

4.1 Aesthetics

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Mesa 500-kilovolt (kV) Substation Project (proposed project) proposed by Southern California Edison Company (SCE, or the applicant) with respect to aesthetics.

Comments received during the scoping period asked that the Environmental Impact Report (EIR) assess the visual impact of the proposed 500-kV Mesa Substation from residents' homes in Montebello; impacts on the surrounding areas during construction; the inclusion of landscaping and architecturally pleasing enhancements to the project infrastructure; and visual impacts generated by the existing power lines and electrical infrastructure in the City of Montebello, as well as by their lack of maintenance. This section was informed by the scoping comments. This EIR assesses impacts of the proposed project; therefore, the existing infrastructure is discussed as part of the existing environmental setting in this section.

4.1.1 Environmental Setting

4.1.1.1 Local Setting

The proposed project's main components would be constructed within, or would cross, several incorporated and unincorporated areas within Los Angeles County, as discussed in Chapter 2.0, "Project Description" and shown in Figure 2-1, "Project Overview." In addition, minor work would occur within the perimeter fence lines of 27 existing satellite substations throughout the Western Los Angeles Basin Electrical Needs Area in southern Los Angeles County and northern Orange County, as shown in Figure 2-2, "Existing Transmission and Subtransmission System and Proposed Modifications to Substations."

The central component of the proposed project is work that would occur at or adjacent to the proposed Mesa Substation site area. The proposed project is located in an area of transition between the high, rugged San Gabriel Mountains approximately 10 to 15 miles to the north and the broad, gently sloping coastal plain to the south. The terrain within this transition area consists of rolling to steep hills intermixed with some flatter areas and various drainages. The San Gabriel Mountains provide a vivid backdrop to many views in the area. Although some remnants of native oak woodland, riparian, coastal sage scrub, and grassland habitats still exist, much of the area's vegetation now consists of non-native, ornamental plantings. The area is highly developed with housing, commercial and industrial, freeways, and other land uses, including some parks and open space areas.

Predominant land uses in the vicinity of the Mesa Substation site include a business park and residential areas to the north, a cemetery to the northeast and east, the Pomona Freeway and a closed landfill to the south, and residential neighborhoods to the south and west. In addition, an undeveloped area to the east of the proposed substation site has been approved to be developed as a commercial center. Nighttime lighting associated with development is extensive throughout the area. Tall transmission lines, light poles, and other vertical utility structures occur throughout the area. The visual character of the substation site and project area is predominately urban and developed.

1 **Sensitive Viewer Groups**

2 In general, sensitive viewers are people located within, or close to, the proposed project areas who
 3 could be affected by the visual changes introduced by the project. These viewers are described in
 4 terms of their exposure to the project components and levels of sensitivity. Viewer exposure
 5 considers the distance of the viewer to the project, the position of the viewer in terms of relative
 6 elevation, the direction of the view, the approximate number of viewers, and the duration and
 7 frequency of views. Usage volume is estimated based on the size of the viewer group where
 8 quantifiable (e.g., number of residences or traffic counts) or on the amenities offