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is a key place that is valued for its scenic quality and is maintained as a naturally evolving and natural appearing landscape that functions as a year-round forested mountain recreation area.
- **Existing Scenic Integrity: High, with Areas of Very Low.** The landscape visible from Mount Gleason Road is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with dense, dark green chamise and chaparral covered mountainsides. There is very little vegetative pattern in this landscape and the sun angle and shadows emphasize the ruggedness of the steep slopes and broken terrain. The natural landscape has a coherent form and character with substantial visual variety created by the rugged, folded terrain. The existing 220-kV and 500-kV transmission lines were constructed prior to development and application of the Forest Service Visual Management System or the new Scenery Management System. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line conductors that glow with reflected sunlight, leading the eye to the almost transparent, industrial-character steel lattice towers. Access and spur roads to the existing towers are visually evident and

further emphasize the reflectivity of the conductors, causing the valued landscape character to appear heavily altered. This leads to a rating of very low scenic integrity for the utility corridor.

KOP-Center-4 – Southbound Angeles Forest Highway (Segment 6)

KOP-Center-4 (see Map & Figure Series Volume, Figure 3.14-19a) was established on the Angeles Forest Highway, going southbound away from Mill Creek Summit, looking downhill and to the south-southwest. In crossing over Mill Creek Summit, Segment 6 would also traverse the PCT at S6 MP 7.3. Similar to the existing visual impacts that were seen from KOP-Center-3 on Mount Gleason Road, the existing utility corridor that would be upgraded by Segment 6 is very visible against the dark green, uniform textured, chaparral-covered mountainsides in the Angeles High Country. Some of the existing 220-kV and 500-kV LSTs have a landform backdrop but many are situated against the skyline and are very visible in Figure 3.14-19a. Sunlight reflecting off existing conductors and steel lattice towers creates strong visual contrasts. As mentioned before, these conductors were specified to be "non-reflective and non-refractive" but in actuality they are quite visually evident during certain lighting conditions, such as shown in this mid-afternoon photograph depicted in Figure 3.14-19a. This view is typical from Mill Creek Summit, southbound on the Angeles Forest Highway for approximately 2.5-to-3 miles.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is a key place that is valued for its scenic quality and is maintained as a naturally evolving and natural appearing landscape that functions as a year-round forested mountain recreation area.
- **Existing Scenic Integrity: High, with Areas of Unacceptably Low.** The landscape visible from KOP-Center-4 and the Angeles Forest Highway is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with dense, dark green chemise and chaparral covered mountainsides. Vegetative patterns are evident from this view, with changes in riparian vegetation color and texture occurring in the draws. The sun angle and shadows emphasize the ruggedness of the steep slopes and broken terrain. The natural landscape has a coherent form and character with substantial visual variety created by the rugged, folded terrain. The existing 220-kV and 500-kV transmission lines were constructed prior to development and application of the Forest Service Visual Management System or the new Scenery Management System. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line conductors that glow with reflected sunlight, leading the eye to very visually evident, industrial-character steel lattice towers. Access and spur roads to the existing towers are evident and further emphasize the reflectivity of the conductors. These manmade features are excessive and begin to totally dominate the landscape character, leading to a rating of unacceptably low scenic integrity for the utility corridor.

KOP-Center-5 – Northbound Angeles Forest Highway (Segment 6)

KOP-Center-5 (refer to Map & Figure Series Volume, Figure 3.14-20a) was established on the Angeles Forest Highway approximately 2-air-miles south of Mill Creek Summit, traveling northbound toward the Summit and looking uphill to the northeast. Similar to the existing visual impacts that were seen from KOP-Center-3 on Mount Gleason Road and KOP-Center-4 southbound on the Angeles Forest Highway, the existing utility corridor that would be used by Segment 6 is very visible against the dark green, uniform textured, chaparral-covered mountainsides in the Angeles High Country. Some of the existing 220-kV and 500-kV LSTs have a landform backdrop and are barely visible, but many are situated against the skyline and are very visible as seen in Figure 3.14-20a. Even though the time of day was similar to that for KOPs-Center-3 and 4, in this image sunlight reflecting off existing conductors is not a problem, because the angle of view is different. However, the conductors may, and most likely will, reflect sunlight at some point in time throughout the day. The steel lattice towers create strong visual contrasts when seen

against the skyline, and draw attention away from the natural landscape features (see Figure 3.14-20a). This view is typical for northbound travelers for approximately 2.5 miles as they climb toward Mill Creek Summit on the Angeles Forest Highway.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is a key place that is valued for its scenic quality and is maintained as a naturally evolving and natural appearing landscape that functions as a year-round forested mountain recreation area.
- **Existing Scenic Integrity: High, with Areas of Low.** The landscape visible from the Angeles Forest Highway in general, and KOP-Center-5 specifically, is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with dense, dark green chemise and chaparral covered mountainsides. There is very little vegetative pattern in this landscape view. The sun angle and shadows emphasize the ruggedness of the steep slopes and broken terrain. The natural landscape has a coherent form and character with substantial visual variety created by the rugged, folded terrain. The existing 220-kV and 500-kV transmission lines were constructed prior to development and application of the Forest Service Visual Management System or the new Scenery Management System. The natural landscape exhibits a high degree of intactness and scenic integrity, but the highly discordant transmission line structures and the access and spur roads leading to those towers are visually evident and moderately alter the valued landscape character, leading to a rating of low scenic integrity for the utility corridor.

Landscape Unit 7: Angeles Uplands West

Landscape Unit 7 is located between Landscape Unit 6 to the north (which is at generally higher elevations) and Landscape Unit 8 to the south (which is located at generally lower elevations). Both Segment 11 (westerly) and Segment 6 (easterly) pass through this landscape unit in a north-south direction (refer to Figure B-7 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 7). This landscape unit contains a major portion of State Highway 2 – the Angeles Crest Scenic Highway and Scenic Byway. Segment 11 passes immediately adjacent to the Big Tujunga Reservoir and Segment 6 is located immediately adjacent to the southwest corner of the San Gabriel Mountain Wilderness as they pass through Landscape Unit 7. The LMP description of this landscape Place's Theme, Setting, Desired Condition, and Program Emphasis states:

> ***Theme:*** *The Angeles Uplands West Place is a popular, expansive, chaparral-covered landscape that serves as a mid-elevation gateway to the high country (Angeles High Country Place). This area provides dramatic canyon panoramas along the Angeles Crest Scenic Byway. Visitors can also find recreation experiences that provide challenge in a remote setting. It is one of the "Key Places" representing the most picturesque national forest locations, containing its own landscape character.*
>
> ***Setting:*** *The Angeles Uplands West Place is located between the Front and High Country Places. Elevations in the Place range between approximately 2,500 feet to approximately 6,300 feet. The slopes are steep on the southern aspect of the Place, with sharp to rounded summits and deep narrow canyons similar to other mid-elevation Places on the Angeles National Forest. The Place is accessed from routes that pass through the Front Country Place. These routes (including the Angeles Crest Scenic Byway) lead visitors to dramatic canyon panoramas and rugged mountain background views. This Place includes portions of designated wilderness areas that have been proposed for wilderness evaluation, and Inventoried Roadless Areas.*
>
> *Slopes are steep on the southern aspect of the Place, with sharp to rounded summits and deep narrow canyons similar to other mid-elevation Places on the ANF. Canyons have steep rocky sides and are dense with upland vegetation. There is considerable diversity in the vegetation between the north- and*

south-facing slopes and along shaded slopes and canyons. The landscape is generally natural or near-natural in appearance. Human influence is most apparent in the developed and dispersed recreation facilities and travel ways. Developed recreation is limited by the character of the landscape within the Place. Dispersed recreation is emphasized, including hiking, backpacking, equestrian use, bicycling, mountain biking, hang gliding, hunting, fishing, and off-highway vehicle (OHV) use. The condition of trails varies, and other infrastructures such as campgrounds and trailheads are aging. The intense level of recreation use generates user conflicts on roads, trails and other areas.

The Place supports multiple uses that are valuable to the public. Many of the utility service infrastructures that support the greater Los Angeles urban area are present within this landscape. Several county roads and California State highways serve as major high-speed commuter routes from inland valleys and the desert to the Los Angeles Basin.

***Desired Condition:** The Angeles Uplands West Place is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas fir and Coulter pine, and a well-defined age class mosaic in chaparral.*

***Program Emphasis:** Management emphasis is focused on forest health, particularly protection of pockets of large conifers. Management is also focused on the high levels of recreation use, as well as the urban and national forest infrastructure present, in a balanced and sustainable manner consistent with preserving the dramatic canyon panoramas. Historic Vetter Lookout will be a focal point for interpretation and community outreach. The Angeles Crest Scenic Byway Corridor Management Plan is implemented and rural routes showcase key destinations of the Scenic Byway.*

Angeles Crest Scenic Byway Corridor Management Plan. The Angeles Crest Scenic Byway passes through Landscape Unit 7. The Angeles Crest Scenic Byway has a Corridor Management Plan, as described below:

California State Highway 2 was designated a California State Scenic Highway in 1971 and a National Forest Scenic Byway in 1990. The 55-mile-long byway begins outside of the ANF in La Cañada-Flintridge and continues over the San Gabriel Mountains through the ANF to the Los Angeles/San Bernardino County line. A Draft Corridor Management Plan (CMP) has been developed for the byway. Although the CMP is secondary to the Forest Plan and County of Los Angeles General Plan, in terms of enforcement stature, it does reflect the local community's vision for a byway and represents a commitment to maintain and enhance the Byway's intrinsic qualities. The CMP was developed with the input of numerous agencies and non-agency groups.

The ANF manages the Forest lands that the Byway passes through and is responsible for ensuring consistency between the Forest Plan and the CMP. National Forest Scenic Byways are classified as having a concern level of 1 (out of 3), which indicates the highest level of public concern about alterations to the viewed landscape. The Byway passes through three Forest Plan Places (Front Country, Angeles Uplands West, and the Angeles High Country) and three landscape units (Landscape Unit 6 – Angeles High Country, Landscape Unit 7 – Angeles Uplands, and Landscape Unit 8 – Foothills Front Country).

For the portion of the Byway that passes through non-Forest lands (in-holdings), Los Angeles County is responsible for management of the Byway as directed under the portions of the County of Los Angeles General Plan that relate to designated scenic highways.

Existing ROW cross-sections for Segments 6 and 11 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 6 varies from 200 to 800 feet, and with Segment 11 it is 200 to over 400 feet. Existing transmission structures throughout all the segments are a mix of LSTs and TSPs at varying heights carrying either 220-kV or 500-kV conductors. Please refer to Figures D-14 and D-15 in Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 7.

KOP-Center-6 – Upper Big Tujunga Canyon Road - Southbound (Segment 6)

KOP-Center-6 (see Map & Figure Series Volume, Figure 3.14-21a) is located on Upper Big Tujunga Canyon Road between Lynx Gulch and Alder Gulch, approximately one mile northwest of KOP-Center-7 and approximately two-air-miles north of the Angeles Crest Scenic Byway. The image in Figure 3.14-21a was taken looking east, capturing a portion of the proposed Project's Segment 6 as it crosses the mountain slopes of the Upper Big Tujunga Canyon. In that image, existing towers and conductors along the Segment 6 alignment are very visible as they cross the midslope landscape, and so are the cut slopes of the SCE access roads are visible in this view. Vetter Mountain Lookout is the white dot located on the high-point of the skyline ridge. Existing transmission lines where Segment 6 would be located are approximately 0.5 miles away from KOP-Center-6. Viewing duration is long for highway users, as there are multiple viewing opportunities toward Segment 6 from various vantage points along the road. Viewers are not commuters, and therefore Forest visitors in this vicinity would be expected to have high concern for scenery.

Human-made objects visible from this point include the road itself and gray colored LSTs in the middleground. Vetter Mountain Lookout is the white dot on the highest part of the skyline. With the exception of the road and transmission corridor passing through it, the rest of the landscape viewed from this KOP appears intact and has a natural-appearing landscape character.

This view encompasses upper Big Tujunga Canyon and adjacent mountains, and this part of the canyon is wide and open compared to the narrow, lower canyon, where slopes are steeper. A variety of vegetation including chaparral shrubs and conifer stands can be seen in the canyon and on adjacent slopes.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Low.** The landscape visible from Upper Big Tujunga Canyon Road in general, and KOP-Center-6 specifically, is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with dense, dark green chaparral and evergreen tree-covered mountainsides. There are interesting vegetative patterns in this landscape view that are created by the folded terrain and microclimates. The sun angle and shadows emphasize the ruggedness of the steep slopes and broken terrain. The moderate slopes and rolling terrain are not as visually dominant as the terrain in many other parts of the Forest and therefore the existing transmission lines in this corridor have a stronger visual presence. The natural landscape has a coherent form and character with substantial visual variety created by the rugged, folded terrain. In this utility corridor, the existing 220-kV and 500-kV transmission lines were constructed prior to development and application of the Forest Service Visual Management System or the new Scenery Management System. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the discordant transmission line structures and access road cutslopes, which

further detract from scenic integrity, leading to a rating of low scenic integrity for the utility corridor. This landscape currently does not meet the ANF High SIO because of the presence of human-made features.

KOP-Center-7 – Upper Big Tujunga Canyon Road - Northbound (Segment 6)

KOP-Center-7 (see Map & Figure Series Volume, Figure 3.14-22a) is located on the northbound side of Upper Big Tujunga Canyon Road, at an elevation of approximately 3,900 feet, approximately one-air-mile north of the Angeles Crest Scenic Byway, looking north. It is approximately 1.5 miles north and downhill of the intersection of Big Tujunga Canyon Road and the Angeles Crest Highway. The transmission corridor is very visible along this section of road because the road parallels and crosses under transmission lines in several locations. From this view, Segment 6 towers and conductors are very visible in the foreground, and they are visible in the middleground from the point where they cross over the Angeles Crest Highway (behind the view of this photograph) and then continue north, as shown in Figure 3.14-22a. Segment 6 would be visible in the immediate foreground of the Upper Big Tujunga Canyon Road for approximately three miles past the intersection of the Angeles Crest Scenic Byway.

KOP-Center-7 was selected to represent the foreground and middleground views that people driving north along the road would have of Segment 6 of the transmission corridor. This gently sloping hillside is almost at the top of the Angeles Crest. The sloping terrain is covered with thick chaparral shrubs and small trees. Views from this location are somewhat contained by the relatively low adjacent terrain, but in general, this location has expansive views that extend above the ridgelines and over nearby vegetation. This section of the Upper Big Tujunga Canyon Road is not a commuter route, but is in the heart of the ANF. Therefore, viewers from this location are people who are recreating or driving for pleasure and their concern for scenery is moderate-to-high.

Human-made objects visible from this point include the road itself, LSTs that are protruding above the skyline, and tan-colored cutslopes of the access and spur roads along the transmission corridor. With the exception of the road and transmission corridor passing through it, the landscape viewed from this KOP appears intact and has a natural-appearing landscape character.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Unacceptably Low.** The landscape visible from Upper Big Tujunga Canyon Road, in general, and KOP-Center-7, specifically, is predominantly natural-appearing, consisting of foreground and middleground landscapes with dense, dark green chaparral and evergreen tree-covered mountainsides. There are interesting vegetative patterns in this landscape view that are created by the folded terrain and microclimates. The moderate slopes and rolling terrain are not as visually dominant as the terrain in many other parts of the Forest and therefore the transmission lines in this corridor have a stronger visual presence. Although vegetation appears fairly intact, the overall view from this KOP, and for approximately three miles along this road, is dominated by the road and existing transmission line corridor with tall lattice towers. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line structures and access/spur road cutslopes, which detract from scenic integrity. These manmade features are visually excessive and begin to totally dominate the landscape character, leading to a rating of unacceptably low scenic integrity for the utility corridor.

KOP-Center-8 – Vetter Mountain Lookout (Segment 6)

KOP-Center-8 (see Map & Figure Series Volume, Figure 3.14-23a) is located at Vetter Mountain Lookout at an elevation of approximately 5,890 feet, looking southwest toward the Mount Wilson electronic site on the skyline. Segment 6 towers and conductors are very visible as they cross over the Angeles Crest Highway and two middleground ridges. Cutslopes of this Highway are very visible in this view. Additionally, a few scattered, smaller cutslopes of the Upper Big Tujunga Canyon Road are visible below the Lookout. Vetter Mountain Lookout is a National Scenic Byway destination and is located on a high-point on the western end of a long flat ridge on which Charlton Flat Picnic Area is located. Both of these recreation sites are accessed from the Angeles Crest Scenic Byway by way of Forest Service Road 3N16.2 that continues west from Charlton Flats Road 3Na6.1, toward the lookout. The lookout is located at the end of an approximately 1-mile trail from the trailhead parking area. Vehicular access is available to the interpretive volunteers who work at the lookout and Forest Service personnel. From the lookout, views to the west and southwest reveal Segment 6 as it crosses upper slopes of the Upper Big Tujunga Canyon. Segment 6 is between approximately 1.1-to-1.3 miles away. Viewing duration is long for visitors to this destination and forest visitors would be expected to have high concern for scenery.

This view encompasses upper Big Tujunga Canyon and adjacent mountains, and this part of the canyon is wide and open compared to the narrow, lower canyon, where slopes are steeper. A variety of vegetation including chaparral shrubs and conifer stands can be seen in the canyon and on adjacent slopes.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Moderate.** The landscape visible from Vetter Mountain Lookout (and Charlton Flats) in general, and KOP-Center-8 specifically, is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with dense, dark green chaparral and evergreen tree-covered mountainsides. There are interesting vegetative patterns in this landscape view that are created by the folded terrain and microclimates. The sun angle and shadows emphasize the ruggedness of the steep slopes and broken terrain. The natural landscape has a coherent form and character with substantial visual variety created by the rugged, folded terrain. On the skyline, electronic facilities at Mount Wilson are visible and attract attention. On the midslopes, the existing utility corridor contains 220-kV and 500-kV transmission lines that were constructed prior to development and application of the Forest Service Visual Management System or the new Scenery Management System. Also on the midslopes, existing highway cutslopes are partially shielded from view by dark shadows. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the visually discordant electronic sites, transmission line structures, and highway cutslopes. Access and spur roads to the existing towers are evident beyond the Angeles Crest Highway, and further detract from scenic integrity, leading to a rating of moderate scenic integrity for the utility corridor. This landscape currently does not meet the ANF High SIO because of the presence of these human-made features.

KOP-Center-9 – Angeles Crest Scenic Byway (Westbound) & Rincon-Shortcut Trailhead (Segment 6)

KOP-Center-9 (see Map & Figure Series Volume, Figure 3.14-24a) is located on the Angeles Crest Scenic Byway just east of the Shortcut Saddle Area, looking west at the Rincon-Shortcut OHV Trailhead. Existing LSTs and conductors are very visible in this view as they cross over the highway and trail. The

Rincon-Shortcut OHV Trail follows the corridor of Segment 6 for approximately seven-air-miles; and towers, conductors, and spur roads would be very visible from this OHV Trail. OHV users are generally classified as moderate or low concern levels for scenic quality; however, this view is also seen by travelers on the Angeles Crest Scenic Byway, which has been classified as high concern for scenic quality.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Very Low.** The landscape visible from the Angeles Crest Scenic Byway and Rincon Trailhead in general, and KOP-Center-9 specifically, is predominantly natural-appearing, consisting of foreground and middleground landscapes with dense, dark green chaparral and evergreen tree-covered mountainsides. There are interesting vegetative patterns in this landscape view that are created by the folded terrain and shadows in the landscape. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line structures, one of which has aircraft warning colors and symbols, which further detracts from scenic integrity and makes the landscape look heavily altered, leading to a rating of very low scenic integrity for the utility corridor.

KOP-Center-10 – Angeles Crest Scenic Byway (Eastbound) (Segment 6)

KOP-Center-10 (see Map & Figure Series Volume, Figure 3.14-25a) is located on the Angeles Crest Scenic Byway approximately 1.5 miles west of the Shortcut Saddle Area, at the southern crest of the San Gabriel Mountains at an elevation of approximately 4,350 feet. This location was selected to represent middleground views of the Segment 6 transmission corridor as seen by people driving up the highway. The view is to the highway corridor, utility corridor crossing, and the surrounding landscape. Figure 3.14-25a was taken from a small, unpaved turnout, and, although it is not a formal vista point, numerous tire tracks and footprints indicate it has major use as a scenic viewing area. There are several well-used, unpaved turnouts along this segment of the Byway, of which this is one. It represents views that people have when they stop at the pullouts along this section of the highway and look at the landscape. Viewing duration from this location is short for drivers as they tend to focus on the sinuous road, but long for those who stop at the pullouts. The level of concern for viewers from this scenic byway is high.

Views from KOP-Center-10 to the east include rugged terrain composed of mountains, ridgelines, and canyons. The south-facing slopes are covered with medium- to low-growing chaparral shrubs with a large cut-and-fill slope on the highway ahead, and areas of exposed earth and rock along the Segment 6 utility corridor. Just above the transmission line is the San Gabriel Mountain Wilderness. The proposed route for Segment 6 does not enter the San Gabriel Wilderness Area. However, it is positioned directly adjacent to a portion of the southwestern boundary between S6 MP 18.0 and MP 18.5. Views are extensive from this location, including views southward to the San Gabriel Valley.

The steep mountainsides are dominant visual elements. Rock faces from road cuts-and-fills and the transmission corridor are also highly visible elements from this KOP. These human-made elements are located within the immediate foreground to middleground. The road cuts and fill are quite visible due to their contrast in color, shape, and size (scale). The transmission corridor elements are less visible, but are prone to drawing attention to themselves when the sun glints off of the conductors at certain times of the day, such as shown in Figure 3.14-25a. The towers on the skyline ridgeline are also more visible than

other corridor elements. Except for the road cuts and fill and the transmission corridor, the viewed landscape is intact and has a natural-appearing character.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Low.** The landscape visible from the Angeles Crest Scenic Byway in general, and KOP-Center-10 specifically, is predominantly natural-appearing, consisting of foreground and middleground landscapes with dense, dark green chaparral-covered mountainsides and scattered clumps of evergreen trees. There are interesting vegetative patterns in this landscape view that are created by the folded terrain and shadows in the landscape. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line structures, which make the valued landscape character appear moderately altered. They detract from the otherwise high scenic integrity, leading to a rating of low scenic integrity for the utility corridor.

KOP-Center-11 – Silver Moccasin Trailhead (Segment 6)

KOP-Center-11 (see Map & Figure Series Volume, Figure 3.14-26a) is located on the Angeles Crest Scenic Byway at the Shortcut Saddle Area, looking southwest from the Silver Moccasin Trailhead at an elevation of approximately 4,750 feet. This area is adjacent to and just east of the Rincon-Shortcut OHV Trailhead that is displayed above. KOP-Center-9 was selected to represent views of Segment 6 transmission corridor from a popular, high elevation recreation area. The Shortcut Saddle area has a picnic area, large paved parking area, and interpretive signage. The proposed Segment 6 would traverse Shortcut Saddle at S6 MP 16.7. In addition, a number of different types of trails converge in this area. The Silver Moccasin National Recreation Trail passes in a north-south direction over the Angeles Crest Highway in this area. Because of the parking area, many people start hiking the trail from this location (the portion of the trail south of the highway is also known as Shortcut Canyon Trail (Robinson, 2007). This area is also a terminus for the Rincon-Shortcut OHV Trail. Most of the viewers from this location are either people hiking on the Silver Moccasin Trail or people parking at the trailhead and taking advantage of the spectacular views to the south. Viewer level of concern for scenic values is high in this area.

Existing LSTs and conductors are very visible in this view as they cross over the saddle and proceed south along the southwestern border of the San Gabriel Mountain Wilderness, which is situated to the left of the structures. A portion of the Mount Wilson electronic site is visible on the skyline to the right side of the photograph. The existing utility corridor crosses over the trail as both proceed downhill and southward to the Los Angeles Basin.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.

- **Existing Scenic Integrity: High, with Areas of Unacceptably Low.** The landscape visible from the Silver Moccasin Trailhead in general, and KOP-Center-11 specifically, is predominantly natural-appearing, consisting of foreground and middleground landscapes with dense, dark green chaparral and evergreen tree-covered mountainsides. There are interesting vegetative patterns in this landscape view that are created by the folded terrain and shadows in the landscape. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line structures. These manmade features are visually excessive and begin to totally dominate the landscape character, leading to a rating of unacceptably low scenic integrity for the utility corridor.

KOP-Center-12 – Cogswell Reservoir & National Scenic Bikeway (Segment 6)

KOP-Center-12 (see Map & Figure Series Volume, Figure 3.14-27a) was established on Cogswell Reservoir Dam, looking west. KOP-Center-12 is located at the west end of the West Fork San Gabriel River National Scenic Bikeway, and just south of the San Gabriel Wilderness, at an elevation of approximately 2,415 feet. The bikeway is a popular, paved recreation trail that follows along the south side of the West Fork San Gabriel River. The trail starts at the West Fork Day Use Trailhead off Highway 39, and then proceeds westward for approximately 5.5 miles, following an easy gradient, and passing several small waterfalls of tributaries that flow into the West Fork. At the western end of the trail, the gradient becomes steeper for the last 0.25 mile, as the road pitches up to the dam. Bicyclists are rewarded with this view from the dam, looking west-southwest toward the divide between the San Gabriel and Anita Canyon watersheds.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Low.** Existing 220-kV and 500-kV lattice structures are visible on the skyline, as are access and spur roads cutting across the mountainside and leading to each LST. When the reservoir is full, there is no "bathtub ring" effect and scenic integrity is high for this landscape. Overall, the existing scenic integrity of this natural-appearing National Forest landscape is high, with no deviations of form, line, color, texture, or scale except for the seasonal bathtub ring at the reservoir in the foreground and existing transmission lines, access roads, and spur roads near the skyline in the middleground. These manmade features create strong visual contrasts and make the valued landscape character appear moderately altered. They detract from the otherwise high scenic integrity and reduce certain areas of this landscape to a level of low scenic integrity.

KOP-Center-13 –Mount Zion (Segment 6)

KOP-Center-13 (see Map & Figure Series Volume, Figure 3.14-28a) is located on Mount Zion looking northeast from an elevation of approximately 3,575 feet. Mount Zion is a mountain peak just north of Chantry Flat Picnic Area and Trailhead. Chantry Flat is a popular recreation destination featuring American Disability Act (ADA) accessible facilities at the picnic area and a trail-riding concessionaire under special use permit from the Forest Service. The picnic area is situated north of the City of Arcadia and is approximately 1-mile north of the ANF boundary on a narrow, sinuous, paved, two-lane road. KOP-Center-13 was selected because it offers a vantage point to several LSTs of Segment 6, as seen from the top of Mount Zion. This location exhibits middleground views of the Segment 6 transmission line structures as seen from this heavily used recreation trail. While hiking to this KOP on a weekday, the

visual analyst and Forest Service landscape architect encountered several parties of hikers. Weekend use is higher than weekday use, and concern for scenery is high for this viewshed.

From this vantage point, the tops of 10 lattice steel structures are visible to the naked eye; five are very evident on the skyline near the right-center of this view, and others just barely are visible on the skyline to the left of the saddle.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas Moderate.** Although most of the area seen from this KOP is visually intact and natural-appearing, five existing lattice structures stand out on the middleground skyline and attract attention, and then other lattice structures become evident, once the attention is drawn to the skyline. Most of the NFS lands in this area are visually intact and meet the definition of High SIO. However, the existing transmission line does not, and meets the definition of moderate scenic integrity because the valued landscape character appears slightly altered, and the transmission lines remain visually subordinate to the landscape character being viewed.

This concludes the analysis of individual KOPs for Segment 6. Following is a north-to-south analysis of KOPs for Segment 11.

Landscape Unit 6: Angeles High Country

Landscape Unit 6 begins approximately above the intersection of ANF Highway and Aliso Canyon Road, continues up and over the northern crest of the San Gabriel Mountains, and ends adjacent to Landscape Unit 7. Segment 11 passes though this landscape unit (refer to Figure B-6 and the top portion of Figure B-7 in Appendix B of the *Visual Resources Specialist Report* for maps showing Landscape Unit 6).

The Segment 11 transmission corridor passes through a relatively narrow portion of the Angeles High Country Place at its western extent. Segment 11 would both cross over the PCT in this landscape unit, north of the CDF Camp 16 on Mount Gleason Road. The LMP description of this landscape Place's Theme, Setting, and Desired Condition are fully described at the introduction to KOP-Center-3, above.

KOP-Center-14 – Pacific Crest Trail (Segment 11)

KOP-Center-14 (see Map & Figure Series Volume, Figure 3.14-29a) was established on the Pacific Crest Trail (PCT), just north of the Mount Gleason Road and just west of Big Buck Campground, looking north toward two existing parallel transmission lines: a set of 220-kV towers and conductors on the left and a set of 500-kV towers and conductors on the right. This viewpoint was selected to characterize the existing landscape visible to hikers and equestrians on the PCT in the vicinity of the proposed Project. Tan and reddish-colored soils are visible at the base of existing tower in the middleground, leading off to the right to an access road near the skyline. This is evidence of the access roads that have been used to construct and maintain the existing transmission line.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition

is a key place that is valued for its scenic quality and is maintained as a naturally evolving and natural appearing landscape that functions as a year-round forested mountain recreation area.

The Pacific Crest Trail Association's April 2005 edition of the PCT Communicator featured an article "Protecting the PCT Experience" authored by Mike Dawson (2005), Trail Operations Director for PCTA. The article focuses on PCTA's policy regarding scenery. It describes that in October 2004, the PCTA's Board of Directors accepted the Scenery Management System as a primary method for delineating the PCT management corridor and defining acceptable management within that corridor. Since the SMS formally applies consideration of constituent preferences, this PCTA policy is useful information for program and project planning that might influence the PCT user's experience. The article quotes a PCTA resolution: "Further be it resolved, that the PCTA deems that the foreground zone defined by SMS combined with a minimum corridor width of 500 feet, should be used to define the primary PCNST management corridor, and that actions in the middleground should also meet the Scenic Integrity Objective for those lands. The minimum SIO assigned to lands within the foreground of the trail tread and clearly related viewpoints, campsites and water sources should be "High" as defined in the handbook, while the SIO of lands in the middleground should be a minimum of "Moderate" as defined in the handbook." The above SIO assignments are consistent with the Forest Plan. The article concludes, "Representatives of PCTA shall advocate such designations within planning documents affecting the PCT experience and shall use the SMS to judge whether management actions that are proposed are appropriate on public lands." (PCT Communicator, April 2005)

- **Existing Scenic Integrity: High, with Areas of Low.** The landscape visible from the PCT is predominantly natural-appearing, consisting of a foreground and middleground landscape with dense, dark green Douglas fir, oak, and pine trees on north-facing slopes and chaparral shrubs with widely scattered pine trees on south-facing slopes, creating a mosaic of patterns scattered across these steep mountainsides. The natural landscape has a good coherence of form and character with substantial visual variety. The natural landscape exhibits a high degree of intactness, or scenic integrity, except for the few distinct manmade features – the transmission lines with industrial-character, tall, geometric lattice towers. Access and spur roads to the existing towers are evident and attract attention. When viewed for long durations in the foreground or middleground, as when hiking on the PCT, the existing transmission line towers are very evident as vertical, angular structures that create glare and contrast with the natural landscape. These discordant features attract attention from the harmony of the natural form and character of the landscape, especially transmission towers that are in the foreground or are silhouetted against the skyline in the middleground. These discordant elements do not borrow form, line, color or texture from the natural-appearing landscape, and create a moderately altered landscape. Therefore, the existing transmission line towers meet the definition of low inherent scenic integrity.

KOP-Center-15 – Mount Gleason Road (Eastbound) (Segment 11)

KOP-Center-15 (see Map & Figure Series Volume, Figure 3.14-30a) was established on the Mount Gleason Road, approximately 0.3-miles east of Camp 16, looking northeast toward the ridgetop and an existing pull-out on the north side of the road. The proposed route for Segment 11 would not traverse this landscape, but would be located approximately 0.3-miles west of this location. However, this KOP is relevant because in this vicinity SCE proposes to construct a helicopter staging area (SCE #1) for the proposed Project. (However, this SCE-proposed helicopter staging area would not be used for Alternative 6, the Maximum Helicopter Alternative.) This viewpoint was selected to characterize the existing landscape visible to recreationists and Camp personnel driving eastbound on Mount Gleason Road in the vicinity of the proposed Project. Tan and reddish-colored soils are visible at the pull-out.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is a key place that is valued for its scenic quality and is maintained as a naturally evolving and natural appearing landscape that functions as a year-round forested mountain recreation area.

- **Existing Scenic Integrity: High, with Areas of Borderline Moderate-to-Low.** The landscape visible from the Mount Gleason Road is predominantly natural-appearing, consisting of large-scale, panoramic views to middleground and background landscape, such a shown at KOP-Center-3. However, this is a foreground view toward the proposed Project's (Alternative 2) helicopter staging area (fly yard #1) and it does not show panoramic views; rather, it shows details in the landscape that are somewhat discordant. The dense, dark green brushfields are interrupted by cut and fill slopes of the road itself, and by an access road that follows along the ridgeline and powerline with wooden poles that interrupt the skyline. The natural landscape exhibits a moderate degree of intactness, or scenic integrity, except for the distinct manmade features: the power line with its H-frame wooden poles, the cut and fill slopes with bare earth, and grass/shrubs growing along the roadside. These discordant features distract from the harmony of the natural form and character of the landscape. From this view, built features attract attention, especially the wooden poles and the road itself. These discordant elements do not borrow form, line, color or texture from the natural-appearing landscape, and therefore, this scene is on the borderline between moderate and low inherent scenic integrity.

Landscape Unit 7: Angeles Uplands West

Landscape Unit 7 is located between Landscape Unit 6 to the north (which is at generally higher elevations) and Landscape Unit 8 to the south (which is located at generally lower elevations). Segment 11 passes through this landscape unit in a north-south direction (refer to Figure B-7 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 7). The LMP description of this landscape Place's Theme, Setting, Desired Condition, and Program Emphasis are described as an introduction to KOP-Center-6 through KOP-Center-11, above.

KOP-Center-16 – Angeles Forest Highway (Southbound) (Segment 11)

KOP-Center-16 (see Map & Figure Series Volume, Figure 3.14-31a) was established on the Angeles Forest Highway, approximately 0.25-miles north of the intersection of the Highway and the Lower Big Tujunga Canyon road, looking west toward the skyline and an existing access road that leads to an existing underground water tank that is used for fire-fighting. Although the proposed route for Segment 11 would not traverse this landscape, but instead would be located approximately 0.5-miles west of this location, this KOP was chosen because at this location, there is a proposed helicopter staging area for Alternative 6 (Maximum Helicopter Alternative). However, this site would not be used for the proposed Project (Alternative 2). This viewpoint was selected to characterize the existing landscape visible to recreationists and commuters driving southbound on the Angeles Forest Highway in the vicinity of the proposed Project. This ridgeline is visible for a very short time, based on speed of traffic on the Highway and the narrow and curving nature of this portion of the highway. The gray colors of the asphalt road dominate the scene, and dark green evergreen trees and chaparral cover the mountainside in this vicinity. The flat area on the skyline is completely covered with Spanish broom, and this large leveled area overlooks the Tujunga Creek Canyon. This flat area is visible to travelers on the Highway, although viewing duration is short as drivers focus on the sinuous road. Two types of users travel on this road: commuters and recreationists. It is assumed that commuters have some regard for scenic values, but in general, may have only a low-to-moderate concern level. Recreationists, on the other hand, are generally driving for pleasure and have a high concern level.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.

- **Existing Scenic Integrity: Low.** The landscape visible from the Angeles Forest Highway is predominantly modified by the highway, water tank, and former parking area on the skyline. This highway provides panoramic views to the Tujunga Canyon and steep mountainsides. However, because of the direction of view of this photograph, these panoramic views are not shown. Rather, details in the landscape that are somewhat discordant are displayed, and the landscape appears moderately altered. This is a foreground view toward the proposed helicopter staging area #10 for Alternative 6. This same area is not proposed as a helicopter staging area for Alternative 2. The natural landscape no longer exhibits a high degree of intactness, or scenic integrity, because of the manmade features that have begun to dominate the valued landscape character – the highway itself, the cut and fill slopes with bare earth, and the flattened skyline, caused by an abandoned parking lot on the right side of the skyline and a buried water tank on the left half of the skyline in this view. These discordant elements do not borrow form, line, color or texture from the natural-appearing landscape, and this scene has low inherent scenic integrity.

KOP-Center-17 – Angeles Forest Highway (Northbound) (Segment 11)

KOP-Center-17 (see Map & Figure Series Volume, Figure 3.14-32a) is located on the Angeles Forest Highway approximately three miles north of its intersection with the Angeles Crest Scenic Byway. This location was selected to represent middleground and background views of the Segment 11 transmission corridor as seen by people driving north and down into the Big Tujunga Canyon on their way to Palmdale, Lancaster, or the Antelope Valley. This view is typical of the view northward for approximately 0.5 miles along this twisting, narrow highway. The existing, utility corridor crosses over the highway just south of this vantage point, and then proceeds toward Mount Gleason -- the background ridge in this view. The image in Figure 3.14-32a was taken from a large, unpaved turnout, and although it is not a formal vista point, numerous tire tracks and footprints and voluminous litter piles indicate it is used as a stopping point and scenic viewing area. Footprints indicate people exit their vehicles, which leads to the conclusion that people have a longer duration of view, than if they were simply driving by and not stopping. There are several well-used, unpaved turnouts along this segment of the Highway, of which this is one. It represents views that people have when they stop at the pullouts along this section of the highway and look at the landscape. Viewing duration from this location is short for drivers, as they tend to focus on the sinuous road, but long for people who exit their vehicles and walk around to look at the landscape from these numerous pull-outs. Two types of users travel on this road: commuters and recreationists. It is assumed that commuters have some regard for scenic values, but in general, may have only a low-to-moderate concern level. Recreationists, on the other hand, are generally driving for pleasure and have a high concern level.

Steep hillsides and folded terrain draw attention down into the bottom of Big Tujunga Canyon. Likewise, the folded terrain with interesting shadows draws attention away from the horizontal skyline ridges, which also are very scenic. Vegetation patterns are interesting, and bare soils are evidence of the access and spur roads that follow along the transmission line corridor. Obviously, the setting sun casts rays of light that dramatically illuminate the two parallel transmission lines in this corridor. The influence of human activity is very evident with the presence of highly visible access/spur roads and transmission line towers that appear all the way to the horizon. The landscape character of this area is natural-appearing, except for the steel lattice towers, conductors, access roads, and spur roads.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas

along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.

- **Existing Scenic Integrity: High, with Areas of Very Low.** The landscape visible from the Angeles Forest Highway in general, and KOP-Center-17 specifically, is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with interesting patterns of dense, dark green chaparral-covered mountainsides. The folded terrain and shadows create interesting patterns in this landscape view. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the highly discordant transmission line structures, which detracts from the high scenic integrity. The utility corridor appears heavily altered and visual deviations (human-made structures) strongly dominate the view, leading to a rating of very low scenic integrity for the utility corridor.

KOP-Center-18 – Clear Creek Outdoor Education Camp (Segment 11)

KOP-Center-18 (see Map & Figure Series Volume, Figure 3.14-33a) is located on a nature trail just west of the Clear Creek Outdoor Education Camp. This camp is operated by the Los Angeles Unified School District, under special use permit from the Forest Service. The camp access is a single-lane, paved road that takes off from the Angeles Forest Highway approximately 1-mile north of its intersection with the Angeles Crest Scenic Byway. The nature trail at this location is wide enough for a motor vehicle, but provides access for the 80 students who come to camp for a week at a time. The camp has a three-year waiting list, according to the Assistant Director (Calderon, 2007; Gardina, 2007). This location was selected to represent foreground, middleground, and background views of the Segment 11 transmission corridor as seen by students hiking on the nature trail down into Clear Creek, a tributary of Big Tujunga Creek. This view, looking northwest, is typical of the view for approximately ¼-mile along this trail before it crosses under the transmission lines.

The focal point of this landscape is the background mountain with interesting vegetative patterns and bare rock outcrops that attract attention. The jagged skyline further dominates the viewers' attention away from the foreground slope, which is covered by dense, evenly textured chaparral vegetation. There is a reddish-colored knob in the middleground that does not attract much attention, however, on the top of it, there are two existing transmission LSTs. Both towers have a landform backdrop, and are hardly visible from this vantage point, but the conductors shine in the early morning sunlight, as is evident in this view. On the skyline to the right, one more tower is visible against the blue sky. The conductors shine in the early morning sunlight in this view.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition is maintained as a natural appearing landscape that functions as a mid-elevation recreation gateway to the High Country. The valued landscape attributes to be preserved over time are dramatic canyon panoramas along the scenic byway, the presence of bigcone Douglas-fir and Coulter pine, and a well-defined age class mosaic in chaparral.
- **Existing Scenic Integrity: High, with Areas of Low.** The landscape visible from the Clear Creek Outdoor Education Center in general, and KOP-Center-18 specifically, is predominantly natural-appearing, consisting of foreground, middleground, and background landscapes with interesting tan rock patterns and mottled, dark green chaparral-covered mountainsides, leading the eye to a jagged skyline in the background. The folded terrain and shadows create high visual interest in this landscape view. The natural landscape exhibits a high degree of intactness and scenic integrity, except for the discordant transmission line conductors that lead viewers' attention to the LST on the right skyline. The existing LST in the middle of this view blends almost completely with the mottled background landscape patterns, and if it were not for the horizontal lines created by the conductors, this LST would meet the definition of moderate scenic integrity. However, the existing

transmission line begins to dominate the valued landscape character and detracts from scenic integrity, leading to a rating of low scenic integrity for the utility corridor.

Landscape Unit 8: The Front Country

Landscape Unit 8 is located south of Landscape Unit 7, which is situated to the north and is generally at higher elevations, and north of the greater Los Angeles Basin. The foothills of the San Gabriel Mountains serve as a part of the scenic backdrop for the greater Los Angeles area. The Forest Plan considers the Foothill Place to be one of the ANF's "Key Places" which represents some of the most picturesque areas of ANF. Both Segment 11 (to the west) and Segment 6 (to the east) pass through The Front County Landscape Unit (refer to Figures B-7 and B-8 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 8). The Forest Plan description of the Front Country Place applies to this landscape unit as well. The LMP description of this landscape Place's Theme, Setting, Desired Condition, and Program Emphasis states:

Theme: *The scenic mountain backdrop for the greater Los Angeles area. This Place provides portals from the Los Angeles Basin, (with its 15 million plus population), to the national forest. This 'backyard' landscape is extensive and includes the 60 miles from Lytle Creek to Newhall Pass. It is one of the "Key Places" representing the most picturesque national forest locations, containing its own landscape character.*

Setting: *The Front Country Place rises dramatically from the Los Angeles Basin from an elevation of approximately 300 feet to an elevation of approximately 6,000 feet. The communities that make up the urban interface of the San Bernardino, San Fernando, and San Gabriel Valleys define the lower elevation edge of the Place. The area is easily accessible from various points along the Interstate 5, 15, and 210 travel corridors. The trails through the Place offer national forest visitors dramatic urban panoramas and views to rugged mountain backdrops.*

The southern aspect of the Place includes steep slopes with sharp to rounded summits and deep narrow canyons. The steeper reaches of the slopes are typically barren and highly eroded. Canyons characteristically have steep, rocky sides and are often strewn with large distinctive boulders. The Mediterranean climate of southern California affects vegetation types and water availability. Perennial water is present only in the largest creeks and rivers. Chaparral is the most dominant plant community. Canyon and coast live oaks grow along the shaded slopes of the canyons.

The cultural landscape of the Place is generally characterized by urban influences resulting in a modified character in many areas. The modified setting is often inconsistent with the types of recreation opportunities visitors are seeking. In other areas, steep slopes limit access (protecting resources) resulting in feelings of remoteness and solitude while enjoying hidden treasures that include, springs, waterfalls, a variety of landscapes, and many recreation experiences including hunting and fishing. Access is limited by a trail system that some think is not meeting the needs of the recreating public. Some trails are located in poor locations (steep, unstable areas) requiring high maintenance. There is also a network of user created trails that are the cause of resource problems in many areas. The developed sites in the Place are aging and do not meet the needs of the modern recreation user. Many facilities cannot accommodate modern vehicles and at a fundamental level do not meet the requirements of the Americans with Disabilities Act (ADA) or the National Forests and Grasslands Built Environmental Image Guide (BEIG). In many areas within the Place, managers feel that the levels of recreation use are exceeding the capacity of the facilities.

The Place has numerous electronic and communication sites located on ridgelines and mountain tops. Many of the utility corridors that support the Los Angeles Basin are located in the Place, as well as flood control structures and dam facilities. Finally, there are many unauthorized activities occurring in the Place resulting in resource problems.

The ANF is easily accessible from various points along the Interstates 5, 15, and 210 travel corridors. Numerous trails offer national forest visitors dramatic urban panoramas and views to rugged mountain backdrops. The southern aspect of the Front County includes steep slopes with sharp to rounded summits and deep narrow canyons.

The steeper reaches of the slopes are typically barren and highly eroded. Canyons characteristically have steep, rocky sides and are often strewn with large distinctive boulders. Perennial water is present only in the largest creeks and rivers. Deciduous trees and shrubs occupy riparian areas. Chaparral is the most dominant plant community, while canyon and coast live oaks grow along the shaded slopes of the canyons. The Front County Place is viewed by the residents of adjacent communities as their backyard. The area is intensively used resulting in user conflicts, trash, non-permitted uses, parties, car dumping, graffiti, and other activities that compromise national forest resources. The Front Country Place has numerous human-made features that are visual elements. Some of the more visible include electronic and communication sites located on ridgelines and mountain tops, utility corridors, and flood control structures and dam facilities. Many areas near this place (but outside of the ANF) are heavily developed. They include vast stretches of subdivisions and residential areas of varying ages.

***Desired Condition:** The Front Country Place is maintained as a natural appearing landscape that functions as a 'first impression' scenic backdrop for the Los Angeles/San Bernardino metropolitan area, and a national forest portal for its 15 million residents. The valued landscape attributes to be preserved over time are the rugged and wild appearing mountain silhouettes, dramatic undisturbed views to urban and mountain landscapes especially from trails and roads, coast live oaks along the shaded slopes of the canyons, and a well-defined age-class mosaic in chaparral.*

***Program Emphasis:** Management emphasis is on protecting communities from the threat of fire, managing for high recreation use levels, and maintaining urban and national forest infrastructure (facilities) consistent with the natural setting. An extensive trail network is managed to provide opportunities for hiking, biking, and equestrian trips of short duration and to provide linkages to the national forest trail network and the Pacific Crest Trail. Picnic areas and campgrounds along the Front Country Place provide close to home "first visit" opportunities. Mount Wilson is managed as a major trail destination, vista point and astronomical research site. The national forest will focus on open space protection along the urban interface. Local communities and the national forest cooperate to develop environmental education and conservation stewardship programs relevant to urban students and families especially for the San Gabriel Canyon entry point.*

Existing ROW cross-sections for Segments 6 and 11 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 6 is 200 to 800 feet, and with Segment 11, it is 200 to over 400 feet. Existing transmission structures throughout the segments are LSTs carrying either 220-kV or 500-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 8.

This landscape unit has a variety of viewers because of its proximity to urban areas. The concern level ranges from high for nearby residents and recreationists, to moderate for residents living farther away

from the ANF (but still able to view it) and for people driving on roads that pass through the unit. The most sensitive viewers of the unit would likely be residents living closest to the landscape unit. Residents living in the area near the ANF (and within private in-holdings) have high levels of concern. Recreationists hiking on nearby trails, picnicking, camping, and participating in other activities, such as driving the Angeles Crest Scenic Byway, also have high levels of concern for the visual environment. People driving the Angeles Crest Scenic Byway and the Angeles Forest Highway for commuting or other non-viewing purposes, as well as those driving area roads, are more likely to have different levels of concern, ranging from low, to moderate, to high.

KOP-Center-19 – Gould Substation from Angeles Crest Scenic Byway (Segment 11)

KOP-Center-19 (see Map & Figure Series Volume, Figure 3.14-34a) is located adjacent to the Angeles Crest Highway in a paved pullout and overlook at an elevation of approximately 2,500 feet, approximately 0.5 mile north of the Gould Substation, looking south toward downtown Los Angeles, which is barely visible in the background. This location was selected to represent middleground views of the Segment 11 transmission corridor and the existing Gould Substation, as seen by people driving downhill on the highway or stopped at this developed pullout. The overlook is northwest of the City of Pasadena and north of the City of La Cañada Flintridge. This heavily used overlook was selected as a KOP because it is part of the Angeles Crest Scenic Byway, its popularity as a high use area (due in part to its proximity to developed communities), the closeness of the 210 Freeway (approximately 1.5 miles to the south), the spectacular views it offers, and its visual proximity to Segment 11 of TRTP and the Gould Substation, which are focal points in this panoramic landscape. The overlook was identified in the Angeles Crest Scenic Byway Corridor Management Plan as "Vista Point, Milepost 27.23" and was listed as a potential site for interpretative development.

The existing view from KOP-Center-19 takes in the lower foothills of the San Gabriel Mountains that line both sides of the Arroyo Seco, the San Rafael Hills to the south, and other more distant hills and mountains. On especially clear days, the Pacific Ocean and Catalina Island can be seen in the distance to the west. The foothills in the foreground are thickly vegetated with native chaparral vegetation. Ornamental trees and landscaping can be seen in the residential areas situated on the hilltops south of the Gould Substation.

A variety of land uses that influence landscape character can be observed from this location. They include conservation (on ANF and City of Pasadena watershed protection lands), utility, and residential. Human-made features that can be seen in the foreground to middleground from this KOP include the Gould Substation, several utility corridors, local electric distribution lines, and residences. On clear days, high-rise buildings in downtown Los Angeles can be viewed beyond the Gould Substation. Distant views take in residential areas of La Cañada Flintridge, Pasadena, and Los Angeles beyond. Viewers consist primarily of people who drive to the overlook specifically to take in the view and people driving on the Angeles Crest Highway who pull over for brief views. Their viewing duration ranges from short to moderate and their concern level is high. Because of the open nature of this location when looking southeast, south, and southwest, the views are very expansive and take in a variety of landscape character types. The landscapes seen from this KOP are complex and the view is a good example of an urban/wildland interface. The undeveloped, heavily vegetated foreground and middleground areas are best described as having a natural-appearing landscape character. The transmission corridor is characteristic of large-scale utility infrastructure. Nearby residential areas and areas beyond have an urban or suburban landscape character.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the entire ANF landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition would maintain the Forest as a natural appearing landscape that functions as a 'first impression' scenic backdrop for the Los Angeles/San Bernardino metropolitan area, and a national forest portal for its 15 million residents. The valued landscape attributes to be preserved over time are the rugged and wild appearing mountain silhouettes, dramatic undisturbed views to urban and mountain landscapes especially from trails and roads.
- **Existing Scenic Integrity: High.** Although the Gould Substation and areas beyond are not in the ANF, the foreground and middleground landscapes of this view are within the National Forest and contribute much value to the scene. NFS lands are largely intact in this view, and meet the definition of High SIO. Urban areas beyond the Forest boundary do not have a scenic integrity objective.

KOP-Center-20 – Forest Road to Millard Campground (Segment 11)

KOP-Center-20 (see Map & Figure Series Volume, Figure 3.14-35a) is located on Forest Road 2N65.2, also shown on maps as the Chaney Trail, leading to the Millard Campground just north of the City of Altadena at an elevation of approximately 2,090 feet, looking west. This location is approximately 0.5 miles north of and inside the ANF boundary. This location was selected to represent immediate foreground views of the Segment 11 transmission corridor along this recreation road and trail. The road to the campground was gated at this location and several cars were parking alongside the road, indicating recreationists were using this location along the road as a trailhead for additional recreation pursuits. It is expected that all viewers on this dead-end road are recreationists who have a high concern for scenic values. There are additional recreation trails in this vicinity from which recreationists would view Segment 11 [see Section 3.15 (Wilderness and Recreation)].

Two existing double-circuit 220-kV transmission structures are evident from this vantage point in the landscape; the LST on the left has an unused position on the right side of the tower, where no insulators or conductors are located. In this portion of Segment 11 from the Gould Substation to the Mesa Substation, new insulators would be hung on the vacant positions of these existing 220-kV double-circuit towers and new conductors would be strung.

- **Scenic Integrity Objectives.** In the 2005 Forest Plan, the landscape in this vicinity is mapped as High SIO, where the management direction states that human activities should not be visually evident. Human-caused deviations may be present but must repeat the form, line, color, texture, and pattern common to the natural landscape character so completely and at such a scale that they are not evident. The Desired Condition would maintain the Forest as a natural appearing landscape that functions as a 'first impression' scenic backdrop for the Los Angeles/San Bernardino metropolitan area, and a national forest portal for its 15 million residents. The valued landscape attributes to be preserved over time are the rugged and wild appearing mountain silhouettes, dramatic undisturbed views to urban and mountain landscapes especially from trails and roads.
- **Existing Scenic Integrity: High, with Areas of Unacceptably Low.** Although most of the area seen from this KOP is visually intact and natural-appearing, the two lattice structures in the immediate foreground stand out and attract attention. Most of the NFS lands in this area are visually intact and meet the definition of High SIO. However, the existing transmission lines totally dominate the natural-appearing landscape character, and therefore the transmission line meets the definition of unacceptably low scenic integrity.

South Area: San Gabriel Valley and Inland Empire Landscape Region

The San Gabriel Valley/Inland Empire Landscape Region consists of Landscape Units 9 through 19, extending south from the southern boundary of the ANF to the Mesa Substation, then east to the Chino and Mira Loma Substations.

Landscape Unit 9: Duarte/Bradbury/Irwindale

This landscape unit is bounded on the north by the southern border of the ANF, on the south by the Foothill Freeway (Interstate 210 or I-210), and extends approximately one mile east and west of the transmission corridor. Landscape Unit 9 contains the developed areas of Duarte, an eastern portion of Bradbury, and a small portion of Irwindale north of the Foothill Freeway (refer to Figure B-8 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 9).

The terrain within this landscape unit is generally flat in its central and southern areas. Moderate slopes are present in the northern residential areas, with steeper slopes to the north in the undeveloped foothills of the San Gabriel Mountains, leading up to the southern boundary of the ANF. Development within the landscape unit consists primarily of single-family residential neighborhoods, and some of these lie in close proximity to the transmission corridor. Commercial development is concentrated along Huntington Drive. As is typical for many of SCE's transmission corridors, several nurseries are present within the Right-of-Way (ROW) itself. The Rancho Duarte Golf Course is located within and around the transmission corridor north of Huntington Drive, and the Avila Gardens Residence for Seniors is located immediately south of the golf course and adjacent to the transmission corridor. Some industrial land uses are present south of Huntington Drive near the San Gabriel River channel and immediately north of I- 210. A residential neighborhood is also present south of Huntington Drive and west of the transmission corridor.

Vegetation in this cultural landscape consists of a variety of planted deciduous trees, palm trees, various shrubs, and grass lawns. Native chaparral evergreens dominate the undeveloped San Gabriel Mountains to the north. The most visually dominant features in this landscape unit are the San Gabriel Mountains to the north and the two sets of electric transmission towers and conductors that define the central axis of the landscape unit.

Segment 7 of the proposed Project would traverse Landscape Units 9 and 10, and terminate in Landscape Unit 12 at the existing Mesa Substation. Existing ROW cross-sections for Segment 7 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 7 is 200 to 250 feet. Existing transmission structures in these segments are LSTs carrying 220-kV conductors. Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 9.

Viewers of the transmission corridor within Landscape Unit 9 include residents within their homes, particularly those with views oriented toward the corridor, pedestrians, bicyclists, and motorists traveling on surface roads, plus motorists passing through the landscape unit on I-210.

The study corridor in Landscape Unit 9 traverses through the cities of Duarte, Bradbury, and Irwindale. Applicable laws, regulations, and standards relative to the scenic quality for Landscape Unit 9 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*.

The City of Bradbury has adopted ridgeline and view preservation regulations. There are no designated State or local scenic highways located within Landscape Unit 9.

KOP-South-1 – Royal Oaks/Tocino Intersection, Duarte (Segment 7)

KOP-South-1 represents views from generally level terrain looking north toward the San Gabriel Mountains along the transmission corridor. Viewers from this KOP include residents with static views from their homes, and pedestrians, bicyclists, and motorists traveling on the area's streets (see Map & Figure Series Volume, Figure 3.14-36a). This KOP is located within a residential neighborhood in the south-central portion of the landscape unit immediately adjacent to the transmission corridor, looking

north-northeast. Because only non-NFS lands are visible in the view, the VS/VC methodology applies to this KOP. Figure 3.14-36a is representative of existing conditions seen at foreground viewing distances from S7 MP 0.0 to S7 MP 1.8.

The existing foreground view from KOP-South-1 includes houses, a paved street, parked automobiles, grass lawns, shrubs, a wide variety of attractive trees, some residential overhead utility wires, and the high-voltage transmission towers and conductors present approximately 300 feet to the north-northeast. The middleground view contains the San Gabriel Mountains with chaparral evergreen vegetation, which are natural-appearing and relatively untouched. However, pairs of transmission towers and conductors also are visible in the middleground view, and even though they have a landform backdrop, the existing lattice structures are visually evident, especially for the pair of towers that are exposed above the skyline.

- **Viewer Exposure: high.** The proposed Project would be highly visible from these residential properties because it would cross directly behind existing houses at foreground viewing distances. As seen from these neighborhoods, the proposed Project also would be highly visible on the barren slopes of the San Gabriel Mountains at middleground viewing distances. The duration of view would be extended from these residential neighborhoods, and the number of potential viewers would be moderate-to-high. Therefore, the overall viewing exposure would be high.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in single-family homes, on neighborhood streets, golfers, and residents at the nearby Avila Gardens Senior Center. The level of viewer sensitivity is high.
- **Visual Quality: moderate-to-high.** The overall visual quality for KOP-South-1 is moderate-to-high. The slopes and high ridgeline of the San Gabriel Mountains provide a dramatic and attractive backdrop to this residential view, and the vegetation (particularly the contrasting mix of palm and deciduous trees) provides an element of special visual interest. The visual intactness of the residential area is average, although the transmission structures encroach upon the foreground view. The visual unity of the residences and streetscape is moderately high; the landforms, vegetation and residential structures fit well together. However, the scale and geometric forms of the transmission structures contrast strongly with these other visual elements, and these existing industrial-character structures protrude above the skyline in both the foreground and middleground, creating additional contrasts. Without the transmission lines in this view, this landscape would exhibit high visual quality, but the introduction of these towers and conductors has lowered the visual quality to a moderate-to-high level.
- **Overall Visual Sensitivity: high.** For residents of Duarte in general and KOP-South-1 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 10: I-605 Corridor

Landscape Unit 10 is bounded on the north by the Foothill Freeway (I-210), on the south by the Pomona Freeway (Highway 60), and extends approximately one mile east and west of the transmission corridor (refer to Figures B-8 and B-9 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 10). Landscape Unit 10 is centered along the corridor of the San Gabriel River Freeway (I-605) and the San Gabriel River channel, which generally run north-to-south. The transmission corridor generally parallels the river and freeway, with the conductors crossing the river and freeway at some locations.

This landscape unit is approximately eight miles long and passes through multiple jurisdictions. From north to south Landscape Unit 10 includes: the central portion of Irwindale; a western portion of Baldwin Park; a small western spur of the City of Industry; and, a southeastern portion of South El Monte.

The terrain within this landscape unit is generally flat, with the most significant relief occurring within the San Gabriel River channel and the Santa Fe Flood Control Basin (see KOP-South-2 below). Development

consists primarily of freeway structures and industrial facilities, including several large gravel quarry facilities. Residential neighborhoods are present east and west of the transmission corridor, but these are somewhat visually isolated from the transmission towers and conductors by the intervening freeway and the San Gabriel River. An exception to this occurs in the southwestern portion of the landscape unit in South El Monte (see KOP-South-3 below). Other major features within Landscape Unit 10 include the Irwindale Speedway south of Live Oak Avenue, several schools, the California Country Club northeast of the I-605/Highway 60 interchange, and the Santa Fe Dam Recreation Area.

The Santa Fe Recreation Area is an 836-acre Los Angeles County Park situated north of the Santa Fe Dam, a flood-control structure for the San Gabriel River. The majority of the park is located southeast of the I-210/I-605 interchange, with a smaller section southwest of this interchange. The park includes floodwater spreading grounds; hiking, biking, and equestrian trails; campsites; picnic areas; a children's water play area; and a 70-acre lake. The lake and vicinity are the primary use areas within the park. The portion of the transmission corridor that passes through the park is not visible from the lake area, but the transmission towers are faintly visible atop the ridgeline within the San Gabriel Mountains to the north. Other areas of the park with views closer to the transmission corridor are generally undeveloped and accessible via hiking, biking, or equestrian trails. The transmission corridor is also likely visible from a private remote-controlled model airplane club located west of I-605 in the northwest portion of the park.

Vegetation within Landscape Unit 10 consists of shrubs, trees, and grasses near the San Gabriel River channel, other trees, shrubs, and grasses at various locations along the corridor, and several nurseries within SCE's ROW.

The most visually dominant features in this landscape unit are I-605, the San Gabriel River channel, and the electric transmission towers and conductors. Existing ROW cross-sections for Segment 7 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 7 is 200 to 365 feet wide. Parts of the Segment 7 transmission corridor include two sets of structures; the taller structures are double-circuit LSTs carrying 220-kV conductors; the shorter structures are single-circuit LSTs carrying 220-kV conductors. The last part of Segment 7 includes a third set of LSTs of intermediate height that carry two sets of 66-kV conductors. Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 10.

Viewers of the transmission corridor within Landscape Unit 10 include motorists traveling along I-605, residents living in proximity to the corridor, and pedestrians, bicyclists, and motorists traveling on nearby surface roads. Given the utilitarian nature of this freeway corridor and the high travel speeds, the visual sensitivity of the roadway travelers is considered to be moderate, at most.

The study corridor in Landscape Unit 10 traverses through the cities of Irwindale, Baldwin Park, Arcadia, El Monte, Industry, and South El Monte. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 10 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated State or local scenic highways located within Landscape Unit 10.

KOP-South-2 – I-605 Corridor Between I-210 & Arrow Hwy, Irwindale (Segment 7)

This KOP is located just south of the I-210/I-605 interchange, looking south on the southbound I-605 freeway and it represents a typical view for motorists traveling south along this freeway (see Figure A-37a – Existing Conditions for KOP-South-2 – I-605 Corridor Between I-210 & Arrow Hwy, Irwindale).

- **Viewer Exposure: moderate-to-high.** The proposed Project would be highly visible from the 605 freeway as there is no topographic or vegetative screening in front of these large, industrial structures. Foreground features include the concrete freeway surface, automobiles, lamp posts, freeway signage, and the high-voltage transmission towers and conductors crossing the freeway approximately 800 feet in front of the viewer to the southwest. The Santa Fe Flood Basin Spillway Channel is visible to the right (west) and beneath the upcoming bridge. The middleground view contains more of the freeway and the transmission towers and conductors further to the south. The background view contains a faint view of the Puente Hills, which are more visible on days with clear air-quality. The number of viewers is high, but the duration of view is brief-to-moderate, depending on traffic. Because drivers' focus is primarily concerned with traffic and safe driving, overall viewer exposure is moderate-to-high.
- **Viewer Concern: low.** Viewers in this area consist primarily of motorists traveling along I-605. There is an industrial nature in this freeway corridor and during non-rush-hour, there are high speeds and short viewing times at this KOP. During rush-hour, lanes are crowded with stop-and-slow traffic and drivers' attention is on safety and traffic, not visual quality concerns, and therefore, the overall level of visual sensitivity is considered low.
- **Visual Quality: low.** The overall visual quality for KOP-South-2 is low. The level of vividness in this view is low; the Puente Hills are only faintly visible and the relief provided by the Santa Fe Flood basin is slight, vegetation is minimal, and the human-made elements of the freeway and the transmission structures are not memorable features. The visual intactness is low with the transmission structures encroaching upon the view of the distant hills and sky. The visual unity is also low; the view is reasonably coherent for an industrial freeway corridor, but the transmission structures of varying designs detract from the harmony of the view.
- **Overall Visual Sensitivity: low-to-moderate.** For viewers on I-605 in general and KOP-South-2 specifically, the moderate-to-high viewer exposure, low viewer concern, and low visual quality lead to a low-to-moderate overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-3 – Linard Street/Kayann Place Intersection, South El Monte (Segment 7)

This KOP is located within a residential neighborhood in the southern portion of Landscape Unit 10, in close proximity to the proposed transmission corridor (see Map & Figure Series Volume, Figure 3.14-38a). Foreground features include the street, sidewalk, parked automobiles, single-family residences, light poles, grass lawns, introduced landscaping trees and shrubs, a freeway billboard, and residential utility wires, with the high-voltage transmission towers and conductors visible approximately 500 feet to the east. In the middleground above a rooftop on the right side of Figure 3.14-38a, a small portion of the San Jose Hills is visible.

- **Viewer Exposure: high.** The proposed Project would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is foreground and immediate foreground from these houses. The number of viewers is moderate and viewing time is extended from these streets, houses, and yards.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in these single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: low-to-moderate.** The overall visual quality for KOP-South-3 is low-to-moderate. The level of vividness in this view is moderately low; other than the distant San Jose Hills, the terrain is essentially flat. The visual encroachment of industrial structures (transmission towers and conductors) and freeway commercial structures (billboard) are prominently visible against the sky, reducing visual quality in this neighborhood. Landscaping vegetation within the neighborhood adds some visual interest. The visual unity is somewhat below average due to the contrast between the geometric forms and out-of-scale transmission structures and the other elements of the residential neighborhood. Without the existing transmission lines in this view, this landscape would exhibit moderate visual quality, but the introduction of these towers and conductors and billboard has lowered the visual quality to a low-to-moderate level.

- **Overall Visual Sensitivity: moderate-to-high.** For residents of South El Monte in general and KOP-South-3 specifically, the high viewer exposure, high viewer concern, and low-to-moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 11: San Gabriel Valley

Landscape Unit 11 is located in the San Gabriel Valley. The north end of the unit begins at the southern boundary of the ANF and the southern end of Landscape Unit 8. From the ANF boundary, the transmission corridor heads in a generally southern direction through Altadena, Pasadena, San Gabriel, Temple City, Rosemead, and Monterey Park. The southern terminus is the boundary of Landscape Unit 12, where the transmission line enters the Mesa Substation (refer to Figures B-8 and B-9 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 11). The northern end of Landscape Unit 11 begins in the southern foothills of the San Gabriel Mountains and follows the east side of Eaton Canyon (a major wash complex that contains the Eaton Wash Dam) downstream into the flat San Gabriel Valley. The unit traverses generally level terrain to its southern end where it passes over low hills to the Landscape Unit 12 boundary.

The extreme northern part of the landscape unit in the vicinity of Eaton Wash contains the least developed areas of Segment 11. Even in this area, however, residences are found on the adjacent hillsides. Most of the unit passes through the heavily developed middle of the San Gabriel Valley and includes an assortment of land use types that influence landscape character. Where the transmission corridor is intersected by major arterials such as Sierra Madre Boulevard, Colorado Boulevard, Huntington Drive, Las Tunas Drive, Mission Boulevard, Valley Boulevard, and Garvey Boulevard, nearby land uses (outside of the corridor) tend to be commercial, with some professional-office and residential uses. These areas tend to have a landscape character that is relatively low rise urban commercial. Between the major arterials, land uses are more varied as is landscape character. Uses include well established neighborhoods of single-family residential, concentrated areas of multifamily residential of varying ages and styles, commercial, and light industrial. The landscape character varies according to land use, but from parts of all of these areas components of the transmission corridor (primarily towers and to a lesser extent conductors) can be seen from behind or between buildings and trees.

The transmission corridor is part of the existing landscape and is seen from many areas near it. Towers and conductors are most apparent where the corridor is intersected by streets and allows viewers to look up and down the transmission corridor and see multiple towers and conductors. This is particularly true where land uses under the conductors within the corridor ROW allow clear views and where vegetation has not been planted adjacent to streets to screen views. The transmission corridor is especially visible in areas where public parks have been developed within the ROW, and people have immediate foreground views of corridor elements like towers and conductors.

Existing ROW cross-sections for Segment 11 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 11 is 200 to over 400-feet. Existing transmission structures in Segment 11 are two sets of LSTs carrying 220-kV conductors and in Segment 11, existing transmission structures include two sets 140-foot-tall LSTs carrying 220-kV conductors and two sets of 80-foot-tall LSTs carrying 66-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 11.

The types of viewers of the transmission corridor found within this landscape unit are as varied as land use types. They include residents, employees, people driving past or through the unit, and recreationists. Viewing sensitivity is likewise diverse. It can be assumed that people living near the transmission corridor

would be the most visually sensitive and would have a high visual concern level, and that people passing by or through the area would be less visually sensitive and would have a low visual concern level.

The transmission corridor in Landscape Unit 11 traverses through the unincorporated community of Altadena and the cities of Pasadena, San Gabriel, Temple City, Rosemead, and Monterey Park jurisdictions. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 11 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated state or local scenic highways located within Landscape Unit 11.

Because the SCE's proposed Project would not replace towers and would involve adding three conductors to existing unused tower cross arms, there would be very little change to the existing visual environment or visual quality. Therefore, no KOPs were selected for this landscape unit.

Landscape Unit 12: Mesa Substation/Montebello Town Center

Landscape Unit 12 surrounds the Mesa Substation and the Montebello Town Center and is located in parts of the cities of Montebello and Monterey Park (refer to Figure B-9 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 12). The terrain within this unit is hilly and crossed by a number of utility corridors, including Segments 6 and 11 of the proposed Project. The Mesa Substation is located in a low, broad valley between the Montebello Hills to the southeast and lower hills to the northwest. The Montebello Town Center is situated on a high terrace surrounded by gentle slopes of the Montebello Hills. Land uses in this landscape unit are extremely diverse and that diversity greatly influences landscape character. The area around the substation has an array of land uses, including the substation itself, transmission corridor, and other utility corridors that feed into or exit from the substation, a commercial landscape nursery under one of the utility ROWs, the Operating Industries Incorporated (OII) Landfill (on the northwest edge of the Montebello Hills), Highway 60, office parks, light industry, commercial, vacant lands, arterial roads, a memorial park and residential areas.

Of this array of land uses, the most visually dominating are the north-facing terraced slope of the OII Landfill, Highway 60, the utility corridors, and the Mesa Substation. The landscape character of this part of Landscape Unit 12 is best described as mixed, with the presence of large scale landfill, transportation, and utility infrastructure.

Land uses around the Montebello Town Center are also diverse. They include commercial (primarily the Montebello Town Center), light manufacturing, hotel, residential (north of Highway 60), transportation (Highway 60 and several freeway interchanges and major arterial bridges over Highway 60), utility corridor, and oil extraction. The southern portion of the unit that includes part of the Montebello Hills serves as a visual backdrop to this unit. This area includes an active oil field and contains a utility corridor. The oil field contains oil pumping equipment, out-buildings, numerous paved and unpaved roads, and scattered groupings of trees (mostly eucalyptus) and natural-appearing shrubs and underbrush. The area immediately surrounding the Montebello Town Center has a landscape character that is typical of large regional malls in Southern California. Elements include large areas of paved parking, large, rather low scale buildings, and attractive landscaping and signage. The area south of the Montebello Town Center on the Montebello Hills is best described as having a mineral extraction-industrial landscape character that is edged by a utility corridor. The most visually dominating features in this landscape unit are the Montebello Hills, the Montebello Town Center, the transportation elements described previously, the oil field, and utility corridors.

Existing ROW cross-sections for Segment 7 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 7 is 200 to 500 feet. Existing transmission structures in Segment 7 include three sets of LSTs carrying 220-kV conductors plus a set of three distribution lines. Segment 11 includes two sets of 140 foot-tall LSTs carrying 220-kV conductors and two sets of 80 foot-tall LSTs carrying 66-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 12.

A wide variety of people view Landscape Unit 12, including: shoppers; employees of the Town Center, office buildings, and other businesses; people driving through the unit; and, residents. Because of the extensive large-scale development that has occurred in this area and generally short viewing duration of most viewers, viewer sensitivity is considered to be low-to-moderate.

The proposed Project corridor in Landscape Unit 12 traverses through the cities of Monterey Park and Montebello. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 12 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated State or local scenic highways located within Landscape Unit 12.

KOP-South-4 – Paramount Boulevard, Montebello Hills (Segment 7)

KOP-South-4 was established on Paramount Boulevard heading east near the Montebello Boulevard intersection. This location represents a foreground view of the transmission corridor for people driving southeast on Paramount Boulevard to North Montebello Boulevard and is similar to other views of the transmission corridor from nearby travelways. Paramount Boulevard is used to access the Montebello Town Center, approximately 0.25 mile downhill to the left (northeast), to connect with San Gabriel Boulevard and to access office park and residential areas to the south (see Map & Figure Series Volume, Figure 3.14-39a).

- **Viewer Exposure: moderate-to-high.** The proposed Project would be highly visible from this intersection, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is immediate foreground and foreground from this intersection and these roads. The number of viewers is high and viewing time is brief from these streets.
- **Viewer Concern: low.** Viewers from this location are drivers passing through to another location. People stopped at the traffic light have direct views of this landscape, but viewing duration is relatively brief, even when stopped for a red light, and attention is mainly to cross-traffic. Therefore, viewing sensitivity is considered to be low.
- **Visual Quality: low-to-moderate.** People waiting for a red light at this location or passing through this intersection to North Montebello Boulevard have immediate foreground and foreground views of the northwest edge of the Montebello Hills oil field and the proposed transmission corridor. The oil field contains scattered areas of eucalyptus trees, shrubs, and underbrush; areas that have been cleared of all vegetation; paved and unpaved roads; and various types of equipment related to oil extraction. It is surrounded by chain link fencing. North Montebello Boulevard has a new appearance with new sidewalks and young street trees that line it and visually tie into the Montebello Town Center. Views from this KOP are contained by the slope of the Montebello Hills and a grove of trees along the top of the hills. Human-made objects are very apparent in the immediate foreground and the landscape is dominated by human influence, including traffic signals, street lights, electric distribution lines, and transmission structures. The paved streets, three parallel lines in the proposed transmission corridor, and the grove of trees on the Montebello Hills are dominant visual features. This visually complex landscape has mixed character that includes transportation, utility, and mineral extraction. Despite the presence of a partially forested hillside in the foreground, the viewed landscape encompasses an unusual mix of land uses and human-made elements that intrude on the view. The presence of these elements and the condition of the land in the oil field negatively effect vividness, intactness, and unity and contribute to visual quality rating of low-to-moderate.

- **Overall Visual Sensitivity: low-to-moderate.** For travelers on Paramount Boulevard and Montebello Boulevard in general and KOP-South-4 specifically, the moderate-to-high viewer exposure, low viewer concern, and low-to-moderate visual quality lead to a low-to-moderate overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-5 – Montebello Town Center, Montebello Hills (Segment 7)

KOP-South-5 was established at the main entrance on the southern side of the Montebello Town Center. It represents views that shoppers have as they leave the shopping complex. As they enter the parking area, they see cars and landscaped islands ahead and beyond that, transmission towers and conductors on the skyline (see Map & Figure Series Volume, Figure 3.14-40a). Three sets of transmission lines are present on the north slope of the Montebello Hills, and two structure types are present in this view – LSTs on the left and TSPs on the right.

- **Viewer Exposure: moderate-to-high.** The view from this location is contained by the walls of the shopping center building and the hills beyond, leading the viewers' eyes to the skyline with transmission lines protruding into the blue sky seen in Figure 3.14-40a. (The FedEx truck is a temporary focal point in this photograph but is not a permanent visual element in this landscape, and is, therefore, ignored in this analysis.) Viewing distance ranges from immediate foreground (the shopping center) to foreground (the skyline hills and transmission corridor). Attention is focused on the sidewalks, parking lot, vehicles, the utility corridor on the skyline, and hills. Viewers consist primarily of shoppers and employees leaving the shopping center to access their vehicles or the nearby bus stop. The number of viewers is high, duration of view is brief, and therefore, viewer exposure is moderate-to-high.
- **Viewer Concern: low.** Viewers from this location are shoppers exiting the mall and drivers passing through the parking lot. Peoples' attention is mainly focused on finding a parking space, finding their car, or vehicular/pedestrian cross-traffic. Therefore, viewer concern is considered to be low.
- **Visual Quality: moderate.** The landscape character of this view is a mixture of shopping center, natural-appearing landscape (the hillside) and industrial-appearing (the utility corridor). Vegetative cover on the slope is essentially unbroken and includes natural-appearing trees, shrubs, and underbrush. From this location facilities and developments associated with the oil field cannot be seen. Ornamental landscaping associated with the shopping center is also visually prominent from this location and would be even more prominent during times of year when the trees have leaves. Human-made visual features dominate the view from this location – ornamental trees, sidewalk, parking area, vehicles, light standards for parking, and walls of the shopping center are quite visible in the immediate foreground. Beyond the parking area, the three lattice towers of the transmission corridor are quite visible as are other electric transmission lines and smaller distribution lines along the top of the hillside.

  The existing conditions assessment of the view from KOP-South-5 determined that the quality of the natural setting elements (topography and natural-appearing vegetation) is moderate-to-high. The quality of the Town Center building and its ornamental landscaping is typical of a well-managed major urban shopping center. The view from this KOP is not of the shopping center, but is rather focused on the parking lot and areas beyond. This view produces average ratings for vividness, intactness, and unity. The parking lot and vehicles introduce utilitarian elements into the viewed landscape, and the transmission lines introduce an incongruent industrial character to the overall landscape scene, lowering the visual quality. When all of these factors are considered, the resulting visual quality rating is moderate.
- **Overall Visual Sensitivity: moderate.** For shoppers at Montebello Town Center in general and KOP-South-5 specifically, the moderate-to-high viewer exposure, low viewer concern, and moderate visual quality lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

South Area: Segment Components

Landscape Unit 13: Whittier Narrows

This landscape unit extends from San Gabriel Boulevard on the western boundary east to I-605. Landscape Unit 13 is characterized as an area of highly developed industrial and residential uses in Los

Angeles County's San Gabriel Valley and with highly developed outdoor recreation areas within an established flood control basin (Whittier Narrows) under the jurisdiction of the U.S. Army Corps of Engineers (refer to Figure B-9 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 13).

Whittier Narrows flood control basin is located within a natural gap in the hills that form the southern boundary of the San Gabriel Valley. The Rio Hondo and San Gabriel River follow through this gap. The Rio Hondo flows across the landscape unit from north to south in the western portion of the unit and the San Gabriel River flows across Landscape Unit 13 from north to south in the eastern portion of the unit. Mission Creek, east of Rosemead Boulevard, is one of the remaining natural streambeds of the Rio Hondo. Other waterways are contained in concrete channels.

The northern portion of the landscape unit outside the Whittier Narrows Recreation Area is highly developed and comprised of industrial and residential land use. The Whittier Narrows Dam is located in the southern portion of Landscape Unit 13. A large nursery is located at the intersection of Rosemead Boulevard and Durfee Road. The transportation system within the landscape unit ranges from local streets to State routes (State Highway 60) to interstate highways (I-605).

The Whittier Narrows Recreation Area is a 1,400-acre park located within the Whittier Narrows flood control basin. It is managed by Los Angeles County Department of Recreation and Parks and the City of Pico Rivera. The basin is near the communities of South El Monte, Rosemead, and Montebello. The Whittier Narrows Recreation Area provides fishing lakes, comfort stations, picnic areas, playgrounds, a nature center, an equestrian facility, trails, a multipurpose athletic complex, a military museum, soccer fields, golf course, volleyball courts, and archery, skeet, pistol and trap ranges. Tennis courts are also provided and include a pro shop. Rentals are available for boats, surreys, bikes, and group area picnics. Special events include carnivals, festivals, and dog shows (SMMC, 2004b).

Bosque del Rio Hondo, located within the Whittier Narrows Recreation Area just one mile south of State Highway 60, offers year-round trail access to one of the remaining natural streambeds of the Rio Hondo, as well as seasonal creeks, picnic areas, access to bike paths and equestrian trails, parking facilities, and restroom facilities. The park design visually integrates the natural riverfront with the adjacent land to provide a riverfront setting for passive recreation. A continuing program of native revegetation has restored the river ecosystem and has improved habitat for resident and migratory birds. Additionally, the Whittier Narrows area is a main connection point for access to the San Gabriel River Bike Trail to the west (28 miles long) and the Los Angeles River bikeway via Rio Honda to the east (29 miles long) used by bicyclists and inline skaters (SMMC, 2004a).

Additionally, the Pico Rivera Sports Arena, also located in Landscape Unit 13, is one of the largest Mexican-style "Rancho de Charro" (rodeo ring) facilities in the United States. It annually hosts more than a dozen shows featuring rodeo performers and other celebrities, often presented in combination with a traditional Mexican rodeo. Professional boxing, wrestling and American-style rodeo s are also presented.

Views throughout Landscape Unit 13 include the presence of the existing transmission corridors (both SCE and the City of Los Angeles Department of Water and Power [LADWP] corridors). The existing ROW has been encroached upon by numerous recreation venues (e.g., horse stables, sports arena, parkland, archery/shooting range, fishing lake, picnic areas, hiking trails) and agricultural activities (e.g., nurseries) throughout the landscape unit over the years. The common theme of the views from various locations in the landscape unit is the presence of multiple existing transmission lines within the foreground, middleground, and background views. Native plants and landscape plantings soften the

presence of the structures in some locations; however, the height of the towers exceeds the height of existing vegetation, so the transmission line structures dominate the visual environment.

Vegetation within the landscape unit varies from native riparian and woodland plant species in the natural areas associated with the Whittier Narrows Nature Center and adjacent Bosque de Rio Hondo to the landscaped and irrigated plantings associated with parkland, residential, and industrial portions of the area. Ruderal and non-native species are associated with disturbed-but-undeveloped and non-maintained portions of the landscape unit. Larger trees and shrubs associated with human development are notably present. Within the flood basin floor, views are restricted to the foreground and middleground due to the presence of the native plants and landscape plantings. Views that include the adjacent low lying hills east and west of the basin floor in the background are available from near the western and eastern boundaries of the landscape unit.

There are two established transmission corridors within the landscape unit: the Segment 7 corridor travels east-to-west across the middle portion of Landscape Unit 13; and Segment 8 (8A) travels west-to-east across the southern portion the unit. At the very western end of the landscape unit, Segments 7 and 8A are located within the same transmission corridor. Within this landscape unit, both Segments 7 and 8A are located within Los Angeles County. Segment 7 crosses through South El Monte (approximately 0.3 mile) and unincorporated County of Los Angeles (approximately 2.4 miles); and, Segment 8A crosses through unincorporated County of Los Angeles (approximately 1.6 miles) and Pico Rivera (approximately 0.6 mile).

Existing ROW cross-sections for Segments 7 and 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 7 is 200 to 250 feet; the ROW associated with Segment 8 varies from 150 to 425 feet wide. Existing transmission structures in Segment 7 and 8 include a variety of LSTs carrying 66-kV and 220-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 13.

Land uses in and near Landscape Unit 13 that influence landscape character largely are comprised of recreation, industrial, agricultural, residential, transportation, flood control, and utility (developed transmission corridors throughout the landscape unit). The unit is highly developed outside the Whittier Narrows Recreation Area and is well maintained and managed within the Recreation Area.

Sensitive viewers in Landscape Unit 13 include recreational users of the Whittier Narrows Recreation Area and Bosque del Rio Hondo and people driving throughout the landscape unit. The level of visual sensitivity varies by type of viewer and view duration and exposure, but is generally considered to be moderate-to-high, given the large amount of acreage devoted primarily to recreational use within the flood control basin.

The study corridor in Landscape Unit 13 traverses through the jurisdictions of the cities of Pico Rivera, South El Monte, Industry, and Los Angeles County. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 13 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated state or local scenic highways located within Landscape Unit 13.

KOP-South-6 – Legg Lake, Whittier Narrows, L.A. County (Segment 7)

This KOP was established at Legg Lake Park, on the western shore of the lake, looking southeast toward the proposed Segment 7 transmission corridor. Legg Lake Park is open daily, and affords the general public access to fishing, picnicking, wildlife-watching, and other outdoor recreation. The expansive park

view has level topography and a dramatic waterfront picnic area. Water features are fairly rare in the Los Angeles Basin; consequently, Legg Lake is a dramatic visual element in this landscape (see Map & Figure Series Volume, Figure 3.14-41a). The foreground of this KOP contains maintained park lawns and landscaping. Picnic areas under the transmission lines include picnic tables on concrete pads, barbecue facilities, trash receptacles, lawns, native and non-native trees.

- **Viewer Exposure: high.** The proposed Project Segment 7 would be highly visible from this recreational park at Legg Lake, as there is no topographic screening and vegetative screening is shorter than the existing and proposed large, industrial-character structures. Viewing distance to the transmission line is foreground and immediate foreground from this vantage point and other locations within the park. Existing vegetation screens the middleground and background views. The number of viewers is high and duration of view is extended, and therefore, viewer exposure is high.
- **Viewer Concern: high.** Viewers in this area consist of recreationists who have come to enjoy the unique environment of Legg Lake, enjoy the open space, wildlife, and picnic areas. Given the recreational nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The presence of a large water feature is unique in the Los Angeles Basin, as described above, and even though the landforms are relatively flat, vegetation is attractive and well maintained, consistent with a developed park setting. The overall park view exhibits an intact landscape, except for the encroachment of transmission line structures on the skyline. This encroachment is offset somewhat by the evergreen trees in the foreground, providing an overall expansive park view. The unity of the view is moderate-to-high because the view is consistent with a developed park setting, and the mature trees help to visually screen the bases of the transmission structures. The overall existing visual quality of the view from this KOP is moderate-to-high.
- **Overall Visual Sensitivity: high.** For people visiting and recreating at Legg Lake in general and KOP-South-6 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 14: Rose Hills

Landscape Unit 14 extends approximately from the I-605 to southeast of Rose Hills Memorial Park. Landscape Unit 14 is characterized by the distinctive land uses of Rose Hills Memorial Park and Puente Hills Landfill and includes the communities immediately adjacent to these land uses (refer to Figure B-9 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 14).

Landscape Unit 14 begins as the existing transmission corridor crosses the San Gabriel River and then the I-605 from west to east. The landscape is flat and dominated by the presence of the I-605 and transmission lines in the vicinity. The transmission corridor quickly climbs into the Puente Hills in the vicinity of Rio Hondo Junior College. The landscape around Rio Hondo Junior College is hilly and vegetated with grasses, midsize shrubs, and trees. The remainder of Landscape Unit 14 is primarily comprised of Rose Hills Memorial Park to the south and west of Segment 8, and Puente Hills Landfill and open space associated with the Puente Hills Landfill Native Habitat Preservation Authority to the north and east of Segment 8.

Existing land uses in and near Landscape Unit 14 that influence landscape character are primarily comprised of Rose Hills Memorial Park and Puente Hills Landfill. Recreational uses, open space, and some areas of residential development are also present.

Existing ROW cross-sections for Segment 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 8 is 150 to 310 feet wide. Existing transmission structures in Segment 8 include between one and three sets of LSTs carrying 220-kV

conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 14.

Viewers in Landscape Unit 14 include visitors to Rose Hills Memorial Park, residents with existing and/or future views of Segment 8, and travelers on the I-605. The level of visual sensitivity ranges from low (motorists) to high (residents and Memorial Park visitors).

Segment 8 of the proposed Project traverses through Landscape Unit 14, and includes land falling under the jurisdictions of the City of Industry and Los Angeles County (including the community of Hacienda Heights).

Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 14 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated state or local scenic highways located within Landscape Unit 14.

KOP-South-7 – Buddhist Columbarium at Rose Hills Memorial Park (Segment 8A)

KOP-South-7 is located at the Buddhist Columbarium at Rose Hills Memorial Park. This KOP was selected to represent views of the Project through the Memorial Park. The immediate foreground of this KOP consists of the fencing and paving at the edge of the Buddhist Columbarium, while the foreground and middleground consists of various portions of the Memorial Park. Also in the middleground is a large agricultural area, which will be developed in the future as part of the Memorial Park extending to the ridgeline. An existing transmission line traverses this agricultural area. The San Gabriel Mountains form an attractive snowcapped feature in the background. Vegetation as seen in KOP-South-7 alternates between the rigid landscaping of the Park, the natural but orderly vegetation in the agricultural area, and small areas of native grasses and shrubs at the edge of the Memorial Park and along the ridgeline (see Map & Figure Series Volume, Figure 3.14-42a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from this vantage point at the Columbarium, as there is no topographic or vegetative screening for the existing or proposed large, industrial-character transmission structures. Viewing distance to the transmission line is foreground from this vantage point. Additionally, due to its high number of visitors and numerous roadways, chapels, and expansive grounds, the Memorial Park offers several other vantage points of the transmission line at different viewing distances, including immediate foreground, foreground, and middleground. The number of viewers is high and duration of view is extended, leading to an overall high viewer exposure.
- **Viewer concern: moderate-to-high.** Rose Hills Memorial Park is open to the public, but has no official designation as a tourist attraction or scenic vista. However, the Buddhist Columbarium at the Memorial Park is situated to serve as a scenic vista point and a location for contemplation and meditation. As such, the level of visual concern is considered moderate-to-high.
- **Visual Quality: moderate-to-high.** KOP-South-7 has a highly visual, interesting mix of landforms, from the gentle slopes of the Memorial Park to the rolling hills and mountains beyond in the middleground and background, with a similarly interesting mix of vegetation, ranging from the landscaping of the Memorial Park, agricultural areas, and natural grasses and shrubs. A small lake with a waterfall that is under construction at the Memorial Park adds a pleasant, formal water feature to the view. The view has a relatively high level of intactness, as the human-made development is context sensitive, and the view has high overall coherence that is minimally disturbed by the presence of the transmission line that crosses the agricultural area, mostly below the skyline. The overall existing visual quality of the view from this KOP is moderate-to-high.
- **Overall Visual Sensitivity: moderate-to-high.** For people visiting the Buddhist Columbarium at Rose Hills Memorial Park in general and KOP-South-7 specifically, the high viewer exposure, moderate-to-high viewer

concern, and moderate-to-high visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 15: Hacienda Heights

This landscape unit extends approximately from Rose Hills Memorial Park on the west to State Highway 57 on the east. Landscape Unit 15 is characterized by the Puente Hills, with open space along the ridgeline and residential development located primarily on the north side of the hills (refer to Figure B-9 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 15).

Landscape Unit 15 includes approximately nine miles of Segment 8A and includes the unincorporated communities of Hacienda Heights and Rowland Heights and small portions of the cities of Whittier and La Habra Heights.

Landscape Unit 15 generally traverses the ridgeline of the Puente Hills. The transmission corridor through Landscape Unit 15 passes through a variety of open space and residential areas. The transmission corridor crosses over residential areas in a number of locations throughout the landscape unit. Residential development in Landscape Unit 15 extends into the hills right up to the ridgeline, with existing transmission lines on the skyline. Existing land uses in Landscape Unit 15 that influence landscape character are largely limited to the recreational uses/open space and residential uses described above.

Existing ROW cross-sections for Segment 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW associated with Segment 8 is 150 to 340 feet wide. Existing transmission structures in Segment 8 include between one and three sets of LSTs carrying 220-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 15.

Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 15 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. There are no designated State or local scenic highways located within Landscape Unit 15.

KOP-South-8 – Colima Road, Hacienda Heights (Segment 8A)

KOP-South-8 was established from the passenger's seat of a vehicle on Colima Road, just west of the intersection of Hacienda Boulevard. This KOP was selected to represent views for local residents traveling west-southwest on Colima Road into the residential areas north of the transmission corridor. This is a typical streetscape view of a divided four-lane collector street in Hacienda Heights with convenience commercial development at the intersection (see Map & Figure Series Volume, Figure 3.14-43a).

- **Viewer Exposure: moderate-to-high.** The proposed Project Segment 8 would be highly visible from this vantage point. The foreground view from Colima Road exhibits adjacent commercial development, and on the ridgeline of this foreground view, Colima Road leads to residential areas and undeveloped hills of Hacienda Heights with transmission lines and towers visible on the skyline. Because the skyline is less than 0.5 mile away, all of this view is in the foreground distance zone. The number of viewers is high, but the view duration is brief from this KOP, leading to a moderate-to-high viewer exposure.
- **Viewer Concern: moderate-to-high.** Viewers would be motorists, passengers on busses, and pedestrians. People stopped at the traffic light at the intersection of Hacienda and Colima (behind the camera about 100-feet), or driving on Colima, have direct views of this landscape with relatively brief viewing durations, but the destinations are residential areas. As such, the level of visual sensitivity is considered moderate-to-high.

- **Visual Quality: moderate.** KOP-South-8 has visually pleasing landforms, with the foreground gently rising into the Hacienda Hills. There is a mix of vegetation in the view, from the planted decorative trees along Colima Road and in the residential areas adjacent to the road, to the low grasses on the undeveloped hillside. Human-made development is the focus of the foreground view, and the transmission structures and conductors and overhead distribution lines adjacent to Colima detract from visual quality. The view generally lacks intactness as a result of encroaching development. The tree-lined Colima Road ties the view together, but unity of the view is diminished by the commercial development. The overall existing visual quality of the view from this KOP is moderate.
- **Overall Visual Sensitivity: moderate-to-high.** For people driving on Hacienda Road or Colima Road in general and KOP-South-8 specifically, the moderate-to-high viewer exposure, moderate-to-high viewer concern, and moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-9 – Hsi Lai Buddhist Temple (Segment 8A)

KOP-South-9 was established at the front entrance steps of the Hsi Lai Buddhist Temple in Hacienda Heights. The Temple is a well-known landmark, notable for its prominence as a spiritual and cultural center and also as a tourist destination. The Temple is open to the public daily. KOP-South-9 was selected to represent typical views to the surrounding landscape and the proposed transmission corridor from the Temple main entrance and steps above the main parking area (see Map & Figure Series Volume, Figure 3.14-44a).

- **Viewer Exposure: high.** The foreground view of KOP-South-9 consists of the Temple parking area and main gate (just visible on the right side of Figure 3.14-44a) at the top of the stairs leading to the Main Entrance. The foreground also includes residential areas below the parking lot. The middleground view includes more residential areas and the existing transmission corridor on the skyline ridge, approximately 0.75 to one mile away. The number of viewers is high, and duration of view from the Temple and grounds is extended, leading to an overall high viewer exposure.
- **Viewer Concern: moderate.** It should be noted that because the vividness of the Temple itself is high because of its architectural style, and typical views for visitors to the Temple are usually of the Temple itself, not of the landscape visible from the Temple. KOP-South-9 was selected to represent views of the transmission corridor from the Temple main entrance for regular visitors and tourists. The concern level for viewers is considered moderate to the surrounding landscape and skyline.
- **Visual Quality: moderate-to-high.** The rolling hills beyond the Temple are an attractive landform, and the native vegetation on the undeveloped hills is equally attractive. The human-made features of the Temple result in a high level of vividness, which is reduced by the presence of the transmission line on the skyline. Overall intactness and unity of the view is high, but visual quality of this landscape is reduced by the transmission towers and conductors that encroach on the middleground view. Therefore, the overall existing visual quality of this KOP is moderate-to-high.
- **Overall Visual Sensitivity: moderate-to-high.** For people arriving and leaving from the Hsi Lai Buddhist Temple and grounds in general and from KOP-South-9 specifically, the high viewer exposure, moderate viewer concern, and moderate-to-high visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-10 – Pathfinder Park, Rowland Heights (Segment 8A)

KOP-South-10 was established directly under the transmission lines at Pathfinder Park in Rowland Heights. It was selected because this is a recreational area located adjacent to a large number of residences, and the transmission corridor passes directly overhead. The view is of a grassy area adjacent to picnic tables bordered by decorative trees and walking paths and an access road. Facilities at the park include a recreation center, ball fields, picnic areas with shelters, tennis courts, lawns, and playground (see Map & Figure Series Volume, Figure 3.14-45a).

- **Viewer Exposure: high.** The proposed Project would be highly visible from this park, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is immediate foreground and foreground from this park. The skyline is less than 0.5 mile away, making this a foreground view to the rolling hills with various types of native vegetation, transmission lines and towers, and some residential development. The number of viewers is high and viewing time is extended from all facilities within Pathfinder Park, making this a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist of recreationists who have come to enjoy the facilities and relax at Pathfinder Park, play sports, or enjoy the open space and picnic areas. Given the recreational nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The gentle slope of the foreground leading into the rolling hills at the skyline is visually pleasing with moderately high vividness, as is the broad expanse of landscaped park grass leading into the hillsides with native vegetation. The transmission corridor represents a major human-made feature that strongly detracts from the natural-appearing quality of the view. The unity and intactness of this view are both relatively high, but diminished by the transmission corridor encroaching upon the view. Therefore, the overall existing visual quality of the view from this KOP is moderate-to-high.
- **Overall Visual Sensitivity: high.** For people relaxing, visiting, and recreating at Pathfinder Park in general and KOP-South-10 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 16: Diamond Bar

Landscape Unit 16 is bounded on the west by the Puente Hills, on the east by the City of Chino Hills, and extends approximately one mile north of the transmission corridor, and south through the western portion of Chino Hills State Park. Landscape Unit 16 contains the southwest portion of Diamond Bar and unincorporated portions of Los Angeles County to the south (refer to Figures B-9 and B-10 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 16).

The terrain within this landscape unit consists of rolling hills with some intervening valleys. Development within the landscape unit consists primarily of single-family residential neighborhoods, with commercial development occurring along some portions of the area's major arterials. The transmission corridor passes through several residential neighborhoods, including some gated communities. These gated communities could not be accessed during the field investigation portion of this study.

Vegetation in Landscape Unit 16 consists of native chaparral on the undeveloped hills, and a variety of ornamental trees, shrubs, ground covers, and grasses in residential and commercial areas. The most visually dominant features in this landscape unit are the rolling hills, both developed and undeveloped, and the transmission towers and conductors from some viewing perspectives.

Existing ROW cross-sections for Segment 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW associated with Segment 8 is 150 to 250 feet wide. Existing transmission structures in Segment 8 include one or two sets of LSTs carrying 220-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 16.

Viewers of Segment 8 within Landscape Unit 16 include residents within their homes, pedestrians, bicyclists, and motorists traveling on surface roads, and motorists passing through the landscape unit on the Orange Freeway (State Highway 57), which is a State-designated eligible scenic highway (see KOP-South-11 below). For some portions of Segment 8, likely viewers would be those traveling on unpaved roads, and hikers in the undeveloped hills.

The study corridor in Landscape Unit 16 traverses through the jurisdictions of the City of Diamond Bar and unincorporated Los Angeles County. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 16 are included as part of a comprehensive table included in Section 3.14.3

and Appendix C of the *Visual Resources Specialist Report*. The City of Diamond Bar's General Plan has established a goal to "Preserve significant visual features which are within, or are visible from the City of Diamond Bar, with an emphasis on the preservation of remaining natural hillside areas." Highway 57 (the Orange Freeway) is a state designated eligible scenic highway, which passes through the western portion of Landscape Unit 16 and intersects the transmission corridor immediately south Diamond Bar.

KOP-South-11 – Orange Freeway (Highway 57), Diamond Bar (Segment 8A)

This KOP is located on the northbound Orange Freeway (Highway 57), just north of the Orange County/Los Angeles County line. In this location, Highway 57 is designated by the State as an eligible State Scenic Highway from State Highway 90 to State Highway 60 (CALTRANS, 2008). KOP-South-11 represents typical views of the TRTP transmission corridor for motorists traveling through Landscape Unit 16. At this location, TRTP would be very visually evident on the skyline straight ahead of northbound travelers (see Map & Figure Series Volume, Figure 3.14-46a). Foreground features include the freeway surface, automobiles, and shrubs and grasses along the freeway margins. Middleground (then foreground) views include rolling hills with native chaparral vegetation, with the high-voltage transmission towers and conductors visible approximately 0.5 mile to the north-northeast. The San Jose Hills are visible in the middleground further to the north-northeast.

- **Viewer Exposure: moderate-to-high.** The proposed Project would be highly visible from the Orange Freeway, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distances to the transmission line include the middleground, then foreground distances as vehicles approach the utility corridor. The skyline in Figure 3.14-46a is less than 0.5 mile away, making this a foreground view to the rolling hills with scattered clumps of various types of native vegetation, transmission lines and towers. The number of viewers is high and viewing time is brief, making this a moderate-to-high viewer exposure.
- **Viewer Concern: high.** Viewers from this perspective are motorists traveling north on Highway 57. Although the viewing duration is short for such viewers, viewer sensitivity is considered moderate-to-high given the natural character of the area and the freeway corridor's scenic designation. But because this is eligible as a State Scenic Highway, the level of visual sensitivity is considered high.
- **Visual Quality: high.** The overall visual quality for KOP-South-11 includes a level of vividness that is above average, with both the local and more distant hills providing attractive elements. The visual intactness of the surrounding landscape is high; although the transmission structures encroach upon the skyline and detract for visual quality. The freeway and transmission corridor represent major human-made features that strongly detracts from the natural-appearing quality of the view, although most people discount their own viewer platforms (the freeway itself). The unity and intactness of this view are both relatively high, but diminished by the transmission corridor that encroaches upon the view (and the freeway itself). This segment of the Orange Freeway is designated by the California Department of Transportation (CALTRANS) as an eligible Scenic Highway, and therefore, the overall existing visual quality of the view from this KOP is rated high.
- **Overall Visual Sensitivity: high.** For people traveling northbound on Highway 57 in general and KOP-South-11 specifically, the moderate-to-high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-12 – Crooked Creek Drive, Diamond Bar (Segment 8A)

KOP-South-12 was established within a residential neighborhood in the western portion of the landscape unit on Crooked Creek Drive, less than 0.75 mile northeast of KOP-South-11, looking south-southeast at the existing transmission line corridor. Foreground features include the street, sidewalk, parked automobiles, houses, planted grass lawns, shrubs, and trees, with native evergreen chaparral vegetation on the hillside immediately behind the houses. The transmission towers and conductors are present on top of the hill approximately 900 feet to the south-southeast (see Map & Figure Series Volume, Figure 3.14-47a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is foreground and immediate foreground from this residential street. The number of viewers is moderate and viewing time is extended from these streets, houses, sidewalks, and yards, leading to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in these single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The overall visual quality for KOP-South-12 is moderate-to-high. The level of vividness in this view is above average; the hillside immediately behind the houses adds visual interest, and the well-kept neighborhood and planted vegetation provides an interesting contrast to the native vegetation. The visual intactness is high, except that the existing transmission structures encroach upon the view and add an incongruent industrial character to this otherwise residential landscape. The visual unity is high given the coherent nature of the suburban neighborhood, but lowered by the presence of the LSTs and conductors that disrupt the otherwise-natural skyline view.
- **Overall Visual Sensitivity: high.** For residents of Crooked Creek Drive in general and KOP-South-12 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 17: Chino Hills

Landscape Unit 17 is bounded on the west by unincorporated Los Angeles County, on the east by Highway 71, and extends approximately one mile north of the transmission corridor and south to the Butterfield Ranch Road interchange of Highway 71. Landscape Unit 17 contains the central portion of the City of Chino Hills and a small portion of the City of Chino that lies west of Highway 71 (refer to Figure B-10 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 17).

The terrain within this landscape unit consists of rolling hills and valleys in the west that generally grade to lower-lying, flatter terrain in the east. The density and extent of development generally increases from west to east across this landscape unit. Improved areas consist primarily of single-family residential neighborhoods, with commercial development occurring along some portions of the area's major arterials. The existing transmission corridor that would contain the proposed Project passes through several residential neighborhoods, including at least one gated community that could not be accessed during field investigations for of this study.

Vegetation in Landscape Unit 17 consists of native grasses, shrubs, and trees in undeveloped areas, and a variety of planted deciduous trees, evergreens, palm trees, various shrubs, and grass lawns in developed areas. Decorative landscaping is also present at some locations within the ROW itself.

The most visually dominant features in this landscape unit are the rolling hills (both developed and undeveloped) and the existing transmission towers and conductors from some viewing perspectives. The transmission towers are lattice steel and carry 220-kV single-circuit conductors.

Existing ROW cross-sections for Segment 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW associated with Segment 8 is 150 to 250 feet wide. Existing transmission structures in Segment 8 include one set of single-circuit LSTs carrying 220-kV conductors (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 17.

Viewers of the transmission corridor within Landscape Unit 17 include residents within their homes and yards; pedestrians, bicyclists, and motorists traveling on residential streets; and motorists passing through the landscape unit on major arterials.

The study corridor in Landscape Unit 17 traverses through the cities of Chino Hills and Chino. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 17 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*.

The City of Chino Hills has several policies related to the preservation of natural ridgelines. Although California municipalities do not regulate the construction of high-voltage transmission lines, the City's concern with respect to protection of ridgeline views should be noted. Euclid Avenue has been designated by San Bernardino County as a scenic highway. The City of Chino Hills has also identified Carbon Canyon Road as a scenic corridor.

KOP-South-13 – Intersection of Avenida Anita/Avenida Compadres, Chino Hills (Segment 8A)

This KOP is located within a residential neighborhood adjacent to undeveloped land in the western portion of the Landscape Unit 17. Foreground features include the street, sidewalks, houses, parked automobiles, street-lights, planted lawns, shrubs, and trees, with native grasses and shrubs on the skyline hill behind the houses. The existing 220-kV transmission tower and conductors are visible on a low skyline ridge approximately 800 feet to the southwest (see Map & Figure Series Volume, Figure 3.14-48a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is foreground and immediate foreground from houses and streets in this neighborhood. The number of viewers is moderate and viewing time is extended from these streets, houses, sidewalks, and yards, leading to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in these single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The level of vividness in this view is average; the undeveloped hill behind the neighborhood adds some visual interest, and the neighborhood is well kept, except that the existing transmission structures encroach upon the view, add an incongruent industrial character to this otherwise residential landscape, and create a degree of contrast with the scale and character of the neighborhood. The visual unity is average given the generally coherent nature of this suburban neighborhood, except for the transmission lines. Therefore, the overall visual quality for KOP-South-13 is moderate-to-high.
- **Overall Visual Sensitivity: high.** For residents of Avenida Anita/Avenida Compadres in general and KOP-South-13 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-14 – Coral Ridge Park, Chino Hills (Segment 8A)

This KOP was established within Coral Ridge Park, a residential "pocket" park on Eucalyptus Avenue in Chino Hills, looking northeast. The existing view from KOP-South-14 includes native brush, planted grass, landscaped evergreen and deciduous trees, a street (Avenida Cabrillo), and some parked automobiles. Framed by green grass, a tan gravel equestrian trail is located in the immediate foreground and continues east of Avenida Cabrillo along the transmission corridor (see Map & Figure Series Volume, Figure 3.14-49a). The nearest existing 220-kV transmission tower is approximately 250 feet east of this viewpoint, and a second tower is roughly 1,000 feet further to the east. The tan wall of the park comfort station is visible through trees on the left, and some rooftops of a residential neighborhood can be seen through the trees on the right.

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from this pocket park and residential neighborhood, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is foreground and immediate foreground from this

equestrian trail and other facilities in the park. Middleground features include a third transmission tower that is barely visible behind the second tower. Further in the distance, the urbanized valley contains eastern Chino Hills, Chino, and Ontario. The San Bernardino Mountains are visible above the valley in the background. The number of viewers is moderate and viewing time is extended, leading to a high viewer exposure.

- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents visiting this park to enjoy the open space and play on park facilities or equestrians on the trail. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The level of vividness in this view is above average given the park setting and the distant view of San Bernardino Mountains. The visual unity is average, given a generally coherent neighborhood park setting, but this is somewhat disturbed by the transmission corridor. The visual intactness is moderately low due to encroachment of the transmission structures. The overall visual quality for this KOP is moderate-to-high.
- **Overall Visual Sensitivity: high.** For visitors to Coral Ridge Park in general and KOP-South-14 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-15 – Cork Drive, Chino Hills (Segment 8A)

KOP-South-15 was established on Cork Drive, looking west. Cork Street is a north-south street that connects Tupelo Street on the south and Garden Court on the north, all of which is in a residential subdivision north of Chino Hills Parkway. TRTP Segment 8 would occupy the existing transmission corridor through this neighborhood. Existing chain link fences and gates prohibit public use of the utility corridor ROW in this vicinity and therefore, north of Garden Court (and out of view of Figure 3.14-50a from the Map & Figure Series Volume) the equestrian trail that was visible from KOP-South-14 continues along a floodway channel. SCE does not own the land for the utility corridor in this location, and private land owners have extended landscaping into the ROW under existing (un-electrified) conductors (see Map & Figure Series Volume, Figure 3.14-50a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of these large, industrial structures. Viewing distance to the transmission line is foreground and immediate foreground from houses and streets in this neighborhood. The number of viewers is moderate-to-high and viewing time is extended from these streets, houses, and yards, leading to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in these single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The level of vividness in this view is average; the undeveloped hill behind the neighborhood adds some visual interest, and the neighborhood is well kept, except that the existing chain link fences and transmission structures encroach upon the view, add an incongruent industrial character to this otherwise residential landscape, and create a degree of contrast with the scale and character of the neighborhood. The visual unity is average given the generally coherent nature of this suburban neighborhood, except for the transmission lines. Therefore, the overall visual quality for KOP-South-15 is moderate-to-high.
- **Overall Visual Sensitivity: high.** For residents of Cork Drive in general and KOP-South-15 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-16 – Yellowstone Circle, Chino (Segment 8A)

This KOP is located within a residential neighborhood in the eastern portion of Landscape Unit 17. Although within the City of Chino, this location is west of Highway 71 and is thus part of Landscape Unit 17. Foreground features include the street, sidewalk, houses, parked automobiles, streetlights, planted

lawns, landscaped shrubs, and trees, with the transmission tower and conductors approximately 400 feet away, to the east-southeast (see Map & Figure Series Volume, Figure 3.14-51a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of the proposed large TSP structures. Viewing distance to the transmission line is immediate foreground from houses and streets in this neighborhood. The number of viewers is moderate-to-high and viewing time is extended from these streets, houses, and yards, leading to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in single-family homes and on neighborhood streets. The level of viewer sensitivity is considered high.
- **Visual Quality: moderate.** The level of vividness in this view is moderate-to-low given the flat terrain and the lack of memorable elements in this typical residential neighborhood. The visual intactness is moderate, but has been reduced due to visual encroachment by the transmission structures above the otherwise intact neighborhood. The visual unity is average for this coherent neighborhood that is somewhat disturbed by the nearby transmission structures. The overall visual quality for KOP-South-16 would be moderate-to-high, except the presence of the transmission lines decrease it to moderate.
- **Overall Visual Sensitivity: moderate-to-high.** For residents of Yellowstone Circle in general and KOP-South-16 specifically, the high viewer exposure, high viewer concern, and moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 18: Chino

Landscape Unit 18 is bounded on the west by the Corona Freeway (Highway 71), on the east by Euclid Avenue (Highway 83), and extends approximately one mile north and south of the transmission corridor. Transmission Segment 8A enters Landscape Unit 18 from the west and travels east, north, and then east to the Chino Substation in the approximate center of the landscape unit. At the Chino Substation, Segments 8B and 8C begin and travel east along with Segment 8A to Euclid Avenue where they pass into Landscape Unit 19 (refer to Figure B-10 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 18).

Landscape Unit 18 contains the central portion of the City of Chino. The terrain within Landscape Unit 18 is generally flat. From Highway 71 to Central Avenue, development is dominated by large commercial warehouses and then from Central Avenue to Euclid Avenue, a mix of agricultural, single-family residential, and commercial land uses. As is typical for many of SCE's transmission corridors, several nurseries are present within the ROW itself.

Vegetation in Landscape Unit 18 consists primarily of planted lawns, trees, and shrubs in residential areas, and various agricultural crops both within and near the transmission corridor. The most visually dominant features in this landscape unit are the large warehouses in the west, the agricultural fields, and existing transmission towers and conductors as seen from some viewing perspectives.

Existing ROW cross-sections for Segment 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 8varies between 150 and 600 feet wide. Existing transmission structures in Segment 8 are a mix of single-circuit and double-circuit LSTs carrying 220-kV conductors and contemporary 220-kV double-circuit structures (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 18.

Viewers of the transmission corridor within Landscape Unit 18 include residents within their homes; pedestrians, bicyclists, and motorists traveling on residential streets; and motorists passing through the landscape unit on major arterial streets.

Proposed Segments 8A, 8B, and 8C in Landscape Unit 18 would traverse through the jurisdictions of the City of Chino and San Bernardino County. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 18 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*.

The City of Chino's Eucalyptus Business Park Specific Plan identifies the SCE transmission corridor as the dominant view element. According to this Plan, "Where it is not possible to underground utility lines, appropriate landscape buffers shall be provided." Euclid, Schaefer, and Fern Avenues (each of which intersect the transmission corridor) have been designated by the City of Chino as "Special Boulevards/View Corridors" requiring special and unique design guidelines and standards. Euclid Avenue has been designated by San Bernardino County as a scenic highway.

KOP-South-17 – Edison Avenue at Reuben S. Ayala Community Park, Chino (Segment 8A, 8B, 8C)

This KOP is located in the central portion of Landscape Unit 18 along Edison Avenue, a four-lane arterial that parallels the existing transmission corridor. Figure 3.14-52a from the Map & Figure Series Volume was taken from the exit to the San Bernardino Fairgrounds parking lot, looking east. The existing view from this KOP includes the street, sidewalk, automobiles, grass lawns and landscape trees within an adjacent park, trees lining the road, a traffic light at the cross-street, a multitude of overhead electric distribution lines, and two sets of high-voltage transmission lines with LSTs. The nearest high-voltage transmission tower is visible approximately 300 feet to the east-southeast (see Map & Figure Series Volume, Figure 3.14-52a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible from the fairground parking lot exit, from Edison Avenue, and from the Park, as there is no topographic or vegetative screening in front of the existing transmission and distribution lines, or the proposed large TSP structures. Viewing distance to the transmission line is immediate foreground and foreground from this vantage point. The number of viewers is high and viewing time is moderate-to-extended from the fairgrounds and park, but brief from the street, leading to a high viewer exposure, considering the extended views.
- **Viewer Concern: moderate-to-high.** Viewers in this area consist primarily of motorists traveling along Edison Avenue, or recreationists at the fairgrounds and nearby Reuben S. Ayala Community Park. Given the short viewing duration for motorists, but the moderate to extended viewing duration for recreationists, the level of viewer sensitivity is considered moderate-to-high.
- **Visual Quality: low-to-moderate.** The level of vividness in this view is moderate-to-low; the flat terrain is fairly expansive, with views of grass fields and street trees, but the numerous overhead transmission ones are utilitarian in form. The visual intactness is moderately low with many industrial-character structures encroaching upon the view. The visual unity is somewhat below average; the view is generally coherent for an arterial street, and the many conductors provide some degree linear uniformity, but the numerous utility towers and poles diminish the coherence of the view. The overall visual quality for KOP-South-17 is low-to-moderate.
- **Overall Visual Sensitivity: moderate-to-high.** For visitors to the Reuben S. Ayala Community Park in general and KOP-South-17 specifically, the high viewer exposure, moderate-to-high viewer concern, and low-to-moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-18 – Chipola Court, Chino (Segments 8A, 8B, 8C)

This KOP is located within a residential neighborhood in the eastern portion of the Landscape Unit 18. Foreground features include the street, sidewalk, houses, parked automobiles, street lights, decorative mailboxes, planted grass lawns, shrubs, and trees, with the nearest transmission towers approximately 600 feet to the east. The transmission corridor continues to the east-northeast to the edge of the foreground in

this view, and the San Bernardino Mountains are very faintly visible in the background (see Map & Figure Series Volume, Figure 3.14-53a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible in the foreground and immediate foreground from this neighborhood, as there is no topographic or vegetative screening in front of the proposed large double-circuit TSP structures and double-circuit LSTs. Viewing distance to the transmission line is immediate foreground and foreground from this vantage point. The number of viewers is moderate and viewing time is extended from these streets and houses. This leads to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in single-family homes and on neighborhood streets and sidewalks. The level of viewer sensitivity is considered high.
- **Visual Quality: moderate.** The level of vividness in this view is moderate-to-low given the flat terrain and the lack of memorable elements in this typical residential neighborhood. The visual intactness is moderate, but has been reduced due to visual encroachment by the transmission structures above the otherwise intact neighborhood. The visual unity is average for this coherent neighborhood that is somewhat disturbed by the nearby transmission structures. The overall visual quality for KOP-South-18 would be moderate-to-high, except the presence of the transmission lines decrease it to moderate.
- **Overall Visual Sensitivity: moderate-to-high.** For residents of Chipola Court in general and KOP-South-18 specifically, the high viewer exposure, high viewer concern, and moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 19: Ontario

Landscape Unit 19 is bounded on the west by Euclid Avenue (Highway 83) and on the east by the Ontario Freeway (Interstate 15 or I-15). The Ontario Freeway runs north-south approximately 0.5 mile east of the boundary between San Bernardino and Riverside Counties. A small portion of Riverside County is thus included in Landscape Unit 19, although no portion of the proposed Project actually enters Riverside County. The majority of Landscape Unit 19 is in the southern portion of the City of Ontario. The northern boundary of this landscape unit extends approximately one mile north of Segment 8B; the southern boundary extends approximately one mile south of Segments 8A and 8C (refer to Figure B-10 in Appendix B of the *Visual Resources Specialist Report* for a map showing Landscape Unit 19).

The terrain within Landscape Unit 19 is generally flat, with the San Bernardino Mountains visible to the north and east. Development is dominated by dairy farms and other agricultural uses, with residential subdivisions to the north and in the east-central portion of the landscape unit (see KOP-South-19 and KOP-South-20 below). Vegetation in Landscape Unit 19 consists primarily of grass fields, agricultural crops, and planted grass lawns, trees, and shrubs in residential areas.

The most visually dominant features in this landscape unit are the dairy farms, the residential subdivisions, and the transmission towers and conductors from some viewing perspectives.

Existing ROW cross-sections for Segment 8 are shown in Section 2.2 (Alternative 2: SCE's Proposed Project). The existing ROW width associated with Segment 8 varies between 150 and 330 feet wide. Existing transmission structures in Segment 8 are a mix of single- and double-circuit LSTs carrying either 220-kV or 500-kV conductors and contemporary 220-kV double-circuit structures (SCE, 2007a). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 19.

Viewers of the transmission corridor within Landscape Unit 19 include: residents within their homes and yards; pedestrians, bicyclists, and motorists traveling on residential streets; and motorists passing through the landscape unit on major arterials.

Jurisdictions through which proposed Segment 8 would traverse through Landscape Unit 19 include the City of Ontario and San Bernardino County. Segment 8 does not enter Riverside County, but the study

corridor associated with Segment 8 extends across the Riverside County line. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 19 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. San Bernardino County has designated Euclid Avenue as a scenic highway, and the East Chino Specific Plan identifies Euclid Avenue as a "Special Boulevard." The City of Ontario has identified Euclid Avenue, Grove Avenue, Vineyard Avenue, Archibald Avenue, Milliken Avenue, and Edison Avenue for creation of scenic roadways and view corridors.

KOP-South-19 – Tumbleweed Street, Ontario (Segments 8A, 8B, 8C)

This KOP is located within a residential neighborhood in east-central portion of Landscape Unit 19. The foreground features include the street, sidewalks, houses, parked automobiles, street lights, mailboxes, planted grass lawns, shrubs, and trees, with the nearest Dreyfus double-circuit transmission tower situated approximately 700-feet away, to the east-southeast. The transmission corridor that would be occupied by proposed Segment 8 continues to the east with two additional Dreyfus towers. The transmission line would then transition to LSTs at the far edge of the foreground. From this view, the San Bernardino Mountains are very faintly visible in the background (see Map & Figure Series Volume, Figure 3.14-54a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible in the foreground and immediate foreground from this neighborhood, as there is no topographic or vegetative screening in front of the proposed large double-circuit TSP structures and double-circuit LSTs. Viewing distance to the transmission line is immediate foreground and foreground from this vantage point. The number of viewers is moderate and viewing time is extended from these streets and houses. This leads to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in single-family homes and on neighborhood streets and sidewalks. The level of viewer sensitivity is considered high.
- **Visual Quality: moderate.** The level of vividness in this view is moderate-to-low given the flat terrain and the lack of memorable elements in this typical residential neighborhood, other than perhaps the Dreyfus towers. The visual intactness is moderate, but has been reduced due to visual encroachment by the transmission structures above the otherwise intact neighborhood. The visual unity is average for this coherent neighborhood that is somewhat disturbed by the nearby transmission structures. The overall visual quality for KOP-South-19 would be moderate-to-high, except the presence of the transmission lines decrease it to moderate.
- **Overall Visual Sensitivity: moderate-to-high.** For residents of Tumbleweed Street in general and KOP-South-19 specifically, the high viewer exposure, high viewer concern, and moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-20 – Chaparral Street and Clover Way, Ontario (Segments 8A & 8B)

This KOP is located within a residential neighborhood in east-central portion of Landscape Unit. The existing view includes the street, sidewalks, houses, parked automobiles, street lights, planted grass lawns, shrubs, and trees, with four lattice-steel transmission towers in the foreground view. The nearest of these is 700 feet to the north-northeast, and it is a dead-end LST with greater visual bulk because of the extra strength needed to change directions of the transmission line (see Map & Figure Series Volume, Figure 3.14-55a).

- **Viewer Exposure: high.** The proposed Project Segment 8 would be highly visible in the foreground and immediate foreground from this neighborhood, as there is no topographic or vegetative screening in front of the proposed large LSTs. Viewing distance to the transmission line is immediate foreground and foreground from this vantage point. The number of viewers is moderate and viewing time is extended from these streets and houses. This leads to a high viewer exposure.

- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in single-family homes and on neighborhood streets and sidewalks. The level of viewer sensitivity is considered high.
- **Visual Quality: moderate.** The level of vividness in this view is moderate-to-low given the flat terrain and the lack of memorable elements in this typical residential neighborhood. The visual intactness is moderate, but has been reduced due to visual encroachment by the transmission structures above the otherwise intact neighborhood. The visual unity is average for this coherent neighborhood that is somewhat disturbed by the nearby transmission structures. The overall visual quality for KOP-South-20 would be moderate-to-high, except the presence of the transmission lines decrease it to moderate.
- **Overall Visual Sensitivity: moderate-to-high.** For residents of Chaparral Street and Clover Way in general and KOP-South-20 specifically, the high viewer exposure, high viewer concern, and moderate visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

3.14.2.4 Alternative 3: West Lancaster Alternative

Provinces, Landscape Units, and KOPs

The West Lancaster Alternative (Alternative 3) would be identical to SCE's proposed Project, except that it would re-route the new 500-kV transmission line in Segment 4 along 115th Street West rather than 110th Street West. The West Lancaster Alternative would deviate from the proposed route at approximately S4 MP 14.9, where the new 500-kV transmission line would turn south down 115th Street West for approximately 2.9 miles and then turn east for approximately 0.5 mile, rejoining the proposed route at S4 MP 17.9. This re-route would increase the overall distance of Segment 4 by approximately 0.4 mile.

The affected environment and landscape character for the distinctive portion of Alternative 3 is the same as the Affected Environment description of the "North Area: Antelope Valley Landscape Region" and Landscape Unit 1 in Section 3.14.2.3 (see Map & Figure Series Volume, Figure 3.14-56a, KOP-North-5).

West 110th Street is a straight north-south road that gradually descends in elevation from Portola Ridge into the flat Antelope Valley. Under the proposed Project, new 500-kV LSTs and transmission lines would be very visually evident in the immediate foreground of West 110th Street for more than two miles. Under Alternative 3, the proposed structures would be located ½ mile west of West 110th Street along West 115th Street, an undeveloped dirt road.

- **Viewer Exposure: moderate.** The West Lancaster Alternative would not be highly visible in the foreground or immediate foreground of West 110th Street, because it would be located 0.5 mile west and parallel to West 110th Street, following along undeveloped West 115th Street. There is no topographic or vegetative screening in front of the proposed large LSTs, but the viewing distance and angle of view is directed to the north, following the road. Viewing distance to the transmission line is foreground and middleground from West 110th Street. There are no sensitive receptors located along West 115th Street. There are no residences along West 115th Street and the number of potential viewers is low, except in spring when the poppies bloom and the number of viewers is high. Therefore, the overall viewer exposure is moderate.
- **Viewer Concern: moderate.** Visitors and residents enjoy the predominantly natural setting with distant, panoramic sightlines to the Antelope Valley and Tehachapi Mountains. The widely scattered ranches have predominantly horizontal structures (one story buildings) and predominantly horizontal windbreaks of low-growing trees and evergreen shrubs. The view northbound on West 110th Street is characterized by the panoramic open-space, natural-appearing landscape.
- **Visual Quality: moderate.** The predominant visual elements are the horizontal lines of the valley plains and the nearly horizontal line created by the background mountain ranges. Along West 115th Street, vegetation is generally low, dry grass and scrub or agricultural fields. Colors in the landscape include bright orange poppies in spring, green sage and grasses in winter, spring and early summer, and tan grasses in summer and

autumn. Existing 220-kV and 500-kV electric transmission lines diminish the scenic integrity of this landscape, reducing what would otherwise be a high level of visual quality, especially when viewed in springtime with poppies in bloom.

- **Overall Visual Sensitivity: moderate.** For visitors to Antelope Valley in general and looking northbound on West 110th Street specifically, the moderate viewer exposure, moderate viewer concern, and moderate visual quality, lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

3.14.2.5 Alternative 4: Chino Hills Route Alternatives

Provinces, Landscape Units, and KOPs

Under Alternative 4, the proposed transmission line would follow the same route as the proposed Project (Alternative 2) through the North and Center Areas. In the South Area, Alternative 4 would be the same for Segments 7, 11, and the western portion of Segment 8A. Segment 8A would diverge from the proposed Project route at S8A MP 19.2 and turn to the southeast, crossing through portions of the City of Brea and Orange County before entering San Bernardino County, the City of Chino Hills, and Chino Hills State Park (CHSP). Under Alternative 4 (Routes A, B, C, and D) Segment 8A would not occur from S8A MP 19.2 to S8A 35.2. Additionally, Segments 8B and 8C would not occur near the Mira Loma Substation in Ontario.

North and Center Areas

The Affected Environment for the North Area and Center Area of Alternative 4 would be exactly the same as for the proposed Project (Alternative 2), as described in Section 3.14.2.3.

South Area

Under Alternative 4, the Affected Environment associated with Segment 8A would be different than that of the proposed Project from S8A MP 19.2 through 35.2. In addition, the upgrades associated with Segments 8B and 8C would not occur; therefore, along these portions of the proposed Project, no visual changes or visual impacts would occur.

There are four routes for Alternative 4; each route would cross through landscapes that would not be crossed by the proposed Project (Alternative 2). Routes A, B, and D for Alternative 4 would cross through Chino Hills State Park (CHSP), and Route C would be aligned just outside the north boundary of the park. CHSP is managed by the California Department of Parks and Recreation, with assistance from the Chino Hills State Park Interpretive Association (CHSPIA), a non-profit volunteer organization (CHSPIA, 2007). The visual implications of the four different routes (Routes A through D) that are included under Alternative 4 are discussed in further detail below.

The four routes (A, B, C, and D) are identical from their point of departure from Segment 8A (S8 MP 19.2) to the north boundary of Chino Hills State Park, a distance of approximately 3.9 miles. The north park boundary for Alternative 4 is designated as "Chino Hills Alternative Milepost 23.1" (Alt 4-A/B/C/D MP 23.1). At this location, Routes C and D turn east, diverging from Routes A and B which continue southeast, parallel to and south of the existing Walnut/Olinda-Mira Loma 220-kV double-circuit transmission line. This portion of Alternative 4 would cross through Landscape Unit 16, which was first introduced in Section 3.14.2.3.

Landscape Unit 16: Diamond Bar

Landscape Unit 16 is bounded on the west by the Puente Hills, on the east by the City of Chino Hills, and extends to the northwest and southeast of the proposed Project (Alternative 2) and follows Alternative 4 to

the southeast. Landscape Unit 16 contains the southwest portion of Diamond Bar, portions of the City of Brea, portions of CHSP, and unincorporated portions of Los Angeles and Orange Counties (refer to Figures B-10 and B-11 in Appendix B of the *Visual Resources Specialist Report* for a map showing Alternative 4 in Landscape Unit 16).

Alternative 4 crosses forested and brush-covered hills and valleys within Landscape Unit 16 that are undeveloped and natural-appearing. At the west end of Tonner Canyon Road, the entrance gate to the Firestone Boy Scout Camp is gated and locked, and could not be accessed during the field investigation portion of this study. State Highway 142, the Carbon Canyon Road, connects the cities of Brea and Chino Hills. The terrain within this landscape unit consists of rolling hills with some intervening valleys and a new planned development called Vellano, adjacent to the Aero Jet property.

Vegetation in Landscape Unit 16 consists of native chaparral on the undeveloped hills, and native oak woodlands in natural-appearing groves. The most visually dominant features in this landscape unit are the rolling hills, both developed and undeveloped, and the transmission lines on skylines from some viewing perspectives.

Existing ROW cross-sections for Segment Alt 4-A/B/C/D are shown in Section 2.4 (Alternative 4: Chino Hills Route Alternatives). The existing ROW associated with Alternative 4 is 150 to 250 feet wide. Existing transmission structures in this portion of Alternative 4 include one set of double-circuit LSTs carrying 220-kV conductors (SCE, 2008). Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 16.

Viewers of Alternative 4 within Landscape Unit 16 include recreationists at the Boy Scout Camp, residents within their homes, pedestrians, bicyclists, and motorists traveling on surface roads, recreationists at Carbon Canyon Regional Park, Chino Hills State Park, and motorists passing through the landscape unit on Tonner Canyon Road and Carbon Canyon Road (see KOP-South-21 below). For some portions of Alternative 4, likely viewers would be those traveling on unpaved roads, fire roads, plus bicyclists, equestrians, and hikers in the undeveloped hills.

The study corridor for Alternative 4 in Landscape Unit 16 traverses through the jurisdictions of the Cities of Diamond Bar, Brea, and unincorporated Los Angeles and Orange Counties. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 16 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*. The City of Diamond Bar's General Plan has established a goal to "Preserve significant visual features which are within, or are visible from the City of Diamond Bar, with an emphasis on the preservation of remaining natural hillside areas." Highway 57 (the Orange Freeway) is a state designated eligible scenic highway, which passes through the western portion of Landscape Unit 16 and intersects the proposed Project (Alternative 2) transmission corridor immediately south Diamond Bar. Alternative 4 is not visible from Highway 57.

Two KOPs were selected to represent views of the Alternative 4 transmission corridor within this landscape unit. KOP-South-21 represents views for motorists traveling northbound on Carbon Canyon Road. KOP-South-22 represents views from residential neighborhoods of the Vellano Planned Development, where the Alternative 4 transmission corridor is visible to the south and southeast on nearby hills.

Route A. This alternative would deviate from the proposed Project route at Segment 8A MP 19.2 and run parallel to the existing Walnut/Olinda-Mira Loma 220-kV transmission line for 6.2 miles, 2.3 miles

of which would be within the CHSP. Route A would be situated within an existing utility corridor, but would require that the corridor be widened by 150 feet for the length of Route A. In addition, Route A would require the installation of a new switching station within the CHSP. The size of new switching station would be a minimum of 4-to-5 acres in size (using gas-insulated technology). Route A would travel through CHSP for approximately 2.3 miles.

As described in the Section 3.15 (Wilderness and Recreation), the route for Alternative 4 Route A would make direct crossings of six different trails and fire roads within the CHSP, and therefore, park visitors would have immediate foreground and foreground views of the Alternative 4-A transmission line. No campgrounds or picnic areas would be directly traversed by the route of Route A.

The new switching station that would provide the terminus for Route A would be situated along an existing fire road between Raptor Ridge (to the north) and Telegraph Canyon (to the south). As described above, the switching station would be a minimum of 4-to-5 acres in size (using gas-insulated technology).

Route B. Route B would follow the same path as Route A into CHSP, but instead of terminating at the new switching station described above, Route B would continue to just beyond the eastern Park boundary, eventually terminating at a new switching station between the CHSP and Butterfield Ranch Road. The transmission line for Route B would make direct crossings of ten different trails and fire roads that are used by recreationists within CHSP and, therefore, park visitors would have immediate foreground and foreground views of the transmission line. No campgrounds or picnic areas would be directly traversed by the route of Route B.

Under the Route B alternative, the new switching station of 4-to-5 acres in size would be installed outside the eastern boundary of the CHSP, whereas the switching station under Route A would be installed within the Park. Route B would travel through CHSP for approximately 4.9 miles.

Route C. Route C would involve the construction of a new transmission line just north of the CHSP, the re-routing of two existing lines within the CHSP, and the removal of existing transmission lines from within the CHSP.

Although the new transmission line associated with Route C would not make any direct crossings of recreational resources, the transmission line re-routing and removal activities associated with Route C would traverse several trails within the CHSP, including the following: North Ridge Trail; McDermont Trail; Raptor Ridge Hiking Trail; Raptor Ridge Fire Road Trail; Hills For Everyone Trail; Telegraph Canyon Trail; and, South Ridge Trail. Therefore, park visitors would experience immediate foreground and foreground views of construction/removal activities and landscape restoration within the park. Additionally, residents in neighborhoods surrounding and adjoining CHSP would experience immediate foreground and foreground views of construction activities and would see new transmission lines, towers, and conductors.

Route D. Route D would follow the same path as Route C, but instead of terminating at a switching station at approximately Segment 8A MP 26.8, Route D would follow the northern boundary of CHSP for approximately 3.7 miles, before crossing through part of the Park in a southeasterly direction and terminating at a new switching station just outside the eastern Park boundary. The switching station for Route D would be in the same location as that proposed for the Route B alternative.

The path for the Route D alternative would make direct crossings of four different Fire Trails, roads, and/or trails, and therefore, park visitors would have immediate foreground and foreground views of construction activities and would see new transmission lines, towers, and conductors.

KOP-South-21 – Carbon Canyon Road, Orange County (Alternative 4-A/B/C/D, Segment 8A)

This KOP is located on Carbon Canyon Road (State Highway 142) in Orange County, looking north from the northbound lane. Carbon Canyon Road runs northeast from Lambert Road in Brea (Orange County) to State Route 71 in Chino Hills (San Bernardino County). This portion of Landscape Unit 16 is typified by the deeply incised canyon walls and rolling hills covered with scattered brush, with the curving, narrow, two-lane road following the contours upstream. This portion of Highway 142 is eligible for inclusion in the State Scenic Highway System (CALTRANS, 2008). The existing view includes the road, grass- and brush-covered hillsides, and one existing LST in the middleground on the skyline (see Map & Figure Series Volume, Figure 3.14-57a).

- **Viewer Exposure: moderate-to-high.** All four routes of Alternative 4 (A/B/C/D) would be identical in this area, and would be visible from the Carbon Canyon Road. There is no topographic or vegetative screening in front of the existing or future large, industrial structures. Viewing distances to the transmission line include the middleground, and then foreground distances as vehicles approach the existing utility corridor. The skyline in Figure 3.14-57a is less than 0.5 mile away, making this a foreground view to the rolling hills with scattered clumps of various types of native vegetation and the lone visible transmission towers. The number of viewers is high but viewing time is very brief because of the twisting road, making this a moderate-to-high viewer exposure.
- **Viewer Concern: high.** Viewers from this perspective are motorists traveling north on Carbon Canyon Road. Although the viewing duration is short for such viewers, viewer sensitivity is considered moderate-to-high given the natural character of the area and the road's scenic highway eligibility. Because of this eligibility as a State Scenic Highway, the level of visual sensitivity is considered high.
- **Visual Quality: high.** The overall visual quality for KOP-South-21 includes a level of vividness that is above average, with both the local and more distant hills providing attractive elements. The visual intactness of the surrounding landscape is high; although this and other visible transmission structures encroach upon the skyline and detract for visual quality. The roadway and transmission line represent human-made features that detract from the natural-appearing quality of the view, although most people discount their own viewer platforms (the roadway itself). The unity and intactness of this view are both relatively high, but diminished by the transmission line that interrupts the skyline (and the roadway itself). This segment of Carbon Canyon Road is designated by the California Department of Transportation (CALTRANS) as an eligible Scenic Highway, and therefore, the overall existing visual quality of the view from this KOP is rated high.
- **Overall Visual Sensitivity: high.** For people traveling northbound on Carbon Canyon Road in general and KOP-South-21 specifically, the moderate-to-high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-22 – Vellano Planned Development, Chino Hills (Alternative 4-A/B/C/D, Segment 8A)

This panoramic view is located in the Vellano Planned Development on Vellano Club Road, just uphill from Catena Drive, looking southeast toward Chino Hills State Park and surrounding undeveloped lands north of the Park. This portion of Landscape Unit 16 continues the typical forested and brush-covered rolling hills that are largely undeveloped. KOP-South-22 uses a single frame of this panoramic view (see Map & Figure Series Volume, Figure 3.14-58a).

- **Viewer Exposure: moderate-to-high.** All four routes of Alternative 4 (A/B/C/D) would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of these large, industrial structures that would occupy the skyline. Viewing distance to the transmission line is middleground from this residential street. The number of viewers is moderate and viewing time is extended from these streets, houses, sidewalks, and yards, leading to a moderate-to-high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in these single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.

- **Visual Quality: high.** The overall visual quality for KOP-South-22 is high. The level of vividness in this view is above average; the undeveloped hillsides and new houses add visual interest. The planned neighborhood and planted vegetation provides an interesting contrast to the natural-appearing hillside vegetation. The visual intactness is high, except that the existing transmission structures on the middleground skyline encroach upon the view and add an incongruent industrial character to this otherwise residential and natural-appearing landscape. The visual unity is high given the coherent nature of the suburban neighborhood.
- **Overall Visual Sensitivity: high.** For residents of Vellano Club Road in general and KOP-South-22 specifically, the moderate-to-high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

Landscape Unit 17: Chino Hills

Landscape Unit 17 is bounded on the west by unincorporated Los Angeles County, on the east by Highway 71, and extends approximately one mile north of the proposed Project (Alternative 2) transmission corridor and south to the Butterfield Ranch Road interchange of Highway 71. Landscape Unit 17 follows Alternative 4 to the east through and around Chino Hills State Park. Landscape Unit 17 contains the central portion of the City of Chino Hills and also a small portion of the City of Chino that lies west of Highway 71 (refer to Figures B-10 and B-11 in Appendix B of the *Visual Resources Specialist Report* for maps showing Landscape Unit 17).

The terrain within this landscape unit consists of rolling hills and valleys in the west and south that generally grade to lower-lying, flatter terrain in the east and north. Hillsides are covered with green grasses and yellow mustard in spring. The density and extent of development generally increases from west to east across this landscape unit. Improved areas consist primarily of single-family residential neighborhoods, with commercial development occurring along some portions of the area's major arterials. The northern entrance to Chino Hills State Park is from Soquel Canyon Road and Elinvar Drive.

Vegetation in Chino Hills State Park in Landscape Unit 17 consists of native grasses, non-native mustard, widely scattered shrubs, and native trees along riparian areas. The historic Rolling M Ranch is located near the heart of CHSP, and serves as a focus of pedestrian activities. A scenic overlook, equestrian area, campground, and paved trailhead parking area are located near the Ranch headquarters.

Residential neighbors are adjacent to CHSP to the north and east, and these landscapes have a variety of planted deciduous trees, evergreens, palm trees, various shrubs, and grass lawns. Transmission lines are visible on the skyline from these residential areas and from a corner commercial area on Butterfield Ranch Road and Pine Avenue. The most visually prominent features in the Park landscape and surrounding neighborhoods are the rolling hills (both developed and undeveloped) and the existing transmission lines that protrude above the skyline as seen from various perspectives. Existing transmission lines are LSTs, both double circuit and single circuit. Please refer to Appendix D of the *Visual Resources Specialist Report* for photos of Landscape Unit 17.

Viewers of the transmission corridor within Landscape Unit 17 include residents within their homes and yards; pedestrians, bicyclists, and motorists traveling on residential streets; and motorists passing through the landscape unit on major arterials, plus campers, hikers, equestrians in CHSP.

The study corridor in Landscape Unit 17 traverses through the cities of Chino Hills and Chino. Applicable laws, regulations, and standards relative to scenic quality for Landscape Unit 17 are included as part of a comprehensive table included in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*.

The City of Chino Hills has several policies related to the preservation of natural ridgelines. Although California municipalities do not regulate the construction of high-voltage transmission lines, the City's concern with respect to protection of ridgeline views should be noted. Euclid Avenue has been designated by San Bernardino County as a scenic highway, and from this highway, the switching stations for Alternative 4, Routes B and D (same location) would be visible. The City of Chino Hills has also identified Carbon Canyon Road as a scenic corridor.

Three KOPs were selected to represent views of the Alternative 4 transmission corridor within this landscape unit. KOP-South-23 represents views for hikers, equestrians, and bicyclists in CHSP in the landscape unit where the transmission corridor generally passes through undeveloped areas and directly overhead of several trails. Alternative 4 Routes A and B would be seen from this KOP. KOP-South-24 represents views from the equestrian center in CHSP, and Routes A, B, and D would be visible from the Horse Camp. KOP-South-25 represents views for residents living in the eastern, more-developed portion of the landscape unit as seen from Butterfield Ranch Road, looking at the eastern transition station of Routes B and D.

KOP-South-23 – Chino Hills State Park Trail, CHSP (Alternative 4-A/B, Segment 8A)

This KOP is located within Chino Hills State Park on a hiking/equestrian trail and fire road that connects Telegraph Canyon Trail to Raptor Ridge Trail in the southern portion of Landscape Unit 17. Foreground and middleground features include rolling, undeveloped hills covered with native grasses and non-native mustard, which, when in bloom, is very scenic. Existing 220-kV double-circuit and 500-kV single-circuit transmission lines are very visible on the skyline ridge, and the trail crosses directly under these lines (see Map & Figure Series Volume, Figure 3.14-59a).

- **Viewer Exposure: high.** Alternative 4 Routes A & B would be highly visible from this recreational trail in CHSP, as there is no topographic or vegetative screening in front of these new large, industrial structures that would occupy the skyline or the transition station of Route A that would be in the center of Figure 3.14-59a. Viewing distance to the transmission line is immediate foreground, foreground, and middleground from this and other trails in the vicinity. The number of viewers is moderate-to-high and viewing time is extended based on speed of travel on these trails, leading to a high viewer exposure.
- **Viewer Concern: high.** People come to CHSP to experience a natural environment and to enjoy the scenic outdoors of this State Park. Given the recreational nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: high.** The overall visual quality for KOP-South-23 is high. The level of vividness in this view is above average; the undeveloped hillsides and expansive views to a natural-appearing landscape add visual interest. The visual intactness is high, except that the existing transmission lines encroach upon the view and add an incongruent industrial character to this otherwise natural-appearing landscape. The visual unity is high given the coherent nature of this State Park, and overall visual quality is high.
- **Overall Visual Sensitivity: high.** For visitors to Chino Hills State Park in general and KOP-South-23 specifically, the high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-24 – Horse Camp in Chino Hills State park, CHSP (Segment 8)

This KOP is located at the equestrian center within Chino Hills State Park. The Horse Camp is located on a hilltop at the southern end of Bane Canyon Road in the southern portion of Landscape Unit 17. Foreground and middleground features include rolling, undeveloped hills covered with native grasses and non-native mustard, which, when in bloom, is very scenic. Small clumps of dark green brush and trees are scattered across the hillsides. Existing 220-kV double-circuit and 500-kV single-circuit transmission lines are very visible on the skyline ridges. Corrals draw attention to the immediate foreground features.

Paved roads and the restroom of the camping area are visible in the middleground (see Map & Figure Series Volume, Figure 3.14-60a).

- **Viewer Exposure: high.** All four routes of Alternative 4 would be visible from this developed recreation area in CHSP, as there is no topographic or vegetative screening in front of these new large, industrial structures that would occupy the skyline. The transition station of Route A would be partially screened by topography, and it would be located in the center of Figure 3.14-60a. Viewing distance to the new transmission line alignments would be middleground from Horse Camp, but would be foreground and middleground from equestrian trails in the Park. The number of viewers is moderate-to-high and viewing time is extended at Horse Camp and on trails, based on speed of travel, leading to a high viewer exposure.
- **Viewer Concern: high.** People come to CHSP to experience a natural environment and to enjoy the scenic outdoors of this State Park. Given the recreational nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: high.** The overall visual quality for KOP-South-24 is high. The level of vividness in this view is above average; the undeveloped hillsides and expansive views to a natural-appearing landscape add visual interest. The visual intactness is high, except that the existing transmission lines encroach upon the view and add an incongruent industrial character to this otherwise natural-appearing and rural landscape. The visual unity is high given the coherent nature of this State Park, and overall visual quality is high.
- **Overall Visual Sensitivity: high.** For visitors to Chino Hills State Park in general and KOP-South-24 specifically, the high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-25 – Butterfield Ranch Road, Chino Hills (Alternative 4- B/D, Segment 8A)

This KOP is located on Butterfield Ranch Road, just east of Chino Hills State Park, looking west across undeveloped lands toward the eastern boundary of CHSP. This portion of Landscape Unit 17 is typical of the interface of developed and undeveloped landscapes, with grass covered rolling hills that are currently undeveloped (see Map & Figure Series Volume, Figure 3.14-61a).

- **Viewer Exposure: moderate-to-high.** Routes B & D of Alternative 4 Segment 8A would terminate at a new switching station at the same location in these rolling hills. The transmission lines leading into the switching station and the station itself would be highly visible from this collector street, as there is no topographic or vegetative screening available in front of these large, industrial structures that would occupy the skyline. Viewing distance to the transmission line and switching station is foreground from this street. The number of viewers is high and viewing time is brief from this street because of travel speed, leading to a moderate-to-high viewer exposure. Because there are two possible technologies for the switching station, gas insulated or air insulated, two different simulations will be provided from this KOP, so that the visual implications of each technology can be evaluated.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: high.** The overall visual quality for KOP-South-25 is high. The level of vividness in this view is above average; the undeveloped hillsides and flowering landscape along the street add visual interest. This planted vegetation provides an interesting contrast to the natural-appearing hillside vegetation. The visual intactness is high, except that the existing transmission structures on the foreground skyline encroach upon the view and add an incongruent industrial character to this otherwise natural-appearing landscape. The visual unity is high given the coherent nature of the scene.
- **Overall Visual Sensitivity: high.** For travelers on Butterfield Ranch Road in general and KOP-South-25 specifically, the moderate-to-high viewer exposure, high viewer concern, and high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

3.14.2.6 Alternative 5: Partial Underground Alternative

Provinces, Landscape Units, and KOPs

The proposed route for Alternative 5 (Partial Underground Alternative) would not diverge from the proposed Project (Alternative 2) route and therefore, the Affected Environment for Alternative 5 would be identical to the Affected Environment for the proposed Project, as described in Section 3.14.2.3.

KOP-South-26 – Intersection of Gold Shadow Lane /Avenida Compadres, Chino Hills (Alternative 5, Segment 8A)

This KOP is located within a residential neighborhood adjacent to undeveloped land in the western portion of the Landscape Unit 17, and is located just a few blocks west of KOP-South-13. Foreground features include the street, sidewalks, houses, parked automobiles, street-lights, planted lawns, shrubs, and trees, with native grasses and shrubs on the skyline hill behind the houses. The existing 220-kV transmission tower and conductors are visible on a low skyline ridge approximately 1000 feet to the southeast (see Map & Figure Series Volume, Figure 3.14-62a).

- **Viewer Exposure: high.** The proposed West Transition Station of Alternative 5 Segment 8A would be highly visible from this residential neighborhood, as there is no topographic or vegetative screening in front of the large, industrial character, double-circuit structures leading into the underground facility. Viewing distance to the transmission line and transition station is foreground and immediate foreground from houses and streets in this neighborhood. The number of viewers is moderate and viewing time is extended from these streets, houses, sidewalks, and yards, leading to a high viewer exposure.
- **Viewer Concern: high.** Viewers in this area consist primarily of neighborhood residents in these single-family homes and on neighborhood streets. Given the residential nature of this area, the level of visual sensitivity is considered high.
- **Visual Quality: moderate-to-high.** The level of vividness in this view is average; the undeveloped hill behind the neighborhood adds some visual interest, and the neighborhood is well kept, except that the existing transmission structures encroach upon the view, add an incongruent industrial character to this otherwise residential landscape, and create a degree of contrast with the scale and character of the neighborhood. The visual unity is average given the generally coherent nature of this suburban neighborhood, except for the transmission lines. Therefore, the overall visual quality for KOP-South-13 is moderate-to-high.
- **Overall Visual Sensitivity: high.** For residents of Gold Shadow Lane/Avenida Compadres in general and KOP-South-26 specifically, the high viewer exposure, high viewer concern, and moderate-to-high visual quality lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

KOP-South-27 – Pipeline Avenue, Chino Hills (Alternative 5, Segment 8A)

KOP-South-27 was established on Pipeline Avenue in Chino, just west of Highway 71, looking west at the existing transmission line in Segment 8A. This KOP was selected to represent views for local residents traveling north-south on Pipeline Avenue and for customers of the neighborhood commercial area featuring Bravo Burger, Chino Hills Car Wash and neighborhood convenience stores. This is a typical streetscape view of a four-lane collector street in Chino Hills with an entrance to this convenience commercial development and overhead transmission lines (see Map & Figure Series Volume, Figure 3.14-63a).

- **Viewer Exposure: high.** The proposed East Transition Station of Alternative 5 Segment 8A and new double-circuit overhead transmission structures would be highly visible from this vantage point. The foreground view from Pipeline Avenue exhibits adjacent commercial development, and existing palm and orange trees partially screen the existing transmission line in this foreground view, Pipeline Avenue leads to commercial/light-industrial areas to the south and residential areas to the north. All of this view is in the immediate foreground

and foreground distance zones. The number of viewers is high, and because of the commercial uses, view duration is extended from this KOP, leading to a high viewer exposure.

- **Viewer Concern: moderate-to-high.** Viewers would be motorists and pedestrians in this commercial area. People driving on Pipeline Avenue and in the parking areas of this commercial center have direct views of this landscape with relatively brief to relatively extended viewing durations. The level of visual sensitivity is considered moderate-to-high.
- **Visual Quality: moderate-to-high.** KOP-South-27 has visually pleasing architecture and landscaping, with the foreground exhibiting pleasant suburban views. There is a mix of vegetation in the view, from the palm and orange trees planted along the entrance drive, to the low grasses on the undeveloped hillside visible at the end of the entrance road. Red-tile roofs and southern California architectural development is the focus of the foreground view, and the transmission structures and conductors and overhead lines are partially screened from view. The view generally exhibits intactness and unity of view. The overall existing visual quality of the view from this KOP is moderate-to-high.
- **Overall Visual Sensitivity: moderate-to-high.** For people driving on Pipeline Avenue in general and KOP-South-27 specifically, the high viewer exposure, moderate-to-high viewer concern, and moderate-to-high visual quality lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

3.14.2.7 Alternative 6: Maximum Helicopter Construction in the ANF Alternative

Provinces, Landscape Units, and KOPs

The affected environment for Alternative 6 (Maximum Helicopter Construction in the ANF Alternative) would be the same as described for Alternative 2 (SCE's Proposed Project). Therefore, the Affected Environment for Alternative 6 would be identical to the Affected Environment for the proposed Project, as described in Section 3.14.2.3 (Alternative 2: Proposed Project). For an analysis of the Affected Environment of Alternative 6, please refer to the descriptions of Center Area landscape places, landscape character, scenic integrity objectives, and existing scenic integrity for the Center Area KOPs in Section 3.14.2.3.

3.14.2.8 Alternative 7: 66-kV Subtransmission Alternative

Provinces, Landscape Units, and KOPs

The Alternative 7 route would be the same as the proposed Project, except that it would involve the following 66-kV subtransmission components in Segment 7 and Segment 8A: undergrounding the proposed 66-kV line through the Duck Farm Project from S7 MP 8.9 to S7 MP 9.9; re-routing and undergrounding the 66-kV subtransmission line around the Whittier Narrows Recreation Area from S7 MP 11.4 to S7 MP 12.025; and re-routing the Segment 8A 66-kV subtransmission line around the Whittier Narrows Recreation Area from S8A MP 2.2 to S8A MP 3.8. The remaining portions of Segments 7 and 8A, as well as Segments 4 through 11, would be identical to the proposed Project. Consequently, the Affected Environment for Alternative 7 would be the same as the Affected Environment for Alternative 2 (the proposed Project), as described in Section 3.14.2.3.

3.14.3 Applicable Laws, Regulations, and Standards

The laws, regulations, and standards applicable to the proposed Project and its alternatives for visual resources have been identified, and are provided in Appendix C of the *Visual Resources Specialist Report*. The applicable laws, regulations, and standards for visual resource analysis that have been identified was completed using the following two methodologies for lands with different jurisdictions: (1) for non-NFS lands, the visual sensitivity/visual change (VS/VC) methodology was used; and, (2) for NFS lands, the

Forest Service Scenery Management System (SMS) methodology, including desired condition and scenic integrity objectives (establishing minimum standards for scenic integrity) was used.

3.14.3.1 Federal

Appendix C of the *Visual Resources Specialist Report* provides the federal laws, regulations, and standards for visual resources. Table C-1 in Appendix C includes the Council on Environmental Quality Regulations for implementing NEPA, and Forest Service Land Management Plan (Forest Plan) standards.

3.14.3.2 State

Table C-2 of the *Visual Resources Specialist Report*, Appendix C, provides the State laws, regulations, and standards for visual resources. Table C-2 includes the California Environmental Quality Act guidelines, California Streets and Highway Code for Scenic Highways, and Chino Hills State Park General Plan guidelines.

3.14.3.3 Local

Table C-3 of the *Visual Resources Specialist Report*, Appendix C displays local laws, regulations, and standards for visual resources. Table C-3 includes County General Plans and policies for Kern, Los Angeles, and Orange Counties. It also includes Specific Plans and City Plans for the various jurisdictions that would be crossed by the proposed Project and its alternatives. Because the closest unincorporated areas of San Bernardino County are approximately 1.5 miles away from (north of) the proposed Project ROW, and the proposed Project would not be visible from these areas, no General Plan requirements for San Bernardino County would apply.

3.14.4 Impact Analysis Approach

3.14.4.1 Criteria for Determining Impact Significance

To satisfy CEQA requirements, conclusions are made regarding the significance of each identified impact that would result from the proposed Project and alternatives. Appropriate criteria have been identified and utilized to make these significance conclusions. The following significance criteria for Visual Resources were derived from previous environmental impact assessments and from the CEQA Guidelines (Appendix G, Environmental Checklist Form, Section IX). Impacts of the proposed Project or alternatives would be considered significant and would require mitigation if:

- Criterion VIS1: Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings.
- Criterion VIS2: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.
- Criterion VIS3: Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings).
- Criterion VIS4 Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape.

Significance conclusions for individual impacts are not required for compliance with NEPA. Therefore, conclusions presented in the following analysis regarding the significance of identified impacts are provided for the purposes of CEQA only.

3.14.4.2 Applicant-Proposed Measures (APMs)

APMs were identified by SCE in the PEA. Table 3.14-6 presents the APMs that are relevant to the issue area of Visual Resources. APMs are a commitment by the Applicant (SCE) and are considered part of the proposed Project. Therefore, the following discussions of impact analysis assume that all APMs will be implemented as defined in the table. Additional mitigation measures are recommended in this section if it is determined that APMs do not fully mitigate the impacts for which they are presented.

Table 3.14-6. Applicant-Proposed Measures – Visual Resources

APM AES-1	Transmission Lines - Reduce Light Reflection off Towers/Poles. Lattice steel towers (LSTs) and tubular steel poles (TSPs) will be constructed of steel that is galvanized and treated at the factory to create a dulled finish that will reduce reflection of light off of the tower members. As appropriate to the context, the galvanized coating will also be darkened to allow the towers to blend into the backdrops.
APM AES-2	Transmission Lines - TSPs Near Existing Residential Development. In areas that are in close proximity to existing residential development, TSPs will be specified to provide tower structures that relate visually to the other elements in these settings. The exceptions to this principle are: 1) LSTs are specified at turning tower locations and at long spans because, structurally, TSPs do not have the strength to withstand the forces exerted by the conductors at these locations; and 2) LSTs may be used to match existing structure types adjacent to the Project in the transmission corridor.
APM AES-3	Transmission Lines - Nonreflective/Nonrefractive Insulators. The insulators specified for this proposed Project will be made of materials that do not reflect or refract light.
APM AES-4	Transmission Lines - Nonreflective/Nonrefractive Conductors. The conductors specified for the Project will be nonspecular, that is, they will be treated at the factory to dull their surfaces to reduce their potential to reflect light.
APM AES-5	Transmission Lines - New Structures Aligned with Existing Structures. To the extent feasible, new transmission structures that will be located in corridors containing existing transmission lines will be located to line up with the other transmission structures to create a higher level of visual unity.
APM AES-6	Transmission Lines - Transmission Structures Set Back from Major Roadways. Where conditions permit, transmission structures will be set back from the crossings of major roadways.
APM AES-7	Transmission Lines - Avoid Structures in Middle of Lines of Sight. To the extent feasible, the final locations of transmission structures will be adjusted to avoid locations that place the structures in the middle of the line of sight from streets and other important views.
APM AES-8	Transmission Lines - Regrade/Revegetate Construction Sites. Any areas around new or rebuilt transmission structures that must be cleared during the construction process will be regraded and revegetated to restore the area to an appearance that will blend back into the overall landscape context.
APM AES-9	Access Roads - Use Existing Access Roads. To the extent feasible, existing access roads will be used.
APM AES-10	Access Roads - Helicopter Construction. In mountainous areas, particularly in the ANF, helicopters will be used for construction of towers in areas where extensive new road development would be required.
APM AES-11	Access Roads - Minimize Road Modifications. Widening and grading of roads will be kept to the minimum required for access by proposed Project construction equipment.
APM AES-12	Access Roads - Dust Suppression. During the construction period, dust suppression measures will be used to minimize the creation of dust clouds potentially associated with the use of the access roads.
APM AES-13	Access Roads - Cut and Fill Slope Revegetation. Any areas of exposed cut and fill slope created in the process of widening existing access roads or creating new access roads will be revegetated, as practicable, to blend back into the surrounding landscape.
APM AES-14	Marshalling Yards and Laydown Areas - Reuse Previously Disturbed/Low Visibility, Low Sensitivity Areas for Marshalling Yards. To the extent feasible, the sites selected for use as marshalling yards and laydown areas will be areas that are already disturbed, in locations of low visual sensitivity.
APM AES-15	Marshalling Yards and Laydown Areas - Cover Chain-Link Fencing with Fabric. During the construction period, the temporary chain-link fences surrounding the marshalling yards and laydown areas will be covered with fabric to limit views into these sites and to create a unified, tidy appearance.
APM AES-16	Marshalling Yards and Laydown Areas - Reduce Glare and Light Spill. The lighting specified for the marshalling yards and laydown areas will be the minimum required to meet safety and security standards. All light fixtures will be hooded to eliminate any potential for glare effects and to prevent light from spilling off the site or up into the sky. In addition, the fixtures will have sensors and switches to permit the lighting to be turned off at times when it is not required.
APM AES-17	Marshalling Yards and Laydown Areas - Construction Site Cleanup. When the construction period is over, the fencing around the marshalling yards and laydown areas will be removed, the sites will be cleaned up, and their surfaces will be restored.

Table 3.14-6. Applicant-Proposed Measures – Visual Resources	
APM AES-18	Substations - Reflectivity Finish. All substation equipment will be specified with a low reflectivity, neutral finish.
APM AES-19	Substations - Nonreflective/Nonrefractive Insulators. All insulators at the substations and on the takeoff equipment will be nonreflective and nonrefractive.
APM AES-20	Substations - Low Reflectivity Finish on Structures. The surfaces of all structures will be given low reflectivity finishes with neutral colors to minimize the contrast of the structures with their backdrops.
APM AES-21	Substations - Reduce Glare and Light Spill. The lighting specified for the new and expanded substations will be the minimum required to meet safety and security standards. All light fixtures will be hooded to eliminate any potential for glare effects and to prevent light from spilling off the site or up into the sky. In addition, the fixtures will have sensors and switches to permit the lighting to be turned off at times when it is not required.
APM AES-22	Substations - Chain-Link Dulled Finish. The chain-link fences surrounding the substations will have a dulled, darkened finish to reduce contrast with its surroundings.
APM AES-23	Substations - Landscape Plan. An appropriate landscape plan will be prepared for the area on the west side of the Vincent Substation expansion to screen the equipment from view and blend the substation into the surroundings.

3.14.4.3 Impact Assessment Methodology

From thousands of potential viewpoints, and in consultation with CPUC and Forest Service personnel, 53 locations were selected as KOPs for detailed analysis of the proposed Project, and seven additional KOPs were selected for detailed analysis of the Alternatives 3 through 7. KOPs were established at important viewpoints, regardless of whether they were located on private or public lands. At each KOP, photographs were taken with a digital camera equipped with a "normal" focal length lens. For each KOP analyzed in the EIR/EIS, a photograph and simulation has been printed on 11" by 17" paper. If the reader stands at the exact location of the KOP looking in the direction the photo was taken, each photograph (and simulation) will appear "life-size" when held approximately 18 inches away from the viewer's eyes. From among all photographs taken, the best compositions and exposures were selected to represent the existing view from each KOP and for subsequent computerized visual simulations to depict the visual effects of the proposed Project and its alternatives. In the impact analysis for Visual Resources, future visual effects of the proposed Project and its physical alternatives were predicted for each KOP by using these computerized visual simulations. In Sections 3.14.6 through 3.14.11, the reader will find written descriptions of these visual effects. In the Map & Figure Series Volume, the reader will find "life-size" pairs of before and after photographs and simulations. No simulations were completed for the No Project/Action Alternative (Alternative 1).

For the North and South Areas (non-NFS lands), an assessment was made at each KOP of existing visual conditions, visual contrast, and Project dominance, using the Visual Sensitivity/Visual Change methodology. Subsequently, a conclusion was reached regarding the extent of overall visual change. Taken together with the existing landscape's visual sensitivity, the level of probable visual impact significance was determined.

For the Center Area (NFS lands), the key factors considered in determining the degree of visual impact were compliance and consistency with the adopted Desired Condition and Scenic Integrity Objectives. In like manner as in the North and South Areas, in the Center Area a computerized visual simulation was prepared for each KOP, with which to further evaluate the preliminary impact determination. A conclusion on initial impact significance was then reached, using the standard limits of deviations determined by SIO definitions. At each of these KOPs, field analysis included assessment of existing scenic integrity and Scenic Integrity Objectives using the Scenery Management System methodology.

3.14.5 Alternative 1: No Project/Action

Selection of the No Project/Action Alternative would mean that the Tehachapi Renewable Transmission Project, as proposed, would not be implemented. As such, none of its associated construction or operational activities would occur, and the environmental impacts associated specifically with the proposed Project would not occur. For example, SCE's existing Antelope-Vincent 220-kV line would remain in place in Landscape Unit 3, and the existing Antelope-Mesa 220-kV line would remain in place in Landscape Units 5 through 12, as removal of these lines is specifically linked to construction of the proposed Project. As such, the environmental impacts associated with the proposed Project, as described in Section 3.14.6, below, would not occur.

In the short term, existing environmental conditions for visual resources would continue into the future, and existing landscapes would continue to appear as they are represented in Section 3.14.2.3. However, environmental conditions in the Study Area would continue to naturally evolve and/or change over time; therefore, under the No Project/Action Alternative, the regional setting and baseline conditions of the Study Area, which are discussed in Section 3.14.2.2, would not remain static. The following section describes how visual resources in the Study Area would be expected to change from current conditions under the No Project/Action Alternative.

North Area

Under the No Project/Action Alternative, visual impacts in the North Area would be avoided that otherwise would be created by new transmission lines in new corridors, new, taller transmission line structures, and substation upgrades. Because construction of new wind farms in the Tehachapi Wind Resource Area (TWRA) are dependent upon construction and operation of the proposed Project, these new wind farms would not be built, or would only be built at a date further in the future, after other transmission capacity is realized. This would delay projects such as the PdV/Manzana Wind Energy Project, Alta Wind Energy Center, and/or Pine Tree Wind Development Project, and visual impacts associated with these wind projects would not occur in the landscapes of TWRA.

As described in Section 3.14.2.2, the PCT crosses through the North Area and would be traversed by the proposed Project (Alternative 2). Under the No Project/Action Alternative, this crossing of the PCT by new transmission lines would be avoided. The Pacific Crest Trail Association (PCTA), which works jointly with State and Federal agencies to protect the PCTA (as described in Section 3.14.2.2), is currently working to re-route a portion of the PCT within the North Area through Tejon Ranch, in order to maintain the length of the PCT along ridgelines. It is expected that this re-route would succeed under any of the Project alternatives, including the No Project/Action Alternative. It is further expected that the PCT would continue to be managed and maintained in the future to protect scenic and visual resources.

Also as described in Section 3.14.2.2, there are currently planned residential developments in the North Area which include proposals for intensive housing developments that would modify the existing landscape, including major residential developments of Anaverde, Ritter Ridge, and Quail Valley. It is reasonably foreseeable that these developments would be constructed and that in the future, further development surrounding and expanding the boundaries of the Cities of Lancaster and Palmdale also would modify existing landscape conditions. Such developments would be similar to the developed residential areas found in Palmdale and Lancaster, and in the South Area, which is highly urbanized.

In general, the extent and variety of urban/suburban development in the North Area are expected to increase in the future. However, this increase is not dependant upon selection of the No Project/Action

Alternative and likely would occur independently of the proposed Project or an alternative to the proposed Project.

Center Area

Under the No Project/Action Alternative, visual impacts in the Center Area that would be created by new transmission line structures and upgrades to existing access and spur roads of TRTP would be avoided.

National Forest System lands would continue to be managed by the Forest Service in the future, regardless of the potential implementation of the proposed Project or an alternative to the proposed Project, including the No Project/Action Alternative. As such, existing landscape character and scenic integrity conditions would remain protected in the short term. However, it can be presumed that with increased population in the North and South Areas, it is reasonably foreseeable that additional new transmission lines will be needed in the future. Unless a route(s) is developed to extend outside of the Forest boundary, existing 220-kV single-circuit transmission lines can be expected to be reconstructed to 500-kV single- or double-circuit capacities in the future. Construction of additional transmission lines by SCE and/or LADWP is reasonably foreseeable in the Center Area. With either scenario, visual resources within the Center Area would continue to exist under the management of the Forest Service for the purpose of multiple use, public recreation and enjoyment of scenic quality.

ANF projects currently underway or in the planning stages (fuel treatments, road maintenance, OHV usage, recreation site maintenance, interpretive services, etc.) would continue into the future. Some of these Forest Service activities have the potential to impact visual resources (fuel treatments, road maintenance, or OHV usage) but they are independent of the proposed Project or an alternative to the proposed Project.

South Area

Under the No Project/Action Alternative, visual impacts associated with the proposed Project would be avoided in the South Area because new, taller transmission line structures, new 500-kV conductors, and substation upgrades would not occur. With increased population in the North and South Areas, it is reasonably foreseeable that additional new transmission lines will be needed in the future, with similar pressure to increase electric transmission for increased population. Existing 220-kV single-circuit transmission lines can be expected to be reconstructed to 500-kV single- or double-circuit capacities in the South Area in the future. Construction of additional transmission lines by SCE and/or LADWP is reasonably foreseeable.

As previously described, the South Area is highly urbanized and includes a wide variety of developed urban and suburban landscapes with many different visual attributes. In the viewshed of the proposed Project, much of the landscape has already been developed for urban and suburban uses (unlike the North Area where rapid development of new subdivisions and planned developments is occurring). Therefore, only a few undeveloped parcels of land remain near the proposed Project ROW, and only a few of these are currently undergoing development, causing visual changes to the landscape. These new developments are described in Section 2.9 (Cumulative Projects).

3.14.6 Alternative 2: SCE's Proposed Project

3.14.6.1 Direct and Indirect Effects Analysis

Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)

Impact V-1: Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views.

North Area

Potential visual impacts resulting from the proposed Project's construction in the North Area would primarily be experienced from county roads and nearby residences.

Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the substation sites, staging areas, pulling locations, tensioner locations, splicing locations, and along the access/ spur roads and overhead transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the utility corridor. Vehicles, heavy equipment, helicopters, materials, and workers would be visible during site clearing, grading, substation expansion and construction, structure erection, conductor stringing, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and utility corridor including adjacent and nearby residents and recreationists on roads and trails (including the PCT). View durations would vary from brief to extended periods.

Construction of the transmission line, construction of the new Whirlwind Substation, expansion of existing Antelope and Vincent Substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers. However, Project construction is a relatively short-duration visual impact, as compared to the permanent structures that would be introduced into the landscape by the proposed Project, which would have a life-span of perhaps 50 years.

Center Area

Potential visual impacts resulting from the proposed Project construction activities in the Center Area would primarily be visible and experienced from county roads, State highways (including multiple crossings over State Scenic Highway 2), Forest Service roads, OHV trails, hiking trails (including multiple crossings of the Pacific Crest National Scenic Trail and Silver Moccasin National Recreation Trail), and many nearby recreation sites (including Mill Creek Summit Picnic Area, PCT trailheads, Silver Moccasin Trailhead, Vetter Mountain Lookout, Cobb Estate, Mount Wilson, Mount Lowe, Mount Disappointment, Strawberry Peak, Rincon-Red Box OHV Trail, Upper Winter Creek Trail, Mount Zion, Cogswell Reservoir, and West Fork National Scenic Bikeway). For a complete list of recreational sites affected in the Center Area, please see Section 3.15 (Wilderness and Recreation).

Construction impacts on visual resources would result from the presence of equipment, materials, and work force along Segments 6 and 11, and would be as described above in the North Area. The only residences in the Center Area are located on small, scattered tracts of non-NFS lands, and the number of residences is low, such as along Aliso Canyon Road. Therefore, except for residents in these scattered tracts, the duration of view of construction activities would be brief for recreationists in the ANF,

estimated by SCE engineers to be perhaps a maximum of two weeks' duration. However, based on experience that is being gained during construction of the Antelope-Pardee Transmission Project, because of fire regulations and weather conditions, there have been constant work stoppages. Therefore, some construction durations may be longer. .

Construction of the transmission line, improvements and realignments at the existing Gould Substation, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters equipment storage materials, and workers. However, impacts related to construction would be relatively short in duration, as compared to the permanent structures that would be introduced into the landscape by the proposed Project, which would have a life-span of perhaps 50 years, if not more.

South Area

Potential visual impacts resulting from the proposed Project construction activities in the South Area would be experienced from a multitude of vantage points, including Interstate Highways (210, 605, 10) State Highways (60, 57, 39, 2), county roads, state parks, county parks, city parks, memorial parks, and thousands of nearby residences.

Construction impacts on visual resources would result from the presence of equipment, materials, and work forces as described above for the North Area. Construction of the transmission line, upgrades to the existing Mesa and Mira Loma Substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers. However, impacts related to construction would be relatively short-duration, as compared to the permanent structures that would be introduced into the landscape by the proposed Project, which would have a life-span of perhaps 50 years.

No indirect visual effects would occur because of construction activities in the North, Center, or South Areas would occur under Alternative 2.

Mitigation Measure for Impact V-1

V-1 **Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis.** SCE shall keep construction-related operations areas clean and tidy by storing building materials and equipment within the proposed construction staging areas and/or generally away from public view when feasible. SCE shall remove construction debris promptly at regular intervals.

For areas of non-NFS lands where cleared vegetation would be visible from sensitive viewing locations, SCE shall dispose of cleared vegetation and woody material in a manner that is not visually evident and does not create visual contrasts. For NFS lands, in areas where cleared vegetation would be visible from sensitive viewing locations, SCE shall dispose of cleared vegetation and woody material off-site (not necessarily off-NFS lands), or chipped and stored for restoration work, as approved by the FS, and in a manner that is not visually evident and does not create visual contrasts. On both NFS lands and non-NFS lands, cleared vegetation or chipped and stored vegetation shall not be stockpiled for longer than 14 days after it is cleared from the site, so that native vegetation is maintained in a healthy condition.

CEQA Significance Conclusion

Due to construction of the proposed Project, short-term visual impacts on landscape character and visual quality of landscape views as seen from various vantage points would be significant and unavoidable (Class I). There are no mitigation measures available to make vehicles, heavy equipment, helicopters, and

other related components less than visible during construction. To reduce the consequence of these potential visual impacts, the following mitigation measure has been identified: Mitigation Measure V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis).

Mitigation Measure V-1 would help to minimize the adverse visual effects of construction activities and equipment as seen from sensitive receptor locations by minimizing and containing the visual clutter associated with construction. Mitigation Measure V-1 is similar to APM AES-15 and APM AES-17, and would augment these APMs by requiring specific procedures such as establishing a regular periodic interval for cleanup, not to exceed one week in duration. Mitigation Measure V-1 would create natural appearing vegetation clearing shapes and patterns, instead of un-natural square or rectangular openings in vegetation. Implementation of Mitigation Measure V-1, as described above, would reduce Impact V-1 somewhat, but temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact.

Impact V-2: For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality.

Landscape character is determined by its unique combination of physical, biological, and cultural attributes. Landscape character is an overall visual impression of landscape attributes; it's the physical appearance of a landscape that gives it an identity and "sense of place". When land owners and society in general have accepted the existing landscape character, often a rural, pastoral, or residential landscape character, as their "sense of place," it is often difficult to reconcile the introduction of a transmission line that makes a permanent change to an industrial landscape character. The "rub" with transmission lines comes from the disruption of a "sense of place" and the introduction of industrial character structures into the landscape that do not relate to the human scale.

Visual quality of a landscape is a measure of the degree to which a landscape is visually perceived to be "complete." The highest visual quality ratings are given to those landscapes that have little or no deviation from the landscape character valued by constituents for its aesthetic quality. When all visual elements of a landscape are in harmony, that place is deemed to have high visual quality. Introduction of incongruent visual elements into such a landscape would be deemed to detract from visual quality.

North Area

All of Segment 10 and a portion of Segment 4 (S4 MP 15.8 and S4 17.9) would be constructed in a new ROW where there is no existing transmission line; therefore, the existing natural-appearing landscape character would be modified to an industrial character by the presence of the Project. High-voltage transmission line structures are the tallest structures in the desert landscape of the Antelope Valley, except for some of the wind turbine generators in the TWRA. In the North Area, typical 500-kV single-circuit LSTs would be 94 to 220 feet tall and have four legs that would occupy an area of approximately 38 to 42-feet square at the base, tapering to a waist of approximately 19 feet, with 96 foot-wide arms holding up the long strings of large, round conductors. These new 500-kV LSTs would be constructed in natural-appearing landscapes that have no existing transmission lines in the following North Area locations: all of Segment 10; and, Segment 4, from S4 MP 15.8, at which point the line would turn south paralleling the east side of 110th Street West (a County Priority 2 Scenic Highway) for approximately 2.1 miles to S4 MP 17.9, thereby degrading the natural appearance of this landscape.

For Segment 10 near the TWRA, introduction of new, industrial character 500-kV LSTs and conductors across the uniform brushfields with uniform vegetative textures and relatively flat desert plains of the Mojave Desert would adversely affect the existing natural-appearing and rural landscape character. Visual quality would be detracted by the geometric forms and angular lines of new LSTs against the rounded lines of rolling foothills and Tehachapi Mountain backdrops. Gray or dark gray colors of factory-treated galvanized steel, as proposed in APM-AES-1, would aid somewhat for LSTs to blend in with the gray-green creosote bush scrub and widely scattered Joshua trees, as seen against the backdrop of the foothills and Tehachapi Mountains.

In the TWRA, new technology systems for wind farms use monopoles exclusively, instead of LSTs, for supporting the wind turbine generators. There are many reasons that lattice towers are not used now, including visual impact reduction and bird-mortality reduction (by reducing perching opportunities on LSTs). Even though some existing, older wind turbine generators in the TWRA have LSTs, all new wind turbine generators in the TWRA currently are using the new, sleek-looking monopoles and larger rotors with slower revolutions per minute, all of which reduces visual impacts and also reduces bird-kills. Therefore, use of LSTs for the new 500-kV transmission line of Segment 10 is not recommended for both visual resource and wildlife reasons, and TSPs are preferred for TRTP Segment 10.

In the North Area an indirect visual effect of Alternative 2 in existing natural-appearing landscapes would be potential new visual impacts of OHV use in undeveloped landscapes, especially those new OHV trails that would emanate from new access and spur roads along Segment 10 and Segment 4 from MP 14.9 to S4 MP 17.9. Other indirect visual effects in natural-appearing landscapes of the North Area would be the further development of wind farms and wind turbine generators in the TWRA. Without the proposed Project, it has been stated that future wind farms would not be able to transport the electricity that would be generated by future wind turbine generators. Therefore, by allowing the proposed Project to proceed, the natural-appearing landscape in the TWRA would be further modified by construction, operation and maintenance of new large wind turbine generators and development of new wind farms.

Center Area

Although the Center Area is predominantly all natural-appearing landscapes, under Alternative 2 there are no occurrences within the Center Area where new transmission line structures would be built in a completely new alignment or new ROW. (There is a three-mile portion of Segment 11 directly north of the Gould Substation where Segment 11 is currently constructed and operated in an existing designated utility corridor where the existing ROW would be widened). Therefore, with only replacement of existing industrial landscape character structures with new, taller, wider industrial landscape character structures, there are no situations where there would be V-2 impacts in the Center Area.

Because the proposed Project would be developed in existing transmission line ROWs in the Center Area, no indirect V-2 effects would occur in undeveloped, natural-appearing landscapes of the Center Area under Alternative 2.

South Area

The following portions of Segment 8 would be constructed in new ROWs, and therefore the existing natural-appearing landscape character would be modified to an industrial character by the presence of the proposed Project (Alternative 2). New 500-kV LSTs would be constructed in natural-appearing landscapes that have no existing transmission lines, as follows:

- Rose Hills Memorial Park ROW relocation onto a skyline ridge (existing: 1.1-mile, 200-foot-wide; future: 1.4-mile, 240-foot-wide) (Discussed below, under Impact V-2.)
- Hacienda Heights ROW expansion (existing: 2.15-mile, 150 to 230-foot-wide; future: 250 to 330-foot-wide) (Discussed under Impact V-3 because there are existing transmission lines adjacent to the expanded ROW.)
- Fullerton Road new ROW (existing: none; future: 0.4-mile, 100-foot-wide) (Discussed under Impact V-3 because there are existing transmission lines adjacent to the expanded ROW.)
- Ontario (near Mira Loma Substation) ROW expansion (existing: 0.45-mile, 100-foot-wide; future: 250-foot-wide) (Discussed under Impact V-3 because there are existing transmission lines adjacent to the expanded ROW.)

Under Alternative 2, typical transmission line towers within the South Area would have the following range of heights:

- 500-kV single-circuit LST: 128 to 149 feet tall
- 500-kV double-circuit LST: 147 to 255 feet tall
- 500-kV single-circuit TSP: 120 to 170 feet tall
- 500-kV double-circuit TSP: 150 to 195 feet tall
- 220-kV single-circuit LST: 65 to 75 feet tall
- 220-kV double-circuit LST: 113 to 180 feet tall

Consequently, for these portions of Segment 8 in the South Area which include new ROW, Alternative 2 would alter existing natural-appearing landscape character and modify these to industrial character landscapes.

Based on the analysis of the North, Center, and South Areas where new transmission lines would be introduced into a landscape that currently has no transmission lines, recommendations have been made where TSPs and/or colored galvanizing treatments should be used to reduce visual resource, recreation, and wildlife impacts, as provided in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*.

In the South Area, except for the four occurrences noted above, no significant adverse indirect visual effects of Alternative 2 would be anticipated to occur in existing natural-appearing landscapes.

Mitigation Measures for Impact V-2

V-2a **Use tubular steel poles instead of lattice steel towers in designated areas.** When feasible, SCE shall use tubular steel poles, rather than lattice steel towers, in locations designated by the CPUC and the FS (for NFS lands), to reduce visual impacts as seen from sensitive receptor locations and/or to match existing and/or future wind turbine generator monopoles and/or to accomplish community desires. SCE shall submit a Structure Type and Treatment Plan to the CPUC and FS, as appropriate, 45 days after Project approval, demonstrating compliance with this measure and Mitigation Measure V-2b (Treat surfaces with appropriate colors, textures, and finishes).

V-2b **Treat surfaces with appropriate colors, textures, and finishes.** For all structures that are visible from sensitive viewing locations outside NFS lands, and for all NFS lands, SCE shall treat surfaces with appropriate galvanizing treatments to most effectively blend the structures with the visible backdrop landscape, as determined by the CPUC and the FS (for NFS lands). For structures that are visible from more than one sensitive viewing location, if backdrops are substantially different when viewed from different vantage points, the darker color shall be selected, because dark colors tend to blend into landscape backdrops more effectively than lighter colors, which may contrast and reflect light, producing glare. At locations where a lattice

steel tower or a tubular steel pole would be silhouetted against the skyline, non-reflective, light-beige-gray colors shall be selected to blend with the sky. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive. SCE shall consult with the CPUC and the FS (for NFS lands) to ensure that the objectives of this measure are achieved. SCE shall submit a Structure Type and Treatment Plan for the lattice steel towers, tubular steel poles, conductors, insulators, substation structures, fences, retaining walls, and any other visible structures, to the CPUC and FS, as appropriate, after Project approval, demonstrating compliance with this measure and Mitigation Measure V-2a (Use tubular steel poles instead of lattice steel towers in designated areas).

V-2c **Establish permanent screen.** At Antelope and Vincent Substations, SCE shall establish a permanent screen of sufficient height for immediate visual screening around the new expansion and existing Antelope and Vincent Substations. Plant materials selected for screening shall be locally appropriate, wind-resistant, non-invasive, and acclimated to the particular environment and micro-climate. Other screening materials shall blend in with the local landscape. SCE shall consult with the CPUC to ensure that the objectives of this measure are achieved. SCE shall submit landscaping plans for Antelope and Vincent Substations that demonstrate compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction at these substations.

CEQA Significance Conclusion

The goal of Mitigation Measures V-2a through V-2c is to select appropriate structure types and heights, exact structure placement, and vegetative screening through thoughtful planning and design, such that the new structures (substations, LSTs, or TSPs) would blend into the landscape to the greatest extent possible, with the least impact to landscape character and visual quality.

Starting with Segment 10 at the northern end of the North Area, implementation of Mitigation Measure V-2a (Use tubular steel poles instead of lattice steel towers in designated areas) throughout the existing and planned TWRA would allow the new structures to set an architectural tone for the existing and soon-to-be enlarged wind resource area. In the future, development of new wind turbine generators with sleek monopoles would add to the architectural tone of the area and make the 500-kV monopole structures seem to be a congruent visual part of the enlarged TWRA.

The introduction of new transmission lines (Segment 10) and the new Whirlwind Substation into existing natural-appearing landscapes with no existing transmission lines (Segment 10) or substations (Segment 9), as proposed under Alternative 2, would create adverse but not significant visual impacts in the North Area. There is no mitigation available to make new transmission lines or a new substation disappear or become inconspicuous. Implementation of Mitigation Measures V-2a through V-2c would help to minimize the adverse visual effects of new transmission line alignments and structures as seen from sensitive receptor locations by minimizing visual impacts through careful planning and design.

Implementation of Mitigation Measure V-2c (Establish permanent screen) around the existing and proposed expanded Antelope and Vincent Substations would lead to an overall improved visual environment at both Substation sites. SCE has proposed APM AES-23, but it specifically mentions only the expansion area at Vincent Substation; therefore, Mitigation Measure V-2c is required. Measure V-2c would augment APMs AES-18 through AES-22 at Antelope and Vincent Substations, and visual impacts in the areas of the proposed expansions would remain adverse but not significant.

As currently planned and designed, Segment 4 (S4 MP 15.8 to S4 17.9) would result in significant adverse visual impacts to 110th Street West, a Priority 2 Los Angeles County Scenic Highway under the

current County General Plan, leading to significant and unavoidable adverse impacts. However, for Segment 4 (S4 MP 15.8 to S4 17.9), implementation of Mitigation Measures V-2a (Use tubular steel poles instead of lattice steel towers in designated areas) and V-2b (Treat surfaces with appropriate colors, textures, and finishes) would substantially reduce visual impacts. Implementation of these measures, as described above, would reduce Impact V-2 somewhat, but the presence of new transmission line structures and conductors in new ROWs, visible from Oak Creek Canyon Road, Tehachapi-Willow Springs Road, and 110th Street West in a landscape that currently has no transmission line facilities, would remain a significant and unavoidable adverse visual impact (Class I).

In the Rose Hills Memorial Park, Segment 8A would relocate the transmission line from an existing ROW that is midslope onto a skyline ridge. The existing LSTs have a landform backdrop as seen from many vantage points in Rose Hills Memorial Park. The new ROW is located on a ridgetop and new 500-kV LSTs would be skylined and very visible from sensitive receptor locations to the south (inside Rose Hills) and to the north (various residential areas and the Pomona Freeway [Highway 60]). Implementation of Mitigation Measures V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis), V-2a (Use tubular steel poles instead of lattice steel towers in designated areas), and V-2b (Treat surfaces with appropriate colors, textures, and finishes) would reduce Impact V-2 in the Rose Hills Memorial Park. Implementation of Mitigation Measures V-2a and V-2b, as described above, would reduce Impact V-2 in the Rose Hills area and use of TSPs instead of LSTs on a skyline ridge would result in a significant adverse visual impact that can be reduced to less than significant through application of feasible mitigation measures (Class II) (see Figures 3.14-42a/b in the Map & Figure Series Volume).

In addition to the measures described above, implementation of the following mitigation measure is recommended for the entire route of the proposed Project to minimize the effects of Impact V-2 along the Project route: V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis).

While the mitigation measures described above would reduce the effects of Impact V-2 along 110th Street West, the impact to this Priority 2 Los Angeles County Scenic Highway would remain significant and unavoidable (Class I). Please see Section 3.14.7 for a discussion, implementation of Alternative 3, which would avoid placing the transmission line in the immediate foreground of this road for a distance of 2.1 miles, but would result in a direct crossing of this road.

Impact V-3: For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects.

For a landscape with one or more existing transmission lines, removal of smaller existing transmission line structures (e.g., 220 kV) and replacement with structures of increased size (e.g., 500 kV) made of new materials would result in adverse visual effects. Increased visual contrasts could be created by increased structure prominence, new or additional structure skylining, new or additional ridgeline obstruction, new or additional skyline intrusion, and/or view blockage to desirable landscape features. New, taller transmission line structures could also increase the predominance of industrial landscape character by introduction of larger structures with more pronounced geometric forms, unnatural straight lines, increased visual complexity, and increased visual clutter. New metal surfaces tend to stand out more than older, more weathered surfaces, thereby making the new, taller structures even more visually prominent.

North Area

Most of the North Area has an existing rural landscape character with scattered rural residential/ranch developments, agricultural fields, and a one-mile grid of roads. Only near the western outskirts of Palmdale and Lancaster are there any areas of medium-to-high density residential uses, and these residential neighborhoods are continuing to be built closer to the Segment 5 ROW. Crossing these rural and residential landscape characters, there are several major transmission line corridors, including the corridors where most of Segment 4 (except S4 MP 15.8 to MP 17.9) and all of Segment 5 would be built.

The visual appearance of different types of high-voltage transmission line structures depends on several variables, including: viewing distance (foreground, middleground, or background); angle of view (viewer below a structure, viewer above a structure, or viewer level with a structure); structure placement in the landscape (situated on a skyline ridge, midslope on a mountainside, at the bottom of a hillside or mountainside, or in the middle of a flat desert plain), as explained above under Impact V-2.

For the northern portion of Segment 4, the construction of two new parallel, 4-mile long, single-circuit 220-kV transmission lines (Cottonwind – Whirlwind 220-kV No. 1 & No. 2) would not create an adverse visual impact, as seen from nearby roads, because they would be immediately adjacent to existing 220-kV and 500-kV transmission lines. These two new lines would cross directly over the PCT at S4 MP 2.7, but this part of the PCT is located on an existing access road, not a narrow trail-bed, and visual impacts would be minimal. Because this four mile subsegment of Segment 4 is within the TWRA, it is likely that future wind farms will be constructed in the immediate vicinity of these two transmission lines. As was discussed for Segment 10, above, use of LSTs for the two new parallel 220-kV transmission lines of Segment 4 is not recommended for both visual resource and wildlife reasons, but rather, newly designed monopoles for transmission lines would be appropriate in the TWRA. Such a newly designed monopole was developed for the Segment 3 220-kV transmission line in the TWRA (Segment 3 of TRTP).

For the middle portion of Segment 4 S4 MP 4.1 to 15.8 (the single-circuit Whirlwind – Antelope 500-kV line), there would be new 500-kV LSTs and conductors constructed in an expanded ROW southwest of and adjacent to an existing utility corridor with high-voltage transmission lines. Because this portion of Segment 4 would be constructed next to this existing corridor; consequently, overall changes to existing landscape character and existing visual quality would be adverse but less than significant, as displayed in Figures 3.14-6a/b (see Map & Figure Series Volume). However, the southern portion of Segment 4 (S4 MP 14.9 to 17.9) would be in an entirely new 200-foot ROW immediately adjacent to 110th Street West, a County-designated Second Priority Scenic Highway in the current County General Plan, then turn east and connect to Antelope Substation. This new 500-kV transmission line would create adverse visual impacts to the existing rural landscape character and intact visual quality of West 110th Street, and is discussed above under Impact V-2.

Expansion of the existing Antelope Substation would be highly visible from Avenue J and nearby residences. It would create high visual contrast, high dominance, and high view blockage/impairment to the existing landscape and views to Portal Ridge. Establishment of a permanent evergreen vegetative screen (Mitigation Measure V-2c) would help to reduce visual impacts, as illustrated in Figures 3.14-8a/8b (see Map & Figure Series Volume) for KOP-North-6.

Segment 5 would remove the existing Antelope-Vincent 220-kV transmission line and the existing Antelope -Mesa 220-kV transmission line, and in the same 200-foot-wide ROW, would construct the new, approximately 17.8 mile long, single-circuit Antelope-Vincent No. 2 500-kV transmission line. The new single-circuit 500-kV LSTs would range from 113 to 188 feet tall, while existing 220-kV LSTs are

approximately 20 to 25 percent shorter. The increased size of these new towers could result in several adverse visual effects. The additional structure height and width of the 500-kV structures, as compared to the existing shorter, smaller 220-kV structures that would be removed, would cause an increase in structural prominence, and create a visible increase in industrial character. As a result, visual quality would be reduced by contrasting forms, lines, and that resulting contrast would be high. The existing Antelope-Vincent corridor visually dominates the existing rural landscape features adjacent to the utility corridor, and the addition of Segment 5 would continue this dominance. The new and increased structure height would create additional obstruction of the background landscape and would result in a high degree of view blockage of higher quality landscapes as seen from the KOPs.

Additional structure height also would cause additional structure skylining (towers and conductors extending above the horizon line), particularly for towers where, as seen from some vantage points, the existing shorter structures remain below the skyline or only slightly extend above the horizon line. Some new structures would protrude above the horizon and impair scenic views. Increased tower height would also raise the conductors such that more of the background landscapes in this portion of the North Area (Tehachapi Mountain Range, Antelope Valley, Mojave Desert, Portola Ridge, and Sierra Pelona Ridge) would be visually obstructed, depending on the direction of view. These visual changes are illustrated in Figures 3.14-9a through Figures 3.14-15b (see Map & Figure Series Volume). Because existing landscape conditions include TSPs, LSTs, and conductors of various transmission lines, visual changes of the Project from the Antelope Substation to the Vincent Substation would be noticeable but not uncommon.

In the North Area an indirect visual effect of Alternative 2 would be the further development of wind farms and wind turbine generators in the TWRA. Without implementation of the proposed Project or one of its physical alternatives, it has been stated that future wind farms would not be able to transport the electricity that would be generated by future wind turbine generators. Consequently, under Alternative 2 the landscape in TWRA could be further modified by construction, operation and maintenance of new large wind turbine generators and development of new wind farms.

Center Area

Potential visual impacts resulting from the proposed Project's construction and operation in the Center Area would primarily be experienced by sensitive receptors from roads, trails, and recreation areas in the ANF. These travelways and use areas include State, county, and Forest Service roads, Forest Service trails (including National Scenic and National Recreation Trails), a Los Angeles Unified School District Outdoor Education Center, and nearby developed recreation sites and undeveloped recreation areas. See Section 3.15 (Wilderness and Recreation) for a complete list of these recreation sites. Existing high-voltage transmission line LSTs in the Center Area are the tallest features in the ANF, dwarfing the native chaparral vegetation and scattered groves of pines and Douglas fir trees. In the Center Area, new TRTP 500-kV single-circuit LSTs would be 85 to 220 feet tall and have four legs that occupy an area of approximately 38 to 42 feet square at the base, tapering to a waist of approximately 19 feet, with 96 foot wide arms holding up the long strings of large, round conductors. The Center Area in the vicinity of Segments 6 and 11 has a predominantly natural-appearing existing landscape character, except for landscape scars that have been created by pads for the existing high-voltage transmission lines, access roads, and spur roads. Additionally, the existing lattice steel structures are generally the tallest objects in the landscape, and have introduced geometric forms, angular lines, and an industrial landscape character in an otherwise natural-appearing landscape. Other existing landscape features that have impacted natural-appearing landscape character and decreased visual quality are existing highways with large cut-and-fill slopes.

In the Center Area, Segment 11 would replace existing shorter, smaller 220-kV LSTs and small conductors with new, taller, wider 500-kV LSTs and larger conductors for a distance of approximately 18.7 miles. In several locations, Segment 11 would be seen at foreground distances, including the Angeles Forest Highway, the PCT, the Mount Gleason Road, Mount Gleason CDF Camp 16, Big Tujunga Canyon Road, Clear Creek Outdoor Education Center, and Angeles Crest Scenic Byway (also known as the Angeles Crest State Scenic Highway). In these locations, existing 220-kV LSTs and conductors already detract from desired natural-appearing landscape character and lower the existing visual quality, thereby not attaining the High Scenic Integrity Objective, where human developments should repeat natural form, line, color and texture to such an extent that they are not noticeable and not visually evident. New, taller, wider 500-kV LSTs and conductors would emphasize and augment the industrial landscape character and would further lower visual quality. Scenic integrity levels that would be met by the proposed Project would be moderate, low, very low, and unacceptably low.

From other vantage points such as the Angeles Forest Highway, Segment 11 would be visible at middleground and background viewing distances, and at certain times of day and with certain sun angles, the new transmission line's towers and conductors would reflect sunlight and be very visible. These adverse visual effects would not meet the Desired Condition of natural-appearing landscape character or the High SIO. Near the Clear Creek Outdoor Education Center, Segment 11 would be very noticeable from the nature trail and would detract from the natural-appearing landscape character, plus it would not meet the High SIO. Scenic integrity levels that would be met by the Project would be low.

Near the Millard Campground, Segment 11 would simply string new conductors on the vacant side of existing double-circuit 220-kV LSTs. When viewed from below, conductors appear dark in color. The scenic integrity level that is currently met near Millard Campground is unacceptably low, and with implementation of Alternative 2, it would continue to be unacceptably low.

Segment 6 from S6 MP 3.25 to 4.8 would replace two existing 220-kV transmission lines with two new 500-kV transmission lines composed of new, taller, wider LSTs in the foreground of the Angeles Forest Highway. From S6 MP 4.8 to 26.9, Segment 6 would replace one existing 220-kV transmission line with one new 500-kV transmission line composed of new, taller, wider LSTs and larger conductors. Segment 6 would be visible in the foreground from the Angeles Forest Highway, PCT and Trailhead at Mill Creek Summit. The increased size and spread of the legs of the 500-kV lattice steel structure proposed for Segment 6 at the Mill Creek Summit would probably encroach directly upon the PCT. Use of a LST in this location would probably require relocation of the PCT trailbed, because the existing 220-kV LST is sandwiched between a paved road and the PCT. This new, larger LST will have direct impacts on visual resources and recreational resources of the PCT.

Segment 6 also would be visible in the foreground from the Upper Big Tujunga Canyon Road, Angeles Crest Scenic Byway (also known as the Angeles Crest State Scenic Highway), and the Rincon-Red Box OHV Trail. Segment 6 would be visible in middleground from Vetter Mountain Lookout, the San Gabriel River National Scenic Bikeway at Cogswell Reservoir, Silver Fish Trail, Upper Creek Winter Trail, and numerous streets and highways in the South Area. There would be adverse visual impacts associated with Segment 6, including reductions in visual quality and increased industrial landscape character under Alternative 2. Along the alignment of Segment 6, existing 220-kV and 500-kV LSTs and conductors already do not attain the Desired Condition of natural-appearing landscape character and have lowered the existing visual quality, thereby not attaining the High Scenic Integrity Objective. New, taller, wider 500-kV LSTs and larger conductors would emphasize and augment the industrial landscape character and

would lower visual quality further. Scenic integrity levels that would be met by Alternative 2 Segment 6 would be moderate, low, very low, and unacceptably low.

The new single-circuit 500-kV LSTs would range from 85 to 220 feet tall in the Center Area, while existing 220-kV LSTs of Segments 6 and 11 are 20 to 25 percent shorter and narrower. The increased size of these new towers would result in several adverse visual effects. Additional structure height and width of 500-kV structures, as compared to existing 220-kV structures that would be removed, would cause an increase in structural prominence, and create a visible increase in industrial character. As a result, future visual quality would be further reduced by contrasting, unnatural geometric forms and straight lines, and the resulting visual contrast would be very high. The proposed Project would appear to dominate the existing natural-appearing landscape character adjacent to the utility corridor. The new and increased structure height would create additional obstruction of the foreground, middleground, and background landscapes and would result in a high degree of view blockage of high quality landscapes as seen from the KOPs.

Additional structure height also would cause additional structure skylining (towers and conductors extending above the horizon line), particularly for towers where, from some vantage points, the existing shorter structures remain below the skyline or only slightly extend above the horizon line. New taller, wider structures that would protrude above the skyline or ridgeline would block more of the natural-appearing horizon and impair scenic views in the ANF, as illustrated in Figures 3.14-16a/b through 3.14-35a/b (see Center Area photos/simulations in the Map & Figure Series Volume).

Under Alternative 2 no indirect effects of Impact V-3 would occur in the Center Area.

South Area

Potential visual impacts resulting from the proposed Project's construction and operation in the South Area would be experienced by thousands of people from a multitude of vantage points, including freeways, highways, collector streets, local streets, county roads, parks, trails, greenways, schools, hospitals, memorial parks, shopping centers, commercial areas, manufacturing areas, and numerous residential neighborhoods. Existing high-voltage transmission line structures are some of the tallest structures in the South Area, and many times these structures are visible against the horizon, towering over rooftops and treetops, or situated along skyline ridges where they are even more visible.

In the South Area, several different tower structure types are proposed under Alternative 2, including single-circuit 500-kV LSTs, double-circuit 500-kV LSTs, double-circuit 500-kV TSPs, and double-circuit 220-kV LSTs. All of the proposed structures would be taller than existing structures that would be removed and replaced. In almost all occurrences, the new replacement structures would be 1 to 2.5 times taller than the existing structures that would be removed. Alternative 2 would lead to an increased industrial landscape character and a decrease in visual quality throughout the South Area.

Landscape character varies widely in the South Area, with the actual ROW of Segments 11, 7, and 8 having an existing industrial landscape character because of the existing transmission lines. However, adjacent landscape characters range widely and include (but are not limited to) undeveloped open space, plant nurseries, parklands, memorial parks, single-family residential areas, gravel quarries, oil fields, commercial areas, and light industrial uses [see Section 3.9 (Land Use) and Map & Figure Series Volume, Figures 3.9-3a to 3.9-3i, which present existing land uses within one-half mile of the proposed Project].

Segment 11 in the South Area would add a new 220-kV circuit (three 220-kV conductors in a vertical array) onto the vacant side of existing 220-kV double-circuit LSTs from the Gould Substation to the Goodrich and Mesa Substations. It is expected that the largest adverse visual impact of this portion of Segment 11 in the South Area would be the presence of equipment and the labor necessary for the stringing and pulling of these new conductors onto existing LSTs (Impact V-1). Because no new lattice steel structures would be built for Segment 11 in the South Area, it is expected that the visual impacts of operation and maintenance of this portion of Segment 11 would remain unnoticed (see Map & Figure Series Volume, Figure 3.14-35a/b for KOP-Center-20).

Segment 7 would extend from the ANF boundary to the existing Mesa Substation and would remove existing, short, single-circuit 220-kV LSTs and replace them with taller, wider, double-circuit 500-kV LSTs and TSPs. Segment 7 would be seen from numerous residences and residential streets, golf courses, parklands, a shopping center, neighborhood streets, Interstates 10, 210, and 605, and Highway 60.

Segment 8 would extend from the existing Mesa Substation on the west to the existing Mira Loma Substation on the east, and is divided into three subsegments: Segments 8A, 8B, and 8C. Segment 8A would construct approximately 35.2 miles of new 500-kV transmission line on double-circuit LSTs and double-circuit TSPs. Segment 8B would construct approximately 6.8 miles of new double-circuit 220-kV transmission line (75 to 115 feet tall) replacing an existing 220-kV transmission line on single and double-circuit structures. All of Segment 8 would remove these existing short 220-kV LSTs and replace them with taller, wider, 500-kV double-circuit LSTs and TSPs, mostly in existing ROW. However, Segment 8 would require new ROW in the following locations, as discussed above under Impact V-2:

- Rose Hills Memorial Park ROW relocation (existing: 1.1-mile, 200-foot-wide; future: 1.4-mile, 240-foot-wide) (Discussed above, under Impact V-2.)
- Hacienda Heights ROW expansion (existing: 2.15-mile, 150 to 230-foot-wide; future: 250 to 330-foot-wide) (Discussed here under Impact V-3 because there are existing transmission lines adjacent to the expanded ROW.)
- Fullerton Road new ROW (existing: none; future: 0.4-mile, 100-foot-wide) (Discussed here under Impact V-3 because there are existing transmission lines adjacent to the expanded ROW.)
- Ontario (near Mira Loma Substation) ROW expansion (existing: 0.45-mile, 100-foot-wide; future: 250-foot-wide) (Discussed here under Impact V-3 because there are existing transmission lines adjacent to the expanded ROW.)

The Hacienda Heights ROW expansion simply widens an existing ROW for a length of 2.15 miles, from an existing width of 150 to 230 feet wide to a future width of 250 to 330 feet wide. Because there are existing transmission line facilities in this ROW, visual impacts will be discussed in subsequent sections of this analysis. In the Fullerton Road area, a new ROW would be required for 0.4 mile, and it would be 100 feet-wide. Both of these areas are discussed in Section 3.14.2.3, under KOP-South-10, and are displayed in Figures 3.14-45a/b (see Map & Figure Series Volume). The Ontario ROW expansion near Mira Loma Substation would expand an existing ROW from 100 feet wide to 250 feet-wide near the Mira Loma Substation. Because there are existing transmission line facilities in this ROW, visual impacts will be discussed in subsequent sections of this analysis. See Section 3.14.2.3, under KOP-South-20, and Figures 3.14-55a/b (see Map & Figure Series Volume). Segment 8 would be visible from numerous residences and residential streets, parklands, a cemetery, the Orange Freeway (State Highway 57), fairgrounds on Edison Avenue, light manufacturing and commercial areas, and rural and agricultural areas.

The new double-circuit 500-kV LSTs of Segments 7 and 8 would be 147 to 262 feet tall, and TSPs would be 195 to 200 feet tall in the South Area, while existing 220-kV LSTs associated with Segments 7 and 8 are much shorter and narrower, as shown in the photos and simulations in the Map & Figure Series Volume. The increased size of these new towers would result in several adverse visual effects. Additional structure height and width of 500-kV structures, as compared to existing 220-kV structures that would be removed, would cause an increase in structural prominence, and create a visible increase in industrial landscape character. As a result, visual quality would be reduced by contrasting geometric forms and straight lines; therefore the resulting visual contrast would be high. The proposed Project would appear to dominate the existing landscape character(s) adjacent to the utility corridor, and the new increased industrial character would visually extend further into neighboring lands. The new and increased structure height would create additional obstruction of the foreground landscapes, and in some cases views to middleground and background landscapes, and would result in a high degree of view blockage.

Additional structure height also would cause additional structure skylining (towers and conductors extending above the horizon line), particularly for towers where, from some vantage points, the existing 220-kV structures remain below the skyline or only slightly extend above the horizon line. New 500-kV structures that protrude above the skyline would block more of the horizon and impair scenic views. Increased tower height would also raise the conductors such that more of the background landscapes in the South Area (San Gabriel Mountain Range, Hacienda Hills, and Chino Hills) would be visually obstructed, depending on direction of view.

Based on the analysis of the North, Center, and South Areas where new, taller, wider transmission lines would replace existing transmission lines, recommendations have been made where TSPs and/or colored galvanizing treatments should be used to reduce visual resource, recreation, and social impacts, as provided in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*. Furthermore, SCE's APM AES-2 (Transmission Lines - TSPs Near Existing Residential Development) indicates that TSPs would be used in close proximity to existing residential development to provide tower structures that relate visually to the other elements in these settings, with the exceptions of turning tower locations, at long spans, and where LSTs are better suited to match existing structure types adjacent to the transmission corridor.

Mitigation Measure V-3a (Match spans of existing transmission structures) is similar to and augments APM AES-5 (For Transmission Lines - New Structures Aligned with Existing Structures). Based on the analysis of the North, Center, and South Areas where new, taller, wider transmission lines would replace existing transmission lines, it is recommended that new structures should match spans of existing 500-kV structures to the extent feasible and practicable to reduce visual resource impacts. These locations are detailed in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*.

Based on the visual analysis for the entire TRTP route, recommendations have been made where TSPs should be used to reduce visual resource, aesthetic, recreation, and social impacts. These locations are detailed in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*. These recommendations are similar to APM AES-2 (Transmission Lines - TSPs Near Existing Residential Development); however, specific areas of special concern, as expressed by public scoping comments and professional expertise, are listed.

In the South Area, no indirect visual effects would be anticipated to occur.

Mitigation Measures for Impact V-3:

Mitigation measures for Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) include implementation of some Impact V-2 mitigation measures, as follows:

V-2a **Use tubular steel poles instead of lattice steel towers in designated areas.**

V-2b **Treat surfaces with appropriate colors, textures, and finishes.**

V-3a **Match spans of existing transmission structures.** If the new Project components are adjacent to an existing transmission line, SCE shall, where feasible, match existing structure spacing and spans as closely as possible in order to reduce visual complexity as seen from sensitive receptor locations. All new structures should also match the heights of existing transmission line structures to the extent possible as dictated by variation in terrain and kV-capacity of lines.

V-3b **On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality.** All reasonable efforts shall be made to meet the Scenic Integrity Objectives (SIOs) shown on the SIO Map in the ANF Land Management Plan. Minor adjustments that exceed a drop of more than one SIO level are allowable, with the Forest Supervisor's approval, for necessary projects that meet a greater public need and cannot be reasonably accommodated on non-NFS land. In order to compensate for the Project's long-term visual impacts to the landscape character and visual quality, including but not limited to impacts to landscape character and visual quality of scenic highway and scenic trail viewsheds, SCE and the Forest Supervisor shall reach a consensus on what is a commensurate amount of restoration or landscape character/visual quality improvement.

Environmental Effects of Mitigation Measure V-3b

While Mitigation Measure V-3b is recommended to meet the Scenic Integrity Objectives on NFS lands, this measure may adversely affect other issue areas. The restoration/improvement activities that may be associated with this measure could contribute to greater land disturbance, which may affect biological resources in the activity area. Cultural resources that may be located in the restoration or improvement area may be damaged by these activities. In addition, greater land disturbance could contribute to increased soil erosion, which could potentially affect water quality. Such potential impacts are similar to the effects of other Project activities, and would require the implementation of mitigation measures presented in Sections 3.4 (Biological Resources), 3.5 (Cultural Resources), and 3.8 (Hydrology and Water Quality).

CEQA Significance Conclusion

Implementation of Mitigation Measure V-2a (Use tubular steel poles instead of lattice steel towers in designated areas) should be adopted for the two new 220-kV lines leading from Cottonwind Substation into the new Whirlwind Substation. This would set an architectural tone for the future enlarged TWRA and would allow the new Segment 4 structures to blend in with monopoles of existing and future wind turbine generators. Implementation of Mitigation Measures V-2a and V-3a (Match spans of existing transmission structures) in this area would reduce visual impacts and would improve the overall visual environment, and would result in visual effects in the area of the Cottonwind and Whirlwind Substations that are adverse but less than significant.

For Segment 4 from the Whirlwind Substation to S4 MP 15.8 and for all of Segment 5, use of LSTs and implementation of Mitigation Measures V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis); V-2b

(Treat surfaces with appropriate colors, textures, and finishes); V-3a (Match spans of existing transmission structures); V-4b (Slope-round and re-contour in areas as prescribed) [on Portal Ridge and Sierra Pelona Ridge]; and V-4d (Dispose of excavated materials as prescribed) would reduce visual impacts to an adverse but less-than-significant level. For Segment 4 from S4 MP 15.8 to the Antelope Substation, because the transmission line would be in the immediate foreground of 110th Street West, implementation of Mitigation Measure V-2a (Use tubular steel poles instead of lattice steel towers in designated areas) would reduce the visual bulk of the new structures, but visual impacts would remain adverse and significant because of the introduction of a new transmission line in the immediate foreground of this road.

For expansion of the Vincent Substation in Segment 9, APM AES-23 would provide for an appropriate landscape plan for the area on the west side of the Vincent Substation expansion to screen the equipment from view and blend the substation into the surroundings. To augment this APM, implementation of Mitigation Measure V-2c (Establish permanent screen) around the Antelope and Vincent Substations would help to improve the overall visual environment of these substations and would reduce visual contrasts. Because of the size and scale of the existing Vincent Substation facilities, and its existing industrial character in this rural environment, the substation expansion and newer, taller LSTs leading into and out of the substation will largely go unnoticed, resulting in an adverse, but less than significant visual effect. Introduction of the Whirlwind Substation into the North Area would create adverse but not significant visual impacts.

In the Center Area, removal of older existing 220-kV LSTs and conductors, and construction of new, taller, wider 500-kV LSTs with new, specially treated galvanized steel, would be very noticeable. In general, the existing 220-kV and 500-kV LSTs and conductors create strong contrasts of form, line, color, texture, and scale, and do not meet the High scenic integrity objective or the natural-appearing desired condition that has been adopted in the new Forest Plan. Scenic integrity levels that would be met by under Alternative 2 would be moderate, low, very low, and unacceptably low SIOs, and future landscape character would be industrial instead of natural-appearing. This represents scenic integrity levels that are one, two, three, and four levels below the High SIO and desired conditions that would not be achieved. Implementation of Alternative 2 would require a Forest Plan amendment to lower most of the SIOs throughout the Project corridors and to modify the desired condition in the ROW of Segments 6 and 11, or disapproval of the proposed Project. Amendment of the Forest Plan is discussed in Section 3.9 (Land Use). Amendment of the Forest Plan to lower the SIOs and modify the desired condition does not reduce the physical impacts to landscape character or visual quality, and implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/ compensation for impacts to landscape character and visual quality) still would be required.

In the South Area, the proposed Project would appear to dominate the existing landscape character(s) adjacent to the utility corridor, and the new increased height of structures would cause the industrial character to visually extend further into neighboring lands. The new and increased structure skylining and additional obstruction of the foreground landscapes, and in some cases views to middleground and background landscapes, would result in a high degree of visual contrast, view blockage, and/or skyline impairment. Additional structure height also would cause additional structure skylining (towers and conductors extending above the horizon line), particularly for towers where, from some vantage points, the existing 220-kV structures remain below the skyline or only slightly extend above the horizon line. New 500-kV structures that protrude above the skyline would block more of the horizon and impair scenic views. Increased tower height would also raise the conductors such that more of the background

landscapes in the South Area (San Gabriel Mountain Range, Hacienda Hills, and Chino Hills) would be visually obstructed, depending on view direction.

The goals of Mitigation Measures V-2a and V-2b are to reduce visual impacts in the immediate foreground of 110th Street West in the North Area, select appropriate structure types and heights near residential and recreation areas, and identify exact structure placement in the North, Center, and South Areas through planning and design so that new structures (LSTs or TSPs) would blend into the landscape to the greatest extent possible and with the least impact to landscape character and visual quality. Implementation of all these mitigation measures would reduce Impact V-3 somewhat in the Study Area, but the presence of newer, taller, wider transmission line structures and conductors (in some cases, very tall double circuit structures) would remain a significant adverse visual impact.

While the mitigation measures described above would reduce the effects of Impact V-3 along portions of the Project route, visual impacts to110th Street West, a Priority 2 Los Angeles County Scenic Highway, as well as the impacts from increased tower heights in the South Area, would remain significant and unavoidable (Class I).

Impact V-4: Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality.

North Area

All of Segment 10 and a portion of Segment 4 would be constructed in a new ROW where there is no existing transmission line; therefore, new access and spur roads would be built to each structure location, splicing location, and pulling location. All of these activities would involve vegetative clearing and earthwork modification for the access and spur roads, as well as vegetative clearing and earthwork modification for structure placement and conductor splicing and stringing.

For Segment 10, vegetative clearing and earthwork to construct new access and spur roads and structure pads in the uniform brushfields of the Mojave Desert would adversely affect the existing natural-appearing and rural landscape character. New access and spur roads tend to follow the linear nature of the transmission line, not necessarily the natural contours of the landscape, and the combination of vegetative clearing, earthwork cuts and fills, and transmission line structures and conductors creates unnatural linear patterns in the landscape.

All of Segments 4 and 5 (except S4 MP 15.8 to S4 17.9) would be constructed in existing corridors or alongside existing transmission lines which have existing access and spur roads. Therefore, vegetative clearing and earthwork grading would be minimal for these two Segments of TRTP, and there would be no substantial changes in existing landscape character and visual quality.

Center Area

There are existing access and spur roads in the Center Area that follow most of Segments 6 and 11, and service existing transmission structures, and some existing structures are isolated and accessible only by helicopter or foot travel. Many of these existing access and spur roads have not been maintained for years, reportedly as much as 15 to 25 years, according to SCE employees (Susan J Nelson., 2007). Many of the access and spur roads, especially along portions of Segment 11, have cut-slope failures and fill-slope failures that have narrowed the access roads substantially. Natural revegetation has occurred along many of these access and spur roads, beginning the process of landscape restoration and visual rehabilitation. Potential visual impacts resulting from vegetative clearing and earthwork modification to

allow access for large equipment would be substantial in the Center Area. The existing corridors that contain Segments 6 and 11 in the Center Area have strong visual contrasts of unnatural forms, geometric lines, contrasting colors, and textures that stand out against the natural landscape, and do not meet the High SIO or the natural-appearing Desired Condition designated in the Forest Plan. New vegetative clearing and earthwork would reverse the natural revegetation that has already occurred, would increase road cut scars by creating soil color contrasts and vegetation/bare earth texture contrasts and thereby further decrease scenic integrity and visual quality. Re-opening access roads and spur roads, in general, would not achieve the Desired Condition of natural-appearing landscapes in the ANF and would not meet the High scenic integrity objectives described in the Forest Plan. Increased Off Highway Vehicle (OHV) use is likely to occur on re-opened/widened access roads and re-opened/re-constructed spur roads. Increased OHV use in the ANF would thereby increase the potential for increased illegal OHV use, soil erosion, wildlife harassment, and additional visual scars in the landscape.

Under Alternative 2, SCE would use the West Fork National Scenic Bikeway from the San Gabriel Canyon Road (State Highway 39) toward Cogswell Dam, and then use FS Road 2N25.2 from Cogswell Dam uphill to the west in order to access Segment 6. Use of this road and construction of Segment 6 are simulated at KOP-Center-12 (see Figure 3.14-27a/b in the Map & Figure Series Volume).The use of the National Scenic Bikeway and FS Road 2N25.2 would alter the existing visual environment by the presence of multiple occurrences of heavy equipment and personnel driving on these roads. Because of the size and weight of these construction vehicles, it can be anticipated that some damage would occur to the pavement, and certain narrow areas of roadway along the creek may need to be widened for large construction vehicles, thereby further altering the visual environment.

Under Alternative 2, SCE would use the existing Mount Gleason Road from Mill Creek Summit to access Segment 11 in the vicinity of Camp 16, and SCE would be required to maintain the pavement in good condition, creating and maintaining a pleasing visual environment. Approximately 0.3-miles east of Camp 16, SCE would construct and operate a helicopter staging area in the immediate foreground of Mount Gleason Road, resulting in unacceptably low scenic integrity in the foreground viewshed of this recreation road. Visual impacts of this helicopter staging area are simulated at KOP-Center-15 (see Figure 3.14-30a/b in the Map & Figure Series Volume).

Under Alternative 2, SCE would reconstruct a washed-out bridge over Fall Creek and re-open FS Road 3N27 to access Segment 11 near MP 12.8. Reconstruction of this road and construction of Segment 11 are simulated at KOP-Center-17 (see Figure 3.14-32a/b in the Map & Figure Series Volume).

South Area

There are existing access roads and spur roads in the South Area that service Segments 7, 8, and 11, and provide access for maintenance of existing transmission structures. However, for the one occurrence of a new ROW in the South Area at Rose Hills Memorial Park, there are no existing SCE access or spur roads on the skyline ridge, rather existing ridgetop roads are in conjunction with the Puente Hills Landfill, administered by the Puente Hills Landfill Native Habitat Preservation Authority (PHLNHPA). In this location, construction of new access and spur roads to the two relocated transmission lines might entail additional vegetative clearing and earthwork modifications. Because the landforms are relatively gentle in this location, and because vegetation is generally grasses and low growing shrubs, very little visual contrast would be created. Existing landscape character and visual quality would, however, be greatly affected by the presence of the new and relocated transmission lines on this skyline, with these new access

and spur roads, creating an overall industrial character in the landscape, and because of the skyline location, transmission lines would affect two viewsheds, seen from both the north and south.

Based on the analysis of the North, Center, and South Areas, where vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality, recommendations for slope rounding and re-contouring have been made to reduce visual resource impacts, and perhaps for improved wildlife movement. Recommended locations are detailed in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*.

Under Alternative 2, there would be no indirect visual effects due to the construction, use, and maintenance of access and spur roads in the North, Center, or South Areas.

Mitigation Measures for Impact V-4

V-4a **Construct, operate, and maintain the Project using existing access and spur roads where feasible.** For non-NFS lands and in locations designated by the CPUC, to protect landscape character and promote visual quality, SCE shall remove existing transmission line towers and conductors using existing and already maintained access roads and spur roads, and shall construct the new transmission line using the existing and already maintained network of access roads and spur roads to the greatest practical extent. SCE shall submit plans for any new access roads and spur roads, and any maintenance plans for un-maintained access and spur roads, demonstrating compliance with this measure, to the CPUC for review and approval at least 60 days prior to the start of construction.

For NFS lands, to protect landscape character and promote visual quality, SCE shall use only those access roads and spur roads designated by the FS for that purpose.

V-4b **Slope-round and re-contour in areas as prescribed.** For areas of non-NFS lands where natural terrain includes rounded landforms, where soil types are conducive, and where cuts-and-fills and excavated materials would be visible from sensitive viewing locations, SCE shall employ slope-rounding techniques to blend earthwork with natural contours where feasible. Greater land area would be disturbed by this measure, possibly increasing exposure to soil erosion and possibly causing more vegetation disturbance, but the goal of this measure is a permanent landform that is natural-appearing in the long-term and may be conducive to easier and better wildlife movement. During and following re-contouring, applicable mitigation measures of the other issue area sections shall be applied, including biological resources, cultural resources, geology and soils, hydrology and water resources, wilderness and recreation, land use, and possibly agricultural resources. SCE shall submit plans for proposed new, upgraded, or newly maintained access roads and spur roads or structure pads to the CPUC for approval 60 days prior to construction.

V-4c **Avoid locating new roads in bedrock on NFS lands.** Where feasible, re-opened and/or new access road and spur road locations on NFS lands shall be designed to avoid bedrock cuts, and all road cuts shall be located in soil material to protect landscape character, ensure revegetation opportunities, and promote visual quality. SCE shall submit road construction plans to the CPUC and FS for review and approval at least 60 days prior to the start of construction.

V-4d **Dispose of excavated materials as prescribed.** For non-NFS lands, SCE shall dispose of excavated materials (soil, rocks, and concrete, and reinforcing steel) in a manner that is not visually evident and does not create visual contrasts. For NFS lands, SCE shall dispose of excavated materials (excess soil and rocks) in disposal areas (either on-NFS lands or off-NFS lands) as designated by the FS. For NFS lands, the FS will designate whether any footings from existing transmission structures need to be removed. Any designated footings designated for

removal (concrete, reinforcing steel, angle steel, anchor bolts, etc.) shall be disposed off-NFS lands in disposal areas that do not create visual contrasts. These sites shall be pre-approved by the CPUC and FS.

Environmental Effects of Mitigation Measures V-4b and V-4d

Mitigation Measures V-4b and V-4d are recommended to minimize the effects of excavated materials on the landscape character and visual quality of the Project area. However, the removal of tower footings (Mitigation Measure V-4d) and proposed slope-rounding techniques (Mitigation Measure V-4b) could contribute to greater land disturbance, which could create several additional impacts to other issue areas. Vegetation removal that would result from earthmoving activities could affect the flora and fauna in the area of disturbance. Greater land disturbance could also contribute to increased soil erosion, which could potentially affect water quality. Cultural resources that could be located in areas to be excavated or re-contoured may be damaged by such proposed activities. In addition, geology-related impacts may be associated with any earthmoving activities that are located in the presence of unstable slopes.

Such potential impacts are similar to the effects of other Project activities, and would require the implementation of mitigation measures presented in Sections 3.4 (Biological Resources), 3.5 (Cultural Resources), 3.8 (Hydrology and Water Quality), and 3.7 (Geology, Soils, and Paleontology).

CEQA Significance Conclusion

Because analysis of visual impacts associated with the proposed Project indicate that APMs presented in Table 3.14-6 would not fully mitigate visual impacts associated with construction and operation of the proposed Project, additional measures were developed to more fully mitigate visual impacts. Mitigation measures stated above augment the APMs. Implementation of Mitigation Measures V-4a (Construct, operate, and maintain the Project with existing access and spur roads where feasible); V-4b (Slope-round and re-contour in areas as prescribed); V-4c (Avoid locating new roads in bedrock on NFS lands); and V-4d (Dispose of excavated materials as prescribed) would decrease the amount of visual disturbance and would improve the visual environment, as compared to the Project without mitigation. The combination of all these measures would lessen the adverse visual impacts of Alternative 2 and would improve the visual attributes of the affected area. However, the visual impacts associated with access and spur roads and splicing and pulling locations throughout proposed Segments 6, 10 and 11 would remain significant and adverse (Class I).

Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS2)

Impact V-5: New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions.

North Area

The new Whirlwind Substation would introduce lighting sources in a portion of this rural landscape where no nighttime lighting currently exists. Implementation of APM AES-21 (Substations - Reduce Glare and Light Spill) would reduce visual impacts of new light sources.

Conductors seen by sensitive receptors from below do not reflect sunlight or cause glare. In fact, conductors appear dark gray or black when seen from below.

New metals required for the proposed Project's LSTs, TSPs, light weight steel poles, and conductors would reflect more sunlight than old, rusted metals. However, with implementation of APM AES-1 (Transmission Lines - Reduce Light Reflection off Towers/Poles) and Mitigation Measure V-2b (Treat surfaces with appropriate colors, textures, and finishes), it is not anticipated that there would be any substantial daytime glare produced by the new structures.

Center Area

When viewed from higher vantage points, such as a mountain road, a high mountain highway, or a ridgeline or crest trail, sunlight reflecting off conductors and towers would draw attention to the new high-voltage transmission lines and would create color and texture contrasts, thereby adversely affecting desired condition and scenic integrity of NFS lands. For examples of this visual phenomenon see the Map & Figure Series Volume for the existing condition photographs and simulations for the Center Area (Center-KOPs 3, 4, 10, 11, 13, 17, and 18). This reflectivity and sunlight glare seems to be a visual phenomenon mostly occurring in the Center Area, where observers are located above looking down on the transmission lines. This phenomenon does not occur in the North or South Areas, where conductors appear mostly black against the sky when viewed from below or in a nearly horizontal fashion.

South Area

Similar to the North Area, in the South Area new metals for the Alternative 2's LSTs, TSPs, light weight steel poles, and conductors would reflect more sunlight than old, rusted metals. However, with implementation of APM AES-1 (Transmission Lines - Reduce Light Reflection off Towers/Poles) and Mitigation Measure V-2b (Treat surfaces with appropriate colors, textures, and finishes), it is not anticipated that there would be any substantial daytime glare produced by the new structures.

Under Alternative 2 there would be no indirect effects associated with Impact V-5 in the North, Center, or South Areas.

CEQA Significance Conclusion

While implementation of APMs AES-18 through AES-22 at the Whirlwind, Antelope, Vincent, Gould, Mesa, and Mira Loma Substation sites would lead to an improved visual environment, as compared to the Project without measures, the resulting nighttime environment would be adversely affected. However, visual impacts would be reduced to a level that is less than significant (Class II) with the following mitigation measure: V-2b (Treat surfaces with appropriate colors, textures, and finishes).

Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings) (Criterion VIS3)

Impact V-6: The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed.

North Area

In the North Area, there are no scenic highways in Kern County from which Alternative 2 would be seen. In Los Angeles County, Priority 2 County Scenic Highways include 110th Street West and Elizabeth Lake Road. The proposed Project would be visible from both of these scenic highways. In the North Area, the proposed Project would cross directly over the PCT at Segment 4 MP 2.7.

Center Area

In the Center Area, the proposed Project would cross directly over the PCT at two locations: Segment 6 MP 7.3; and Segment 11 MP 7.6. The PCT trailhead at Mill Creek Summit is also located at S6 MP 7.3, and its visual environment would be affected by Alternative 2. The size of the lattice steel structure proposed for Segment 6 at the Mill Creek Summit would encroach directly upon the PCT or on the paved road at the trailhead. The increased size of the footprint of the new LST would require relocation of the trailbed, in conflict with Forest-specific Design Criteria Standard ANF S1, and thus requiring a Forest LMP amendment and in accordance with Mitigation V-3b, restoration/compensation provided by SCE. The proposed Project's Segment 6 and Segment 11 would cross over the Angeles Crest Highway at four different locations (at approximately S11 MP 16.0, MP 17.7, and MP 18.4 for Segment 11 and at S6 MP 16.8 for Segment 6). Additionally, Segment 6 would result in a direct crossing of the Silver Moccasin National Recreation Trail (Trail 11W06) at S6 MP 17.2. The proposed Project would be visible from the National Scenic Bikeway Trail at Cogswell Reservoir, with Segment 6 being visible from approximately S6 MP 19 to MP 22.

Under Alternative 2, SCE would use the West Fork National Scenic Bikeway and FS Road 2N25.2 to access Segment 6 from the San Gabriel Canyon Road (State Highway 39). By using the Scenic Bikeway and FS Road 2N25.2 for construction of Segment 6, SCE equipment and personnel would alter the visual environment of the West Fork San Gabriel River during construction. It is very likely that this recreation trail (single lane paved road used for bicycling, hiking, and fishing access) would be degraded by heavy construction equipment, and it is likely that recreationists would be restricted or prohibited from using this area during construction of Segment 6 for safety reasons (see Recreation Report for further analysis of impacts to recreationists). Use of these roadways for construction would alter the availability of scenic resources for human enjoyment during construction, thereby degrading the visual environment.

South Area

In the South Area in Los Angeles County, the State has designated portions of the Orange Freeway (State Highway 57) as "Eligible" to become a State Scenic Highway where it traverses largely undeveloped hills between Brea and Diamond Bar; Alternative 2 would cross State Highway 57 in this vicinity and be very visible to travelers. Colima Road, Hacienda Road, and Harbor Boulevard are proposed as scenic corridors in the most recent update to the County of Los Angeles General Plan. Los Angeles County has designated several other roads as Priority Two Scenic Highways, also indicating a high sensitivity for scenic integrity of landscapes. Portions of I-210 and State Highways 39 and 57 are either designated as, or eligible for, State Scenic Highway status and portions of the proposed Project would be visible from these roadways.

Under Alternative 2 no indirect impacts associated with Impact V-6 would be anticipated to occur in the North, Center or South Area.

CEQA Significance Conclusion

The introduction of new 500-kV transmission lines crossing over scenic highways and trails, and visible within viewsheds of scenic highways and trails, as proposed under Alternative 2, would create a significant impact. Implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/ compensation for impacts to landscape character and visual quality) would help to minimize and compensate for the adverse visual effects of these new transmission lines and structures, resulting in adverse but less-than-significant visual impacts (Class II).

Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape (Criterion VIS4)

Any Project-related construction or operational activity that would occur within the jurisdictional boundaries of an established Resource Management Plan or Conservation Plan, and that would not be in compliance with such plans, would cause an impact under Criterion VIS-4. Of particular note is the Forest Service's Land Management Plan (Forest Plan) for the ANF which, for the purposes of this analysis, is confined to the Center Area. As described in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*, there are local laws, regulations, and standards for the protection and enhancement of visual resources. The majority of these laws, regulations, and standards are managed by city or county governments, and a few are managed by the State Department of Parks and Recreation, which operates in accordance with a General Plan or a Land or Resource Management Plan, or the State Department of Transportation for scenic highways.

Impact V-7: The Project would conflict with established visual resource management plans or landscape conservation plans.

North Area

There are no established Visual Resource Management Plans or Visual Resource Conservation Plans within the North Area that have been identified as being in conflict with the proposed Project. Table C-3 in Appendix C of the *Visual Resources Specialist Report* lists applicable local laws, regulations, and standards for visual resources in the North Area.

Center Area

In Appendix C of the *Visual Resources Specialist Report*, Tables C-1 and C-2 provide lists of applicable federal and State laws, regulations, and standards for visual resources in the Center Area. The Center Area contains all portions of the ANF over which the proposed Project would cross. The ANF is managed by the Forest Service's Land Management Plan (Forest Plan) for the ANF. Within the ANF, Segments 6 and 11 of the proposed Project would replace existing transmission lines located in established utility corridors and require that the existing utility ROWs be widened in certain areas to accommodate the need for larger towers. As described in Table 3.14-4 and Section 3.14.2.3, the majority of Segments 6 and 11 are situated within areas of natural-appearing landscapes with Forest Plan goals of Natural-Appearing Desired Condition and High Scenic Integrity Objective (SIO). SCE proposes to re-open and improve some existing access and spur roads to allow large construction vehicles and equipment to have access. However, many of these existing access and spur roads, because of lack of use, have natural revegetation, beginning the process of landscape restoration and visual rehabilitation, and therefore currently do not achieve the Natural-Appearing Desired Condition or High SIO. Re-opening/ reconstructing roads that are in the aforementioned conditions to higher road maintenance standards would adversely impact visual resources, would further degrade existing visual conditions, and would not meet the Natural-Appearing Desired Condition or the High Scenic Integrity Objective. Increased road widths, re-opened access/spur roads, and new spur road construction would likely lead to increased OHV usage in the ANF, and therefore; the proposed Project would increase the potential for increased illegal OHV use, soil erosion, wildlife harassment, and additional visual scars in the landscape. Additionally, construction and operation of new, taller, wider single-circuit 500-kV transmission lines would adversely impact visual resources by creating strong contrasts of form, line, color, texture and scale, would further degrade

existing conditions, and would not meet the Desired Condition (natural-appearing) or the Scenic Integrity Objective (High). According to the Commodity and Commercial Uses (Non-Recreation Special-Uses) section of the existing Forest Plan, non-recreation special-uses (including energy projects) are authorized within the ANF when they cannot be reasonably accommodated on non-NFS lands (Forest Service, 2005a).

The Forest Plan provides standards specific for Aesthetic Management in both Parts 2 and 3 (Forest Service, 2005b and 2005c). These standards include scenic integrity objectives that have been designated for all areas of the National Forest. At a project level, all national forest activities are subject to review of the scenic integrity objectives.

The following Forest-specific Design Criteria and Place-specific Standards are applicable to the proposed Project:

- ANF S1 - Pacific Crest Trail - Protect scenic integrity of foreground views as well as from designated viewpoints. Where practicable, avoid establishing nonconforming land uses within the viewshed of the trail (Liebre-Sawmill, Santa Clara Canyons, Soledad Front Country and Angeles High Country). (p. 76)
- ANF S9: Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.
- ANF S10: Scenic Integrity Objectives will be met with the following exceptions: Minor adjustments not-to-exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.
- Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

With regard to visual resources, it is expected that approval of the proposed Project would require amendments to the Forest Plan. One amendment would be required where the Project would adversely impact foreground views to the PCT at Mill Creek Summit, which would conflict with Forest Standard ANF S1. Also, see Table 3.14-5 for a description of how the existing SIOs would need to be amended in the 2005 Forest Plan for the proposed Project. With the implementation of these expected Forest Plan amendments, the proposed Project would maintain consistency with the Forest Plan with regards to visual resources. No other established resource management plans or conservation plans have been identified as being in conflict with the proposed Project in the Center Area. Visual impacts would occur and compensatory measures would be required by Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality).

South Area

The South Area does not include any lands within the ANF or other areas that are within the jurisdiction of the Forest Service; therefore, the Forest Plan, Natural-Appearing Desired Condition, and High Scenic Integrity Objective are not applicable to the South Area.

However, as discussed in Section 3.14.2.3 and described in Section 3.14.3 and Appendix C of the *Visual Resources Specialist Report*, there are State and local laws, regulations, and standards for the protection and enhancement of visual resources. Tables C-2 and C-3 in Appendix C of the *Visual Resources Specialist Report* list applicable laws, regulations, and standards for visual resources. The majority of these laws, regulations, and standards are managed by city or county governments, and a few are managed by the State Departments of Parks and Recreation, which operate in accordance with a General Plan or a Land or Resource Management Plan. State Scenic Highways are managed by the State Department of Transportation. One Resource Management Plan (RMP) within the South Area is established by the Puente Hills Landfill Habitat Preservation Authority (PHLHPA), which is an

established public agency that owns and manages lands within Puente Hills for the purposes of protecting biological diversity and providing opportunities for education and low-impact recreation (PHLHPA, 2007). The proposed Project would cross through lands managed by the PHLHPA along Segment 8A and would run along the northern border of Powder Canyon, which falls under the authority of the PHLHPA. Where it is situated along Powder Canyon, the proposed Project would require that the existing ROW be expanded by 100 feet to the south, towards the canyon. In requiring this ROW expansion within the jurisdiction of the PHLHPA, the proposed Project would be subject to the management goals and objectives identified in the PHLHPA RMP. The proposed Project would conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan.

No indirect effects associated with Impact V-7 would occur in the North, Center, or South Areas.

CEQA Significance Conclusion

As discussed above, the proposed Project would be inconsistent with Forest Standard S1 of the Forest Plan, and would require an amendment to the SIOs within the 2005 Forest Plan. The Project would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan. As such, Impact V-7 would be significant and unavoidable (Class I).

3.14.6.2 Cumulative Effects Analysis

Geographic Extent

The geographic extent of the cumulative impacts analysis for visual resources is the same as the extent of the regional setting, as described in Section 3.14.2. That extent is defined as the viewsheds from which the proposed Project and its alternatives might be seen, including immediate foreground, foreground, middleground, and background viewing distances. This cumulative effects analysis is presented according to the three separate geographic areas (the North, Center and South Areas), as described in Section 3.14.2.

Existing Cumulative Conditions

North Area. In the North Area, there are many past projects and activities that have modified the landscape and changed the naturally evolving landscape character. Some of these past activities have adversely affected natural-appearing landscape character and visual quality, including a one-mile grid of roads, Highways 58 and 14, wind farms in the TWRA, scattered rural/agricultural developments, transmission lines, substations, the California Aqueduct, and the communities of Monolith, Rosamond, Leona Valley, Quartz Hill, Lancaster, Palmdale, and Acton. The one mile grid of roads in the region provides numerous vantage points from which the landscape easily can be viewed. Agricultural developments include irrigated and dry-crop farming, and irrigated fields have introduced lush green landscapes into the otherwise dry, relatively barren desert environment that was previously covered by creosote bush scrub. Wind farms have introduced motion into an otherwise motionless landscape, and large rotors atop tall monopole and lattice structures attract attention to the wind turbine generators in the TWRA. The newest generation of turbines are much taller than older turbines, and have introduced a massive, sculptural character, albeit industrial in nature. Existing transmission lines cross the North Area in several different directions, including SCE's Antelope-Magunden corridor, Antelope-Vincent corridor, Midway-Vincent corridor, and LADWP's 1,000-kV direct current corridor. All of these corridors contain

large, industrial character LSTs and high voltage conductors that have affected the naturally evolving and/or natural-appearing landscape character and visual quality. In addition, the Sagebrush Transmission Line carries wind power from the TWRA to the Vincent Substation on TSPs, some of which are dark brown corten steel and others near Palmdale are painted white, creating a different kind of visual impact. New residential subdivisions and residential planned developments are occurring in the vicinity of West Lancaster and West Palmdale, and they have dramatically altered existing landscape character and visual quality of the desert environment through the addition of numerous streets, street lights, houses, driveways, vehicles, non-native landscaping, and people. These past and existing projects include Specific Plans and Master Plans, consisting of Willow Springs Specific Plan, Ritter Ranch Master Planned Community, City Ranch Specific Plan (also known as Ana Verde), and Quail Valley Annexation and Development Plan.

Center Area. In the Center Area, there are many past projects and activities that have modified the landscape and changed the naturally evolving landscape character, although most of the Center Area remains natural-appearing in the ANF. Some of these past activities have adversely affected naturally evolving and/or natural-appearing landscape character and visual quality, including the construction of dams, reservoirs, highways, and roads. The Big Tujunga and Cogswell Dams have altered landscape character through the introduction of large water-bodies and large concrete structures into landscapes that generally have no natural lakes. New paved highways have created large cut-and-fill slopes with barren soils, creating adverse color and texture contrasts. Previous timber harvests have altered natural vegetative communities, but generally these past timber harvest activities are natural-appearing and have not created adverse visual impacts. Fire breaks, fuel breaks, and fire suppression activities have created visual scars in the landscape, and large-scale wildfires have changed vegetative communities and resulted in loss of mature forest landscape character and degradation of visual quality. Also within the Center Area, there are several existing high-voltage transmission lines including the Gould-Vincent, La Honda-Vincent, and Antelope-Pardee corridors operated by SCE. The City of Los Angeles Department of Water and Power (LADWP) 1000-kV direct current transmission line corridor is located in San Francisquito Canyon, in the Center Area. These existing high-voltage transmission lines in the Center Area have introduced industrial landscape character features into the naturally evolving and natural-appearing landscapes of the Center Area, and have degraded landscape character and visual quality. Off highway vehicle (OHV) use in designated areas has created unnatural appearing lines, soil erosion, and visual scars in the landscape.

South Area. In the South Area, naturally evolving landscapes are almost non-existent, having been replaced by hundreds of years of urban and suburban development in the Los Angeles Basin and Inland Empire. Freeways, highways, streets, commercial, industrial, and residential developments dominate this landscape. However, there are several large tracts of land along Segment 8 that remain relatively natural-appearing, including the Boy Scout Camp lands near Highway 57, Puente Hills Landfill Native Habitat Preserve, Chino Hills State Park (CHSP), and surrounding lands around CHSP.

Reasonably Foreseeable Future Projects and Changes

As discussed above, ongoing development throughout the cumulative effects area for visual resources is dominated by residential developments, clustered in and around community developments on non-NFS lands, and also includes additional development of wind resources in the TWRA. This trend in wind development and residential development is also representative of reasonably foreseeable future projects in the cumulative effects area, as supported by the aggressive population growth and demand for electricity

forecasted throughout the Study Area. Reasonably foreseeable future projects within the Study Area are expected to be characteristic of past and ongoing projects. The types of cumulative projects that are expected to occur in each of the three Areas (North, Center, and South) are described below.

North Area. As previously discussed, the North Area is currently undergoing rapid population growth and development, particularly in and surrounding Lancaster and Palmdale. The Cumulative Scenario presents data regarding population growth in Kern and Los Angeles County; according to this information, the population in Kern County is expected to rise by 113 percent between the years 2000 and 2050. During the same time period, the population in Los Angeles County is expected to rise by varying degrees, depending on the city, with the Cities of Lancaster and Palmdale experiencing growth of 117.5 percent and 186.5 percent, respectively. As such, development and urbanization in the North Area is expected to continue and increase substantially to accommodate the increasing population. Furthermore, it is expected that existing open space areas in the North Area, which are currently either natural-appearing or used for agricultural operations, will be utilized for the construction of residential developments and other city infrastructure. With regards to visual resources, these changes will dramatically alter the current open space landscapes.

Center Area. As with the future non-NFS projects, the past and ongoing USDA Forest Service projects are representative of future Forest Service projects. It is expected that most of these projects are focused on repairs, re-establishment, or rehabilitation of ecosystems and existing facilities. As presented in the Cumulative Scenario, some of the Forest Service projects which are planned or underway in the ANF include the following: Big Tujunga Dam Operation and Maintenance Plan; Hi-Hill Outdoor School Permit Re-issuance; Millard and Big Tujunga Canyon Recreation Tract;, Santa Anita Canyon Special Use Cabins; Drinkwater Flat and Rowher Flat OHV Site Improvements; Littlerock Reservoir Sediment Removal Project; Old Highway 99 Re-pavement Project; PCT Bridge Construction at Cooper Canyon; Teresita Pines Organization Camp Construction; and, Uppershake Campground Improvements Project. In addition, a variety of fuels reduction activities, which include fire prevention measures, are expected to occur throughout the Forest. These projects indicate a persistence of past and present Forest Service activities to preserve natural resources within the Forest while providing recreational opportunities for the public. Reasonably foreseeable changes to visual resources in the Forest may include improvements to and expansion of existing firebreaks and fuel treatment areas, continued fire suppression activities that impact visual resources, as well as establishment of additional recreational or administrative facilities. Also it is anticipated that there will be applications for new utilities and new infrastructure projects within the Forest, such as microwave sites, communications sites, pipelines, and transmission lines. It is expected that existing wilderness areas in the Forest will continue to be protected from development and expanded if possible (for instance, through the conversion of an Inventoried Roadless Area under consideration for wilderness designation to a designated Wilderness Area), thereby further protecting visual resources.

South Area. As described above, the South Area is characterized by predominately built-out urban and suburban settings. It is reasonably foreseeable that these settings will persist in the future and may continue as population growth continues. As presented in the Cumulative Scenario, expected population growth in the South Area ranges from about five percent or less (Cities of Industry, La Canada Flintridge, San Marino) to more than 90 percent (City of Ontario), between the years 2000 and 2030. Considering that the area is already highly urbanized, the lower growth projections could be an indication that those areas cannot accommodate further growth, while the higher projections indicate areas that are not yet fully built-out. As urban build-out continues in the South Area, it is reasonably foreseeable that remaining open

space areas would either be occupied by development-related infrastructure, or specifically protected by conservation groups and resource agencies such as the Puente Hills Landfill Native Habitat Authority or Chino Hills State Park. In addition, it is reasonably foreseeable that the existing undeveloped land within utility corridors (under the transmission lines) will be increasingly utilized for recreational opportunities, such as the River and Mountains Conservancy's development of the Duck Farm Project, as described in Section 3.14.2, or as improved landscaped areas, thereby improving visual quality and landscape character.

Cumulative Impact Analysis

It has been determined that visual resources impacts associated with the proposed Project, as identified in Section 3.14.6.1, would be cumulatively considerable and therefore would contribute to cumulative impacts. These impacts include Impacts V-1 through V-7. The potential for cumulatively considerable visual resources impacts of the proposed Project to combine with similar impacts of other projects within the geographic scope of the cumulative analysis are described below.

- **Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views (Impact V-1).** Construction activities associated with the proposed Project would be visible and would attract attention temporarily, as described in Section 3.14.6.1 above. As stated above, ongoing development throughout the cumulative effects area for visual resources is dominated by residential developments, clustered in and around community developments on non-NFS lands, and also includes additional development of wind resources in the TWRA. All of these construction activities would be readily visible throughout the Project area, and would be cumulatively adverse and significant (Class I).
- **For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality (Impact V-2).** Construction and operation of new transmission lines and a new substation in areas that currently do not have such industrial facilities would adversely affect natural-appearing landscape character and visual quality, and added to existing and future wind developments in the TWRA, would be cumulatively adverse and significant. Future residential developments in West Lancaster and West Palmdale could encroach on undeveloped, natural-appearing landscapes in the Project area, further reducing natural-appearing landscape character and visual quality, which would also create cumulatively adverse and significant visual impacts (Class I).
- **For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects (Impact V-3).** Construction and operation of new transmission lines with increased structure size and new materials would detract from existing landscape character and visual quality, as described in Section 3.14.6.1 above, and combined with existing transmission lines in the same vicinity, and future transmission lines that may be proposed in the same viewsheds, would lead to cumulatively adverse and significant visual impacts (Class I).
- **Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality (Impact V-4).** Construction, operation, and maintenance of existing and proposed Project transmission lines in the proposed Project corridors would create permanent visual scars that would be visible and would attract attention, as described in Section 3.14.6.1 above. Combined with future transmission lines that may be proposed in the same viewsheds, but in same or different ROWs, would lead to cumulatively adverse and significant visual impacts (Class I).
- **New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions (Impact V-5).** New materials used in construction of existing and future projects within the Project area viewshed have created and have the potential to produce, respectively, daytime glare and new sources of nighttime light and glare. Combined with the proposed Project, these existing and future projects would lead to cumulatively adverse and significant visual impacts (Class I).
- **The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or scenic trail viewshed (Impact V-6).** As urban and suburban build-out continues in the North and South

Areas, it is reasonably foreseeable that remaining open space areas would either be occupied by development-related infrastructure, including new residential developments, electric infrastructures, or commercial and industrial developments. This pressure may result in increased demands for specific protections of open space qualities by conservation groups and resource agencies such as the USDA Forest Service, State Scenic Highways, the Puente Hills Landfill Native Habitat Authority, Chino Hills State Park, or other agencies. No projects in the ANF threaten the viewsheds of the Angeles Crest Scenic Highway, PCT, Silver Moccasin National Recreation Trail, or West Fork National Scenic Bikeway, except for the proposed Project and/or any of the TRTP alternatives. Impact V-6 would be cumulatively adverse and significant (Class I).

- **The Project would conflict with established visual resource management plans or landscape conservation plans (Impact V-7).** Appendix C of the *Visual Resources Specialist Report* provides lists of applicable federal, State, and local laws, regulations, and standards for visual resources in the North, Center, and South Areas. In the North Area, there are no established Visual Resource Management Plans or Visual Resource Conservation Plans; therefore, existing and future projects would not add cumulative visual effects. In the Center Area, the majority of Segments 6 and 11 are situated within areas of natural-appearing landscapes designated with High Scenic Integrity Objective (SIO), as dictated by the Forest Plan. Existing access and spur roads currently do not meet the Natural-Appearing Desired Condition or High SIO, and re-opening or reconstructing them to higher road maintenance standards would adversely impact visual resources, would further degrade existing conditions, and would not meet the Desired Condition or the High Scenic Integrity Objective, thereby requiring an amendment to the 2005 Forest Plan as described in Sections 3.14.2 and 3.14.6.1. Future projects that would upgrade the size of transmission lines or maintain/improve access and spur roads would add to cumulative visual effects. In the South Area, the proposed Project and future projects would cross lands administered by the Puente Hills Landfill Habitat Preservation Authority (PHLHPA). Impact V-7 would be cumulatively adverse and significant (Class I).

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Implementation of the mitigation measures outlined in Section 3.14.6.1 would help to reduce the proposed Project's incremental contribution to cumulative visual impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources.

3.14.7 Alternative 3: West Lancaster Alternative

3.14.7.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to visual resources are introduced in Section 3.14.4.1. Impacts associated with this alternative are presented below under the applicable significance criterion.

Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)

Impacts associated with Criterion VIS1 for Alternative 3 would be the same as the impacts associated with the proposed Project, except for KOP-North-3 on 110th Street West, as described and simulated in Figure 3.14-56a/b (see Map & Figure Series Volume). Except for the 2.1 mile portion of Segment 4 that would be re-routed under this alternative, all other portions of Alternative 3 would be identical to the proposed Project (Alternative 2). The impacts and their associated mitigation measures that fall under Criterion VIS1 are summarized below. Please refer to Section 3.14.6.1 for a detailed description of these impacts, except for KOP-North-3.

Under Alternative 3 effects associated with Impact V-1 (Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views) would be the same as for the proposed Project. Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the substation sites, staging areas,

pulling locations, tensioner locations, splicing locations, and along the access/ spur roads and overhead transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the utility corridor. Vehicles, heavy equipment, helicopters, materials, and workers would be visible during site clearing, grading, substation expansion and construction, structure erection, conductor stringing, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and utility corridor including adjacent and nearby residents and recreationists on roads and trails (including the PCT). View durations would vary from brief to extended periods. Construction of the transmission line, construction of the new Whirlwind Substation, expansion and improvements at existing Antelope, Vincent, Gould, Mesa, and Mira Loma Substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers.

Impact V-1 for Alternative 3 would require implementation of the following mitigation measure, which is fully described in Section 3.14.6.1: V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis). With implementation of this mitigation measure, the effects of Impact V-1 under Alternative 3 would be reduced somewhat. However, temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 3 effects associated with Impact V-2 (For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-2 would occur for all of Segment 10 and a portion of Segment 8A. Additionally, under Alternative 3, a portion of Segment 4 (S4 MP 14.9 to 19.6) would be constructed in a new ROW where there is no existing transmission line. Therefore, the existing natural-appearing landscape character would be modified to an industrial character by the presence of Alternative 3 (West Lancaster).

Implementation of APM AES-6 (Transmission Lines - Transmission Structures Set Back from Major Roadways) and APM AES-7 (Transmission Lines - Avoid Structures in Middle of Lines of Sight) would help reduce visual impacts at road crossings, if Alternative 3 is adopted, such as at any of the Alternative 4 routes crossing over roads in and/or near Chino Hills State Park and the crossings of Highway 57 and Carbon Canyon Road. These APMs indicate that where conditions permit transmission structures will be set back from the crossings of major roadways and, to the extent feasible, the final locations of transmission structures will be adjusted to avoid locations that place the structures in the middle of the line of sight from streets and other important views.

Mitigation Measures for Impact V-2

V-2a Use tubular steel poles instead of lattice steel towers in designated areas

V-2b Treat surfaces with appropriate colors, textures, and finishes

V-2c Establish permanent screen

V-2d At road crossings, structures should be offset so that they are equidistant on each side of the road where feasible. To the extent practical, in locations designated by the CPUC and the FS (for NFS lands), SCE shall relocate new transmission line structures at road crossings and

trail crossings so that conductors are approximately mid-span at the road or trail and structures are kept away from the roadway or trail as far as possible.

In order to minimize visual impacts from the location of new structures near road crossings, such as 110th Street West, Mitigation Measure V-2d (At road crossings, offset structures so that they are equidistant on each side of the road) is recommended. Impact V-2 for Alternative 3 would also require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); and V-2c (Establish permanent screen). With implementation of the mitigation measures listed above, in addition to Mitigation Measure V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis), the effects of Impact V-2 of Alternative 3 would be somewhat reduced. However, the presence of new transmission line structures, conductors, access and spur roads, and new rights of way in landscapes that currently have no transmission line facilities would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 3 the effects of Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-3 would occur throughout the entire Study Area because of increased structure heights and widths, as compared to existing structures and facilities.

The effects of Impact V-3 for Alternative 3 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); V-3a (Match spans of existing transmission structures); and V-3b (On NFS lands, provide restoration/ compensation for impacts to landscape and visual quality). In addition, the effects of Impact V-3 of Alternative 3 would be somewhat reduced with implementation of Mitigation Measures V-1, V-2c, and V-2d, V-4b, and V-4d. However, the presence of newer, taller, wider transmission line structures, new conductors, newly constructed or re-opened access and spur roads, and enlarged substations would remain a significant adverse visual impact (Class I).

Under Alternative 3 the effects of Impact V-4 (Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-4 would occur throughout the entire Study Area. Impact V-4 for Alternative 3 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-4a (Construct, operate, and maintain the Project with existing access and spur roads where feasible); V-4b (Slope-round and re-contour in areas as prescribed); and V-4c (Avoid locating new roads in bedrock on NFS lands); and V-4d (Dispose of excavated materials as prescribed). However, the visual impacts associated with Alternative 3 would remain significant and adverse (Class I).

Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS2)

Impacts associated with Criterion VIS2 for Alternative 3 would be the same as for the proposed Project. Although this alternative would introduce a re-route along Segment 4, the re-route would not alter the location or sources of light at the substations. Under Alternative 3 the effects associated with Impact V-5 (New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and

produce glare in certain lighting conditions) would be exactly the same for the proposed Project (Alternative 2), as described in Section 3.14.6.1. Alternative 3 would require implementation of the following mitigation measure, which is fully described in Section 3.14.6.1: V-2b (Treat surfaces with appropriate colors, textures, and finishes). Implementation of this measure would reduce adverse visual effects to a level of less than significant (Class II).

Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings) (Criterion VIS3)

Under Alternative 3 the impacts associated with Criterion VIS3 would be the same as for the proposed Project. Although this alternative would introduce a re-route along Segment 4, the re-route would not encounter or impact any scenic highway or scenic trail viewsheds.

Under Alternative 3 the effects associated with Impact V-6 (The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed) would be exactly the same as the proposed Project. Alternative 3 would traverse the PCT in the following three locations: Segment 4 MP 2.7 (North Area); Segment 11 MP 7.6 (Center Area); and, Segment 6 MP 7.3 (Center Area). Alternative 3 would cross over the Angeles Crest Scenic Highway (State Highway 2) in four different locations (at approximately S11 MP 16.0, 17.7, and 18.4 for Segment 11 and at S6 MP 16.8 for Segment 6). Alternative 3 would cross over the Silver Moccasin Trailhead at Shortcut Saddle at S6 MP 16.7. Portions of Segment 6 Alternative 3 would be visible from West Fork San Gabriel River National Scenic Bikeway. The State has designated portions of the Orange Freeway (State Highway 57) as "Eligible" to become a State Scenic Highway where it traverses largely undeveloped hills between Brea and Diamond Bar, and Alternative 3 would cross State Highway 57 in this vicinity. Colima Road, Hacienda Road, and Harbor Boulevard are proposed as scenic corridors in the most recent update to the County of Los Angeles General Plan and Alternative 3 would be visible from these highways. Los Angeles County has designated several other roads as Priority Two Scenic Highways, also indicating a high sensitivity for scenic integrity of landscapes. Portions of Interstate 210 (I-210) and State Highways 39 and 57 are either designated as, or eligible for, State Scenic Highway status and portions of Alternative 3 would also be visible from these roadways.

Impact V-6 for Alternative 3 would require implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which is fully described in Section 3.14.6.1. With implementation of this mitigation measure, the effects of Impact V-6 would be reduced to a level of less than significant (Class II).

Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape (Criterion VIS4)

Impacts associated with Criterion VIS4 for Alternative 3 would be identical to the proposed Project. Although this alternative would introduce a re-route along Segment 4, the re-route would not encounter or affect any different adopted city, county, State, or federal management plans for visual or scenic resources. Therefore, the applicable federal and State laws, regulations, and standards presented in Tables C-1, C-2, and C-3 of the *Visual Resources Specialist Report*, Appendix C, would apply.

In the North Area, there are no established Visual Resource Management Plans or Visual Resource Conservation Plans. In the Center Area, the majority of Segments 6 and 11 are situated within areas of

natural-appearing landscapes designated with High Scenic Integrity Objective (SIO) as dictated by the Forest Plan (see Table 3.14-4). Existing access and spur roads currently do not meet the Natural-Appearing Desired Condition or High SIO, and re-opening or reconstructing them to higher road maintenance standards would adversely impact visual resources and further degrade existing conditions; additionally the Forest Plan's Desired Condition and High Scenic Integrity Objective would not be met. Construction and operation of new, taller, wider single-circuit 500-kV transmission lines would also adversely impact visual resources and further degrade existing conditions, and would not meet the Desired Condition or the High Scenic Integrity Objective. Consequently an amendment to the 2005 Forest Plan would be required for Alternative 3, which is described in Table 3.14-5. Implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality) is also recommended to minimize impacts. In the South Area, Alternative 3 would cross lands administered by the Puente Hills Landfill Habitat Preservation Authority (PHLHPA). Alternative 3 would conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan (see Appendix C of the *Visual Resources Specialist Report*).

Alternative 3 would be inconsistent with Forest Standard S1 of the Forest Plan, and would require an amendment to the SIOs within the 2005 Forest Plan. Alternative 3 would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan. As such, Impact V-7 would be significant and unavoidable (Class I).

3.14.7.2 Cumulative Effects Analysis

Geographic Extent

Alternative 3 only differs from the proposed Project for a very small portion of the proposed route along Segment 4; therefore, the geographic extent of the cumulative analysis for Alternative 3 is exactly the same as that for Alternative 2 and would include all of the North, Center, and South Areas.

Existing Cumulative Conditions

The existing cumulative conditions for Alternative 3 are exactly the same as for Alternative 2, as described in Section 3.14.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 3 would be exactly the same as Alternative 2, described in Section 3.14.6.2.

Cumulative Impact Analysis

Impacts associated with Alternative 3 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. The minor re-route of the proposed Project transmission line associated with Alternative 3 would not affect the proposed Project's contribution to cumulative impacts. Therefore, cumulative impacts of Alternative 3 would be exactly the same as cumulative impacts for Alternative 2, as described in detail in Section 3.14.6.2.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measures introduced for Alternative 3 in Section 3.14.7.1 would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures

have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources. Cumulative impacts would be significant and unavoidable (Class I).

3.14.8 Alternative 4: Chino Hills Route Alternatives

3.14.8.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to visual resources are introduced in Section 3.14.4.1. Impacts associated with Alternative 4 Routes A, B, C, and D are presented below under the applicable significance criterion.

Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)

Impacts associated with Criterion VIS1 for Alternative 4 would be the same as the impacts associated with the proposed Project, except that Segment 8A would not be constructed from S8A MP 19.2 to 35.2, a distance of 16 miles, and Segments 8B and 8C would not be built. No visual changes would occur eastward from S8A MP 19.2. Visual changes would occur southeast of S8 MP 19.2 and would affect landscapes in the vicinity of Carbon Canyon Road, south of the Vellano Planned Development, in Chino Hills State Park, and east of CHSP, and these adverse visual effects on existing landscape character and visual quality are described and simulated in Figures 3.14-57a through 3.14-61c for Routes A, B, C, and D (see Map & Figure Series Volume). Alternative 4 Route C is the shortest of the four re-routes, at 5.7 miles, extending from S8A MP 19.2 to S8A MP 24.9; additionally, Route C would reroute an existing 220-kV line for 3.4 miles and an existing 500-kV line for 3.6 miles. Alternative 4 Route D is the longest of the four routes, at 9.8 miles, extending from S8 MP 19.2 to S8A MP 29.0. Route A would be 6.2 miles long and Route B would be 9.7 miles long.

Except for deletion of 16 miles of Segment 8A and the inclusion of four new routes in Segment 8A through and around CHSP, all other portions of Alternative 4 would be identical to the proposed Project (Alternative 2). The impacts and their associated mitigation measures that fall under Criterion VIS1 are summarized below. Please refer to Section 3.14.6.1 for a detailed description of these impacts.

Under Alternative 4 effects associated with Impact V-1 (Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views) would be the same as for the proposed Project. Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the substation sites, staging areas, pulling locations, tensioner locations, splicing locations, and along the access/spur roads and overhead transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the utility corridor. Vehicles, heavy equipment, helicopters, materials, and workers would be visible during site clearing, grading, substation expansion and construction, structure erection, conductor stringing, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and utility corridor including adjacent and nearby residents and recreationists on roads and trails (including the PCT). View durations would vary from brief to extended periods. Construction of the transmission line, construction of the new Whirlwind Substation, expansion and improvements at the existing Antelope, Vincent, Gould, and Mesa Substations, construction of a new switching station in or near CHSP and an all-weather (e.g., paved) access road to the switching station, construction of new access/spur roads in or near CHSP, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers.

Impact V-1 for Alternative 4 would require implementation of the following mitigation measure, which is fully described in Section 3.14.6.1: V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis). However, temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 4 effects associated with Impact V-2 (For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-2 would occur for all of Segment 10, a portion of Segment 4 (S4 MP 15.8 to 17.9) and a portion of Segment 8A in Rose Hills Memorial Park. Additionally, under Alternative 4 Routes C and D, a portion of Segment 8A would be constructed in a new ROW north of CHSP where there is no existing transmission line. Any of the four routes of Alternative 4 would include the construction of a new switching station in or near CHSP and an all-weather (e.g., paved) road to the switching station site, plus new access/spur roads to new LSTs in or near CHSP. Therefore, the existing natural-appearing landscape character would be modified to an industrial character by the presence of Alternative 4 (Chino Hills Route Alternatives).

Impact V-2 for Alternative 4 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); V-2c (Establish permanent screen). In addition, impacts would be further reduced with implementation of the following mitigation measures: V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regularly periodic basis) and V-2d (At road crossings, structures should be offset so that they are equidistant on each side of the road where feasible).

However, the presence of new transmission line structures, conductors, access and spur roads, all-weather road to the switching station, and new rights-of-way in landscapes that currently have no transmission line facilities would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 4 the effects of Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-3 would occur throughout the entire Study Area because of increased structure heights and widths, as compared to existing structures and facilities, except that Impact V-3 would not occur in Segment 8A, 8B, or 8C eastward from S8A MP 19.2 to MP 35.2, a distance of 16 miles.

The effects of Impact V-3 for Alternative 4 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2b (Treat surfaces with appropriate colors, textures, and finishes.); V-3a (Match spans of existing transmission structures); and V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality). In addition, the effects of Impact V-3 of Alternative 4 would be somewhat reduced with implementation of Mitigation Measures V-1, V-2a, V-2d, V-4b, and V-4d. However, the presence of newer, taller, wider transmission line structures, new conductors, newly constructed or re-opened access and spur roads, enlarged substations, an all-weather (e.g., paved) road to the a new switching station site, plus new access/spur roads to new LSTs in or near CHSP, and new transmission line structures in CHSP would remain a significant adverse visual impact (Class I).

Under Alternative 4 the effects of Impact V-4 (Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1), plus there would be additional adverse effects of an all-weather (e.g., paved) road to the new switching station site plus new access/spur roads to new LSTs in or near CHSP. As described in Section 3.14.6.1, Impact V-4 would occur throughout the entire Study Area, including new areas along Alternative 4 Segment 8A, and excluding areas of Segment 8A from S8A MP 19.2 to 35.2 and all of Segments 8B and 8C. Impact V-4 for Alternative 4 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-4a (Construct, operate, and maintain the Project with existing access and spur roads where feasible); V-4b (Slope-round and re-contour in areas as prescribed); V-4c (Avoid locating new roads in bedrock on NFS lands); and V-4d (Dispose of excavated materials as prescribed). However, the visual impacts associated with Alternative 4 would remain significant and adverse (Class I).

Locations where TSPs, colored galvanizing treatments, slope-rounding and/or re-contouring would improve the visual, recreational, and social environments for Alternative 4, as required by the aforementioned mitigation measures, are detailed in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*.

Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. (Criterion VIS2)

Impacts associated with Criterion VIS2 for Alternative 4 would be the same as for the proposed Project. Although this alternative would introduce a re-route along Segment 8A, the re-route would not alter the location or sources of light at the existing substations. Alternative 4 would introduce new light sources at the Switching Station at the eastern end of Segment 8A, and the exact location of this light source would change, depending on which route (A/B/C/D) was selected or discussed.

Under Alternative 4, the effects associated with Impact V-5 (New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions) would be exactly the same for the proposed Project (Alternative 2), as described in Section 3.14.6.1 except for Segments 8A eastward of S8A MP 19.2 and all of Segments 8B, and 8C. Additionally, Alternative 4 would introduce new metal surfaces into landscapes of Segment 8A from its point of connection at MP 19.2 to each of four proposed switching station locations as described above. Alternative 4 would require implementation of the following mitigation measure, which is fully described in Section 3.14.6.1: V-2b (Treat surfaces with appropriate colors, textures, and finishes). Implementation of this measure would reduce adverse visual effects to a level of less than significant (Class II).

Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings). (Criterion VIS3)

Under Alternative 4, the impacts associated with Criterion VIS3 would be the same as for the proposed Project, and in addition, Alternative 4 would introduce a new crossing of an eligible scenic highway at Carbon Canyon Road, State Highway 142. No new designated scenic trail viewsheds would be impacted by Alternative 4.

Under Alternative 4, the effects associated with Impact V-6 (The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed) would be exactly the same as the proposed Project, and in addition, the viewshed of Carbon Canyon Road would be adversely

affected. Alternative 4 would traverse the PCT in the following three locations: Segment 4 MP 2.7 (North Area), Segment 11 MP 7.6 (Center Area), and Segment 6 MP 7.3 (Center Area). Alternative 4 would cross over the Angeles Crest Scenic Highway (State Highway 2) in four different locations (at approximately S11 MP 16.0, 17.7, and 18.4 for Segment 11 and at S6 MP 16.8 for Segment 6). Alternative 4 would cross over the Silver Moccasin Trailhead at Shortcut Saddle at S6 MP 16.7. Portions of Segment 6 Alternative 4 would be visible from West Fork San Gabriel River National Scenic Bikeway. The State has designated portions of the Orange Freeway (State Highway 57) and Carbon Canyon Road (State Highway 142) as "Eligible" to become a State Scenic Highway where they traverse largely undeveloped hills between Brea and Diamond Bar and Brea and Chino Hills, respectively, and Alternative 4 would cross State Highways 57 and 142 in these vicinities. Colima Road, Hacienda Road, and Harbor Boulevard are proposed as scenic corridors in the most recent update to the County of Los Angeles General Plan and Alternative 4 would be visible from these highways. Los Angeles County has designated several other roads as Priority Two Scenic Highways, also indicating a high sensitivity for scenic integrity of landscapes. Portions of Interstate 210 (I-210) and State Highways 39 and 57 are either designated as, or eligible for, State Scenic Highway status and portions of Alternative 4 would also be visible from these roadways.

Impact V-6 for Alternative 4 would require implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which is fully described in Section 3.14.6.1. With implementation of this measure the effects of Impact V-6 would be reduced to a level of less than significant (Class II).

Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape. (Criterion VIS4)

Impacts associated with Criterion VIS4 for Alternative 4 would be identical to the proposed Project, and in addition, Alternative 4 would not be in compliance with the Chino Hills State Park Management Plan. Please see Appendix C of the *Visual Resources Specialist Report* for a list of applicable federal, State and local laws, regulations and standards.

In the North Area, there are no established Visual Resource Management Plans or Visual Resource Conservation Plans. In the Center Area, as described in Section 3.14.2.3, the majority of Segments 6 and 11 are situated within areas of natural-appearing landscapes designated with High Scenic Integrity Objective (SIO) as dictated by the Forest Plan (see Table 3.14-4). Existing access and spur roads currently do not meet the Natural-Appearing Desired Condition or High SIO, and re-opening or reconstructing them to higher road maintenance standards would adversely impact visual resources and further degrade existing conditions; additionally the Forest Plan's Desired Condition and High Scenic Integrity Objective would not be met. Construction and operation of new, taller, wider single-circuit 500-kV transmission lines would also adversely impact visual resources and further degrade existing conditions, and would not meet the Desired Condition or the High Scenic Integrity Objective. Consequently an amendment to the 2005 Forest Plan would be required for Alternative 4, which is described in Table 3.14-5. Implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality) is also recommended to minimize impacts. In the South Area, Alternative 4 would cross lands administered by the Puente Hills Landfill Habitat Preservation Authority (PHLHPA). Alternative 4 would conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource

Management Plan (see Appendix C of the *Visual Resources Specialist Report*). Alternative 4 would conflict with the Management Plan of Chino Hills State Park.

Alternative 4 would be inconsistent with Forest Standard S1 of the Forest Plan, and would require an amendment to the SIOs within the 2005 Forest Plan. Alternative 4 would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan, and with the Management Plan of Chino Hills State Park. As such, Impact V-7 would be significant and unavoidable (Class I).

3.14.8.2 Cumulative Effects Analysis

Geographic Extent

The geographic extent of the cumulative effects analysis for Alternative 4 is the same as the extent of the proposed Project (Alternative 2) as presented in Section 3.14.6.2, except for the following: Alternative 4 differs from the proposed Project only in the South Area from Segment 8A MP 19.2 to MP 25.2, a distance of 16 miles. Therefore, the geographic extent of the cumulative analysis for Alternative 4 is exactly the same as that for Alternative 2 in the North Area, Center Area, and western portions of the South Area. Additionally, Alternative 4 affects different lands east and south of the proposed Project, east of S8A MP 19.2, as described above.

Existing Cumulative Conditions

The existing cumulative conditions for Alternative 4 are exactly the same as for Alternative 2, as described in Section 3.14.6.2, and in addition, several projects listed in Table 2.9-4 (Summary of Cumulative Projects by Jurisdiction), from S8A MP 19.2 to MP 25.2 would not be cumulatively compounded by the Project, as this portion of the proposed Project would not be constructed or operated under Alternative 4.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 4 would be exactly the same as Alternative 2, described in Section 3.14.6.2, except for the portions of Segment 8A east of S8A MP 19.2, where no visual impacts would occur because of the Project. The additional residential developments planned and reasonably foreseeable in the vicinity of Alternative 4 Routes B and D would be a reasonably foreseeable future visual condition. No cumulative projects east of Segment 8A MP 19.2 or related to Segments 8B or 8C would need to be considered under Alternative 4.

Cumulative Impact Analysis

Impacts associated with Alternative 4 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. The elimination of Segments 8B and 8C, plus the elimination of Segment 8A from MP 19.2 to 25.2 would reduce cumulative visual impacts in those areas. However, new cumulative visual impacts would occur along the four routes (A through D) of Alternative 4 in lands of CHSP and in undeveloped lands surrounding the Park. Therefore, cumulative impacts of Alternative 4 would be exactly the same as cumulative impacts for Alternative 2, as described in detail in Section 3.14.6.2 for the North Area (southern Kern County and northern Los Angeles County), Center Area (ANF and private in-holdings), and the western portion of the South Area (beginning at the southern border of the ANF and including lands within southern Los Angeles, Orange, and western San Bernardino Counties). Future planned residential developments in the

vicinity of Alternative 4 would combine with Routes B and D to contribute to adverse cumulative visual impacts.

It has been determined that visual resource impacts associated with Alternative 4, as identified in Section 3.14.8.1, would be cumulatively considerable and therefore would contribute to cumulative impacts. These impacts include Impacts V-1 through V-7. The potential for cumulatively considerable visual resource impacts of Alternative 4 to combine with similar impacts of other projects within the geographic scope of the cumulative analysis are described below, only as they differ from the proposed Project (Alternative 2).

- **Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views (Impact V-1).** Construction activities associated with Alternative 4 would be visible and would attract attention temporarily, as described in Section 3.14.6.1 above. As stated above, ongoing development throughout the cumulative effects area for visual resources is dominated by residential developments, including those along Butterfield Ranch Road and clean-up activities at the Aero Jet Property. All of these construction activities would be readily visible throughout the Project area, and would be cumulatively adverse and significant (Class I).
- **For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality (Impact V-2).** Construction and operation of new transmission lines, and a new switching station at one of four route locations, in areas that currently do not have such industrial facilities would adversely affect natural-appearing landscape character and visual quality would be cumulatively adverse and significant. Future residential developments along Butterfield Ranch Road in Chino Hills could encroach on undeveloped, natural-appearing landscapes in the Alternative 4 Project area, further reducing natural-appearing landscape character and visual quality, which would also create cumulatively adverse and significant visual impacts (Class I).
- **For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects (Impact V-3).** Construction and operation of new transmission lines with increased structure size and new materials would detract from existing landscape character and visual quality, as described in Section 3.14.6.1 above, and combined with existing transmission lines in the same vicinity northwest of CHSP, inside CHSP, and east of CHSP would lead to cumulatively adverse and significant visual impacts (Class I).
- **Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality (Impact V-4).** Construction, operation, and maintenance of the Alternative 4 transmission lines and maintenance of existing transmission lines in the affected corridors would create permanent visual scars that would be visible and would attract attention, as described in Section 3.14.6.1 above. Additionally, vegetative clearing and earthwork necessary for construction of the new Switching Station at locations designated Route A, B, C, or D, and construction of an all-weather (e.g., paved) road to the new switching station site plus new access/spur roads to new LSTs in or near CHSP would create permanent adverse visual impacts that would be visible and would attract attention. Combined with existing transmission lines and substations in the same viewsheds, but in the same or different ROWs, would lead to cumulatively adverse and significant visual impacts (Class I).
- **New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions (Impact V-5).** New materials used in construction of this and future projects within the Project area viewshed have created and have the potential to produce, respectively, daytime glare and new sources of nighttime light and glare. New light sources at the Switching Station would be shielded as described in APM AES 18 through 22. Combined with Alternative 4, these existing and future projects would lead to cumulatively adverse and significant visual impacts (Class I).
- **The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or scenic trail viewshed (Impact V-6).** An additional scenic highway is impacted by Alternative 4: the Carbon Canyon Road, State Highway 142. As urban and suburban build-out continues in the North and South Areas, it is reasonably foreseeable that remaining open space areas would either be occupied by development-related infrastructure, including new residential developments, electric infrastructures, or commercial and industrial developments. This pressure may result in increased demands for specific protections of open space qualities

by conservation groups and resource agencies such as the USDA Forest Service, State Scenic Highways, the Puente Hills Landfill Native Habitat Authority, Chino Hills State Park, or other agencies. No projects in the ANF threaten the viewsheds of the Angeles Crest Scenic Highway, except for Alternative 4. Impact V-6 would be cumulatively adverse and significant (Class I).

- **The Project would conflict with established visual resource management plans or landscape conservation plans (Impact V-7).** Appendix C of the *Visual Resources Specialist Report* provides lists of applicable federal, State, and local laws, regulations, and standards for visual resources in the North, Center, and South Areas. These adverse visual impacts would be the same as described in Section 3.14.6.2. Impact V-7 would be cumulatively adverse and significant (Class I).

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measures introduced for Alternative 2 in Section 3.14.6.1 would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources. Cumulative impacts would be significant and unavoidable (Class I).

3.14.9 Alternative 5: Partial Underground Alternative

3.14.9.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to visual resources are introduced in Section 3.14.4.1. Impacts associated with this alternative are presented below under the applicable significance criterion.

Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)

Impacts associated with Criterion VIS1 for Alternative 5 would be the same as the impacts associated with the proposed Project, except for KOP-South-26 and KOP-South-27, as described and simulated in Figures 3.14-62a through 3.14-63b (see Map & Figure Series Volume). Additionally, the existing un-energized 220-kV transmission line along this 3.6 mile portion would remain in place, instead of being removed, and existing visual conditions would remain in the future in this ROW. Except for this 3.6 mile portion of Segment 8A that would be placed underground, all other portions of Alternative 5 would be identical to the proposed Project (Alternative 2). The impacts and their associated mitigation measures that fall under Criterion VIS1 are summarized below. Please refer to Section 3.14.6.1 for a detailed description of these impacts, except for KOPs-South-3.

Under Alternative 5, visual effects associated with Impact V-1 (Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views) would be the same as for the proposed Project. Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the two new transition station sites, substation sites, staging areas, pulling locations, tensioner locations, splicing locations, and along the access/ spur roads and overhead transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the utility corridor. Vehicles, heavy equipment, helicopters, materials, and workers would be visible during site clearing, grading, substation expansion and construction, structure erection, conductor stringing, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and utility corridor including adjacent and nearby residents and recreationists on roads and trails (including the PCT). View durations would vary from brief to extended periods. Construction of the transmission line, construction of the new Whirlwind Substation,

expansion and improvements at existing Antelope, Vincent, Gould, Mesa, and Mira Loma Substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers.

As for the proposed Project, Impact V-1 for Alternative 5 would require implementation Mitigation Measure V-1, which is fully described in Section 3.14.6.1. With implementation of this mitigation measure listed in Section 3.14.6.1, the effects of Impact V-1 under Alternative 5 would be reduced somewhat. However, temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 5, visual effects associated with Impact V-2 (For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). Impact V-2 for Alternative 5 would require implementation of Mitigation Measures V-1, V-2a, and V-2b, which are fully described in Section 3.14.6.1. Additionally, implementation of Mitigation Measure V-2c (Establish permanent screen) around both new transition stations would substantially reduce visual impacts, but not to less-than-significant levels because of the height of the A-frames and double-circuit towers. With implementation of these mitigation measures, the effects of Impact V-2 of Alternative 5 would be reduced somewhat. However, the presence of new transmission line structures, conductors, access and spur roads, and new rights of way in landscapes that currently have no transmission line facilities would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 5, the effects of Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-3 would occur throughout the entire Study Area because of increased structure heights and widths, as compared to existing structures and facilities. The effects of Impact V-3 for Alternative 5 would require implementation of Mitigation Measures V-3a (Match spans of existing transmission structures) and V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which are fully described in Section 3.14.6.1. In addition, the effects of Impact V-3 of Alternative 5 would be somewhat reduced with implementation of Mitigation Measures V-1, V-2a through V-2c, V-4b, and V-4d. However, the presence of newer, taller, wider transmission line structures, new conductors, newly constructed or re-opened access and spur roads, two new transition stations, and enlarged substations would remain a significant adverse visual impact (Class I).

Under Alternative 5, the effects of Impact V-4 (Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-4 would occur throughout the entire Study Area, and additionally would occur at both West and East Transition Stations in Chino Hills. Impact V-4 for Alternative 5 would require implementation of Mitigation Measures V-4a through V-4d, which are fully described in Section 3.14.6.1. The combination of all these mitigation measures would lessen the adverse visual impacts of Alternative 5 and would improve the visual attributes of the affected area. However, the visual impacts associated with Alternative 5 would remain significant and adverse (Class I).

Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS2)

Impacts associated with Criterion VIS2 for Alternative 5 would be the same as for the proposed Project (Alternative 2) plus there would be additional light sources at the West and East Transition Stations. Under Alternative 5, the effects associated with Impact V-5 (New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions) would be exactly the same for the proposed Project (Alternative 2), as described in Section 3.14.6.1. Alternative 5 would require implementation of Mitigation Measure V-2b, which is fully described in Section 3.14.6.1. Implementation of this measure would reduce adverse visual effects to a level of less than significant (Class II).

Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings) (Criterion VIS3)

Under Alternative 5 the impacts associated with Criterion VIS3 would be the same as for the proposed Project. Alternative 5 would introduce a re-route along Segment 8A that would cross over State Highway 142, an eligible State scenic highway. Under Alternative 5, the visual effects associated with Impact V-6 (The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed) would be exactly the same as the proposed Project, plus new impacts to State Highway 142, the Carbon Canyon Road, and all other impacts of Alternative 5 would be identical to Alternative 2 for Criterion VIS3.

Impact V-6 for Alternative 5 would require implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which is fully described in Section 3.14.6.1. With implementation of this mitigation measure, the effects of Impact V-6 would be reduced to a level of less than significant (Class II).

Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape (Criterion VIS4)

Impacts associated with Criterion VIS4 for Alternative 5 would be identical to the proposed Project. Although this alternative would introduce an underground re-routing along Segment 8A, the re-route would not encounter or impact any different adopted city, county, State, or federal management plans for visual or scenic resources. Therefore, the applicable federal and State laws, regulations, and standards presented in Tables C-1, C-2, and C-3 of the *Visual Resources Specialist Report*, Appendix C, would apply.

As discussed for the proposed Project, Alternative 5 would be inconsistent with Forest Standard S1 of the Forest Plan, and would require an amendment to the SIOs within the 2005 Forest Plan. Alternative 5 would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan. As such, Impact V-7 would be significant and unavoidable (Class I).

3.14.9.2 Cumulative Effects Analysis

Geographic Extent

Alternative 5 is the exact same geographic location as the proposed Project (Alternative 2); therefore, the geographic extent of the cumulative analysis for Alternative 5 is exactly the same as that for Alternative 2 and would include all of the North, Center, and South Areas.

Existing Cumulative Conditions

The existing cumulative conditions for Alternative 5 are exactly the same as for Alternative 2, as described in Section 3.14.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 5 would be exactly the same as Alternative 2, described in Section 3.14.6.2.

Cumulative Impact Analysis

Impacts associated with Alternative 5 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. The minor underground re-routing of the proposed Project transmission line associated with Alternative 5 would not affect the proposed Project's contribution to cumulative impacts. Therefore, cumulative impacts of Alternative 5 would be exactly the same as cumulative impacts for Alternative 2, as described in detail in Section 3.14.6.2.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measures introduced for Alternative 5 in Section 3.14.9.1 would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources. Cumulative impacts would be significant and unavoidable (Class I).

3.14.10 Alternative 6: Maximum Helicopter Construction in the ANF Alternative

The following section describes visual resource impacts of Alternative 6 (Maximum Helicopter Construction in the ANF Alternative) as determined by the significance criteria listed in Section 4. Mitigation measures are introduced where necessary in order to reduce significant impacts to less-than-significant levels, as possible. Alternative 6 would be identical to the proposed Project (Alternative 2) with respect to Segments 4, 5, 7, 8, 9, and 10 as discussed in Section 2.2 (Alternative 2: SCE's Proposed Project); only Segments 6 and 11 would change in the Center Area under Alternative 6. Because Alternative 6 affects only the Center Area, all 20 Center Area KOPs were re-analyzed and 20 new simulations were prepared to show differences between Alternatives 2 and 6. The Alternative 2 simulations show SCE's standard finish on LSTs: dulled galvanized steel, which has a light-gray or silver appearance. Simulations of Alternative 6 show the implementation of surface treatment mitigation measures in the Center Area, and LSTs vary in color from light-gray (or silver) to light-brown-gray to dark-brown-gray.

3.14.10.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to visual resources are introduced in Section 3.14.4.1 (Criteria for Determining Impact Significance). Impacts associated with Alternative 6 (Maximum Helicopter Construction in the ANF) are presented below under the applicable significance criterion.

Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)

Impacts associated with Criterion VIS1 for Alternative 6 would be exactly the same as the impacts associated with the proposed Project in the North and South Areas. In the Center Area, because access and spur roads would not be built or re-constructed to each new 500-kV structure, the visual effects would be different, as displayed in simulations for KOPs Center-1 through Center-20. The use of helicopter construction would minimize land disturbances caused by re-opening and/or improving existing spur roads to each existing tower. Some of the existing spur roads have not been maintained for decades. However, according to SCE engineers, some of the access roads along Segments 6 and 11 would have to be widened to accommodate large equipment for pulling, splicing, and tensioning.

This alternative would increase usage of helicopter construction techniques in the Angeles National Forest and would eliminate construction of spur roads to each (but not every) new 500-kV LST inside the boundary of the Forest. Helicopter staging areas would be constructed in various areas along and near Segments 6 and 11 in and near the ANF (some staging areas would be on private lands, others on NFS lands). Access roads along both segments would need to be improved in some areas in order to allow large equipment for splicing and pulling of conductors; however, road improvements would be less than for Alternatives 2, 3, 4, 5, or 7 because new 500-kV LSTs would be constructed at the staging areas and air-lifted in, rather than being transported by on-the-ground equipment. This means that existing access roads could remain in current conditions or would need only slight widening and/or improvement.

Under Alternative 6 for Segment 6, approximately S6 MP 3.0 to 4.7, SCE would not use existing access roads south of Kentucky Springs Canyon for construction, but rather would use helicopters. For Segment 6, SCE would not use Road 3N23 from Monte Cristo Campground to either Road 4N18.1 or 4N18.2 at approximately S6 MP 10.6.

Under Alternative 6, SCE would not use the Lynx Gulch Road (FS Road 4N18.2) from Upper Big Tujunga Canyon Road, northward for approximately 1.25 miles to approximately S6 MP 12.1 because of sensitive species habitat. This is different than Alternative 2, where the entire Lynx Gulch Road (FS Road 4N18.2) would be used for construction. Likewise, FS Road 3N20 which parallels Big Tujunga Canyon Road would not be used under Alternative 6 from approximately S6 MP 13.6 to 16.4, but this road would be used under Alternative 2. For Segment 6, SCE would not use FS Road 2N23 along the border of the San Gabriel Wilderness from approximately S6 MP 18.3 to 19.7. Under Alternative 6, SCE would not use the West Fork National Scenic Bikeway or FS Road 2N25.2 to access Segment 6 from the San Gabriel Canyon Road (State Highway 39). By not using the Scenic Bikeway or FS Road 2N25.2 for construction of Segment 6, the visual environment of the West Fork San Gabriel River would be maintained in its current condition for public use and enjoyment of scenic resources.

For Segment 11 under Alternative 6, SCE would not use FS Road 4N24 south of Aliso Canyon to construct Segment 11 from approximately S11 MP 4.0 to 6.1, but rather would use helicopter construction. Under Alternative 6, SCE would not reconstruct a washed-out bridge over Fall Creek and would not re-open the southern end of FS Road 3N27 to Segment 11 at approximately S11 MP 12.0 to

13.5. Rather, all road access would come in from the north along Mount Gleason Road and follow south on FS Road 3N27.

Under Alternative 6, SCE would use the existing Mount Gleason Road from Mill Creek Summit to access Segment 11 in the vicinity of Camp 16, and SCE would be required to maintain that pavement in good condition, creating and maintaining a pleasing visual environment. From Camp 16 west to helicopter staging area #4, SCE would use the existing paved roadway but the FS would not require SCE to repair any damage to the pavement, thereby changing the existing visual environment to a more rugged, rustic driving experience suitable for OHVs and/or high clearance vehicles, which is desirable to meet FS road maintenance objectives.

In all areas outside the ANF (North Area and South Area), Alternative 6 would be identical to the proposed Project (Alternative 2) and visual impacts would be identical.

The different visual effects for the Center Area are described and simulated in Figures 3.14-64a/b through 3.14-83a/b of the Map & Figure Series Volume. Except for the differences in the Center Area in Segments 6 and 11, including differences in the number and location of helicopter staging areas as described in Chapter 2, all other portions of Alternative 6 would be identical to the proposed Project (Alternative 2). Please refer to Section 3.14.6.1 (Direct and Indirect Effects Analysis for Alternative 2) for a detailed description of these impacts, The Alternative 6 impacts and their associated mitigation measures that fall under Criterion VIS1 are summarized below.

Under Alternative 6, visual effects associated with Impact V-1 (Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views) would be identical to the proposed Project in the North and South Areas, but would be different in the Center Area. In the ANF, helicopter construction would increase temporary sights and sounds of helicopters and large equipment at the staging areas within the Project area and along Segments 6 and 11; however, some access and spur roads would not be built by ground-based machinery, thereby reducing temporary sights and sounds of large equipment in those areas. Impact V-1 for Alternative 6 would require implementation of the same mitigation measure as the proposed Project; V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis), which is fully described in Section 3.14.6.1. With implementation of the mitigation measure listed in Section 3.14.6.1, the effects of Impact V-1 under Alternative 6 would be reduced somewhat along the access and spur roads; however Impact V-1would be increased at helicopter staging areas and in the air above and near Segments 6 and 11. Therefore, temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 6, visual effects associated with Impact V-2 (For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). Because all helicopter construction under Alternative 6 would occur within existing landscapes that currently have transmission lines, there are no areas where Impact V-2 would occur in the ANF, as stated for the proposed Project (Alternative 2). Impact V-2 for Alternative 6 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); and V-2c (Establish permanent screen). In addition, impacts would be further reduced with implementation of the following mitigation measure: V-1 (Clean up staging

areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regularly periodic basis). With implementation of these mitigation measures, the effects of Impact V-2 of Alternative 6 would be reduced somewhat; however in areas outside the Forest, the presence of new transmission line structures, conductors, access and spur roads, and new rights of way in landscapes that currently have no transmission line facilities would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 6, the effects of Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) would be identical to the proposed Project because the proposed single-circuit 500-kV lattice steel structures are identical in Alternative 6 and the proposed Project (Alternative 2). As described in Section 3.14.6.1, Impact V-3 would occur throughout the entire Study Area because of increased structure heights and widths, as compared to existing structures and facilities. The effects of Impact V-3 for Alternative 6 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); V-3a (Match spans of existing transmission structures); and V-3b (On NFS lands, provide restoration/ compensation for impacts to landscape and visual quality). In addition, compared to the proposed Project, the effects of Impact V-3 of Alternative 6 would be somewhat reduced with implementation of Mitigation Measures V-1, V-2c, V-4b, and V-4d. With implementation of these mitigation measures, the effects of Impact V-3 of Alternative 6 would be reduced somewhat; however, the presence of newer, wider 500-kV single-circuit transmission line structures would create strong adverse visual impacts. Additionally, in the North and South Areas, construction of access and spur roads and enlarged substations of Alternative 6, and increased structure size of Alternative 6 throughout the North, Center, and South Areas would create significant adverse visual impacts, as described fully for Alternative 2 (Class I).

Based on the visual analysis in the ANF where new, taller, wider 500-kV transmission lines would replace existing 220-kV transmission lines, it is recommended that a TSP be used at the PCT at Mill Creek Summit and that colored galvanizing treatments be used on LSTs in various locations, as detailed in the *Tehachapi Renewable Transmission Project Visual Resources Specialist Report*, to reduce visual resource, recreation, and social impacts.

Under Alternative 6, the effects of Impact V-4 (Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality) would be the same as for the proposed Project for the North and South Areas (please see Section 3.14.6.1). However, visual effects of Impact V-4 would be different in the Center Area where fewer access and spur roads would be constructed for structure placement. A total of 143 new 500-kV towers would be constructed by helicopter under Alternative, 87 within Segment 6 and 56 within Segment 11. As a result of helicopter construction, approximately 42 miles ($\pm$15% range of 49 to 36 miles) of new and/or upgraded access and spur roads (includes new, reconstruction, and maintenance road types), which would be required as part of SCE's proposed Project (Alternative 2), would not be created and/or upgraded for ground access to the helicopter constructed towers under Alternative 6.

In addition, possibly as many as 11 large- to medium-sized helicopter staging areas and numerous small helicopter staging areas would be constructed under Alternative 6. These large- to medium-sized helicopter staging areas are shown in Figure 2.6-1 (Candidate Helicopter Staging Areas in ANF Alternative 6). Landform and vegetation disturbance at these helicopter staging areas would be temporary, and visual effects of land disturbance at helicopter staging areas would be rehabilitated to near-natural or

pre-construction conditions after construction of the Project (see Biological Section for details of revegetation).

Because there would be a need to provide access roads to pulling, splicing, and tensioning locations, not all access road improvements along Segments 6 and 11 would be eliminated, as was described in detail above, but a majority of spur roads to individual structures would be eliminated by Alternative 6. As described in Section 3.14.6.1, Impact V-4 would occur throughout the entire Study Area. Impact V-4 for Alternative 6 would require implementation of Mitigation Measures V-4a through V-4d, which are fully described in Section 3.14.6.1. The combination of all these mitigation measures would lessen the adverse visual impacts of Alternative 6 and would improve the visual attributes of the affected area; however, the visual impacts associated with Alternative 6 would remain significant and adverse (Class I).

Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS2)

Impacts associated with Criterion VIS2 for Alternative 6 would be the same as for the proposed Project (Alternative 2). Please see Section 3.14.6.1 (Direct and Indirect Effects Analysis) for a complete description.

Under Alternative 6, the effects associated with Impact V-5 (New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions) would be similar to the proposed Project (Alternative 2), as described in Section 3.14.6.1. Alternative 6 would require implementation of Mitigation Measure V-2b, which is fully described in Section 3.14.6.1. Implementation of this measure would reduce adverse visual effects to a level of less than significant (Class II).

Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings) (Criterion VIS3)

Under Alternative 6, the impacts associated with Criterion VIS3 would be the same as for the proposed Project, except for the decreased amount of access and spur road improvements necessary for structure placement and the increased temporary land disturbance at helicopter staging areas. The helicopter staging areas would be restored to pre-construction conditions after construction, therefore, long term visual effects would be minimized at the staging areas. Under Alternative 6, the visual effects associated with Impact V-6 (The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed) would be similar to, but less than, the proposed Project (Alternative 2) for Criterion VIS3 because fewer access and spur roads would be visible from the Angeles Crest Scenic Highway. Impact V-6 for Alternative 6 would require implementation of the same mitigation measure, which is fully described in Section 3.14.6.1: V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality). With implementation of this mitigation measure the effects of Impact V-6 would be reduced to a level of less than significant (Class II).

Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape (Criterion VIS4)

Although Alternative 6 would construct the Project within the ANF using helicopters to the maximum extent, this alternative would not encounter or impact any different adopted city, county, State, or federal management plans for visual or scenic resources. Therefore, the federal, State and local laws, regulations and standards presented in Tables C-1, C-2, and C-3 of the *Visual Resources Specialist Report*, Appendix C, would apply. Similar to the proposed Project, an amendment to the 2005 Forest Plan would be required for Alternative 6, which is described in Table 3.14-5. Implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality) is also recommended to minimize impacts.

Comparing Alternative 6 to Alternative 2, visual impacts of construction would be different in the ANF, and permanent landform alterations associated with access and spur roads would not occur in certain locations. The exact location of the helicopter staging areas, extent of access road system that would be needed for pulling and splicing locations, and exact structure locations that would still require ground-based construction techniques would be determined during final engineering, in consultation with SCE and its construction contractor(s). It can be noted that skyline interference and creation of greater industrial character intrusion would be identical for Alternative 6 and the proposed Project (Alternative 2) because the structure type and locations would be exactly the same.

Alternative 6 would be inconsistent with Forest Standard S1 of the Forest Plan, and would require an amendment to the SIOs within the 2005 Forest Plan. Alternative 3 would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan. As such, Impact V-7 would be significant and unavoidable (Class I).

3.14.10.2 Cumulative Effects Analysis

Geographic Extent

Alternative 6 is the exact same geographic location as the proposed Project (Alternative 2); therefore, the geographic extent of the cumulative analysis for Alternative 6 is exactly the same as that for Alternative 2 and would include all of the North, Center, and South Areas.

Existing Cumulative Conditions

The existing cumulative conditions for Alternative 6 are exactly the same as for Alternative 2, as described in Section 3.14.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 6 would be exactly the same as Alternative 2, described in Section 3.14.6.2.

Cumulative Impact Analysis

Impacts associated with Alternative 6 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. The removal of one existing single-circuit 220-kV transmission line in each of Segments 6 and 11, and the construction and operation of a new single-circuit 500-kV transmission line in each segment would not affect the

Project's contribution to cumulative impacts. Therefore, cumulative impacts of Alternative 6 would be exactly the same as cumulative impacts for Alternative 2, as described in detail in Section 3.14.6.2.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measures introduced for Alternative 6 in Section 3.14.10.1 would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources.

3.14.11 Alternative 7: 66-kV Subtransmission Alternative

3.14.11.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to visual resources are introduced in Section 3.14.4.1. Impacts associated with Alternative 7 are presented below under the applicable significance criterion.

Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)

Impacts associated with Criterion VIS1 for Alternative 7 would be the same as the impacts associated with the proposed Project. Except for the three 66-kV subtransmission line elements of Segments 7 and 8A that would be either placed underground or re-routed overhead, all other portions of Alternative 7 would be identical to the proposed Project (Alternative 2). The impacts and their associated mitigation measures that fall under Criterion VIS1 are summarized below. Please refer to Section 3.14.6.1 for a detailed description of these impacts.

Under Alternative 7, effects associated with Impact V-1 (Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views) would be the same as for the proposed Project. Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the substation sites, staging areas, pulling locations, tensioner locations, splicing locations, and along the access/ spur roads and overhead transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the utility corridor. Vehicles, heavy equipment, helicopters, materials, and workers would be visible during site clearing, grading, substation expansion and construction, structure erection, conductor stringing, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and utility corridor including adjacent and nearby residents and recreationists on roads and trails (including the PCT). View durations would vary from brief to extended periods. Construction of the transmission line, construction of the new Whirlwind Substation, expansion and improvements at existing Antelope, Vincent, Gould, Mesa, and Mira Loma Substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers.

Impact V-1 for Alternative 7 would require implementation of the following mitigation measure, which is fully described in Section 3.14.6.1: V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis). With implementation of this mitigation measure, the effects of Impact V-1 under Alternative 7 would be reduced somewhat. However, temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 7, effects associated with Impact V-2 (For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-2 would occur for all of Segment 10 and a portion of Segment 8A. Additionally, under Alternative 7, a portion of Segment 8A (S8A MP 2.2 to 3.8) would be constructed in a new ROW where there is no existing transmission line, along San Gabriel Boulevard and Durfee Avenue. Therefore, the existing natural-appearing landscape character would be slightly modified by the introduction of light weight steel poles by the presence of Alternative 7.

Impact V-2 for Alternative 7 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); V-2c (Establish permanent screen). In addition, impacts would be further reduced with implementation of the following mitigation measures: V-1 (Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regularly periodic basis) and V-2d (At road crossings, structures should be offset so that they are equidistant on each side of the road where feasible). With implementation of the mitigation measures listed above, the effects of Impact V-2 of Alternative 7 would be somewhat reduced. However, the presence of new transmission line structures, conductors, access and spur roads, and new rights of way in landscapes that currently have no transmission line facilities would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 7, the effects of Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-3 would occur throughout the entire Study Area because of increased structure heights and widths, as compared to existing structures and facilities. Additionally, removal of existing overhead subtransmission lines in Alternative 7 would improve the visual environment and viewsheds of the Duck Farm and Whittier Narrows and would create a beneficial effect.

The overall effects of Impact V-3 for Alternative 7 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-2a (Use tubular steel poles instead of lattice steel towers in designated areas); V-2b (Treat surfaces with appropriate colors, textures, and finishes); V-3a (Match spans of existing transmission structures); and V-3b (On NFS lands, provide restoration/ compensation for impacts to landscape and visual quality). In addition, the effects of Impact V-3 of Alternative 7 would be somewhat reduced with implementation of Mitigation Measures V-1, V-2c, and V-2d, V-4b, and V-4d. However, the presence of newer, taller, wider transmission line structures, new conductors, newly constructed or re-opened access and spur roads, and enlarged substations would remain a significant adverse visual impact (Class I).

Under Alternative 7, the effects of Impact V-4 (Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 3.14.6.1). As described in Section 3.14.6.1, Impact V-4 would occur throughout the entire Study Area. Impact V-4 for Alternative 7 would require implementation of the following mitigation measures, which are fully described in Section 3.14.6.1: V-4a (Construct, operate, and maintain the Project with existing access and spur roads where feasible); V-4b (Slope-round and re-contour in areas as prescribed); V-4c (Avoid locating new roads in bedrock on NFS lands); and V-4d (Dispose of excavated materials as prescribed). However, the visual impacts associated with Alternative 7 would remain significant and adverse (Class I).

Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS2)

Impacts associated with Criterion VIS2 for Alternative 7 would be the same as for the proposed Project. Although this alternative would introduce a new overhead subtransmission line crossing Rosemead Boulevard and would underground other lines, this would not alter the location or sources of light at the substations. Under Alternative 7, the effects associated with Impact V-5 (New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions) would be exactly the same for the proposed Project (Alternative 2), as described in Section 3.14.6.1. Alternative 7 would require implementation of the following mitigation measure, which is fully described in Section 3.14.6.1: V-2b (Treat surfaces with appropriate colors, textures, and finishes). Implementation of this measure would reduce adverse visual effects to a level of less than significant (Class II).

Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings) (Criterion VIS3)

Under Alternative 7, the impacts associated with Criterion VIS3 would be the same as for the proposed Project. Although this alternative would introduce a new overhead subtransmission line crossing Rosemead Boulevard, the re-route would not encounter or impact any scenic highway or scenic trail viewsheds.

Under Alternative 7, the effects associated with Impact V-6 (The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed) would be exactly the same as the proposed Project. Alternative 7 would traverse the PCT in the following three locations: Segment 4 MP 2.7 (North Area); Segment 11 MP 7.6 (Center Area); and, Segment 6 MP 7.3 (Center Area). Alternative 7 would cross over the Angeles Crest Scenic Highway (State Highway 2) in four different locations (at approximately S11 MP 16.0, 17.7, and 18.4 for Segment 11 and at S6 MP 16.8 for Segment 6). Alternative 7 would cross over the Silver Moccasin Trailhead at Shortcut Saddle at S6 MP 16.7. Portions of Segment 6 Alternative 7 would be visible from West Fork San Gabriel River National Scenic Bikeway. The State has designated portions of the Orange Freeway (State Highway 57) as "Eligible" to become a State Scenic Highway where it traverses largely undeveloped hills between Brea and Diamond Bar, and Alternative 7 would cross State Highway 57 in this vicinity. Colima Road, Hacienda Road, and Harbor Boulevard are proposed as scenic corridors in the most recent update to the County of Los Angeles General Plan and Alternative 7 would be visible from these highways. Los Angeles County has designated several other roads as Priority Two Scenic Highways, also indicating a high sensitivity for scenic integrity of landscapes. Portions of Interstate 210 (I-210) and State Highways 39 and 57 are either designated as, or eligible for, State Scenic Highway status and portions of Alternative 7 would also be visible from these roadways.

Impact V-6 for Alternative 7 would require implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which is fully described in Section 3.14.6.1. With implementation of this mitigation measure, the effects of Impact V-6 for Alternative 7 would be reduced to a level of less than significant (Class II).

Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape (Criterion VIS4)

Impacts associated with Criterion VIS4 for Alternative 7 would be identical to the proposed Project. Although this alternative would introduce an overhead re-route of a subtransmission line along Segment 8A, the re-route would not encounter or impact any different adopted city, county, State, or federal management plans for visual or scenic resources. Therefore, the applicable federal and State laws, regulations, and standards presented in Tables C-1, C-2, and C-3 of the *Visual Resources Specialist Report*, Appendix C, would apply.

In the North Area, there are no established Visual Resource Management Plans or Visual Resource Conservation Plans. In the Center Area, the majority of Segments 6 and 11 are situated within areas of natural-appearing landscapes designated with High Scenic Integrity Objective (SIO) as dictated by the Forest Plan (see Table 3.14-4). Existing access and spur roads currently do not meet the Natural-Appearing Desired Condition or High SIO, and re-opening or reconstructing them to higher road maintenance standards would adversely impact visual resources and further degrade existing conditions; additionally the Forest Plan's Desired Condition and High Scenic Integrity Objective would not be met. Construction and operation of new, taller, wider single-circuit 500-kV transmission lines would also adversely impact visual resources and further degrade existing conditions, and would not meet the Desired Condition or the High Scenic Integrity Objective. Consequently an amendment to the 2005 Forest Plan would be required for Alternative 7, which is described in Table 3.14-5. Implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality) is also recommended to minimize impacts. In the South Area, Alternative 7 would cross lands administered by the Puente Hills Landfill Habitat Preservation Authority (PHLHPA). Alternative 7 would conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan (see Appendix C of the *Visual Resources Specialist Report*).

Alternative 7 would be inconsistent with Forest Standard S1 of the Forest Plan, and would require an amendment to the SIOs within the 2005 Forest Plan. Alternative 7 would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan. As such, Impact V-7 would be significant and unavoidable (Class I).

3.14.11.2 Cumulative Effects Analysis

Geographic Extent

Alternative 7 only differs from the proposed Project for a very small portion of the proposed route along Segments 7 and 8A; therefore, the geographic extent of the cumulative analysis for Alternative 7 is exactly the same as that for Alternative 2 and would include all of the North, Center, and South Areas.

Existing Cumulative Conditions

The existing cumulative conditions for Alternative 7 are exactly the same as for Alternative 2, as described in Section 3.14.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 7 would be exactly the same as Alternative 2, described in Section 3.14.6.2.

Cumulative Impact Analysis

Impacts associated with Alternative 7 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. The minor re-route of the proposed Project transmission line associated with Alternative 7 would not affect the proposed Project's contribution to cumulative impacts. Therefore, cumulative impacts of Alternative 7 would be exactly the same as cumulative impacts for Alternative 2, as described in detail in Section 3.14.6.2.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measures introduced for Alternative 7 in Section 3.14.11.1 would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources. Cumulative impacts would be significant and unavoidable (Class I).

3.14.12 Impact Significance Summary

Table 3.14-7 summarizes the direct and indirect environmental impacts of the proposed Project (Alternative 2) and the other alternatives on Visual Resources. The direct and indirect effects of the Project and alternatives have been fully described in Sections 3.14.6 through 3.14.11 above. Alternative 1 (No Project/No Action) impacts are fully described in Section 3.14.5; however, since no potential future project information is available an impact significance level for Alternative 1 is not included in the table below.

Table 3.14-7. Summary of Impacts and Mitigation Measures – Visual Resources

Impact	Impact Significance								Mitigation Measures
	Alt. 1+	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	NFS Lands*	
V-1: Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views.	N/A	Class I	Class I	Class I	Class I	Class I	Class I	Yes	V-1: Clean up staging areas, storage areas, marshalling yards, helicopter staging areas, access and spur roads, and structure locations on a regular periodic basis.
V-2: For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality.	N/A	Class I	Class I	Class I	Class I	Class I	Class I	Yes	V-1 V-2a: Use tubular steel poles instead of lattice steel towers in designated areas. V-2b: Treat surfaces with appropriate colors, textures, and finishes. V-2c: Establish permanent screen. V-2d: At road crossings, structures should be offset so that they are equidistant on each side of the road where feasible. *[Alternatives 3, 4, 7]*

Table 3.14-7. Summary of Impacts and Mitigation Measures – Visual Resources

Impact	Impact Significance								Mitigation Measures
	Alt. 1+	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	NFS Lands*	
V-3: For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects.	N/A	Class I	Class I	Class I	Class I	Class I	Class I	Yes	V-1 V-2a through V-2c V-2d *[Alternatives 3, 4, 7]* V-3a: Match spans of existing transmission structures. V-3b: On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality. V-4b and V-4d
V-4: Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality.	N/A	Class I	Class I	Class I	Class I	Class I	Class I	Yes	V-4a: Construct, operate, and maintain the Project with existing access and spur roads where feasible. V-4b: Slope-round and re-contour in areas as prescribed. V-4c: Avoid locating new roads in bedrock on NFS lands. V-4d: Dispose of excavated materials as prescribed.
V-5: New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glare in certain lighting conditions.	N/A	Class II	Class II	Class II	Class II	Class II	Class II	Yes	V-2b
V-6: The Project would contribute to the long-term loss or degradation of a scenic highway viewshed or scenic trail viewshed.	N/A	Class II	Class II	Class II	Class II	Class II	Class II	Yes	V-3b
V-7: The Project would conflict with established visual resource management plans or landscape conservation plans.	N/A	Class I	Class I	Class I	Class I	Class I	Class I	Yes	None recommended

N/A = Not Available

* Indicates whether this impact is applicable to the portion of the Project on National Forest System lands.

+ Potential projects would likely traverse the same geographic regions as either the proposed Project or Alternatives 3 through 7, and subsequently introduce similar types of impacts.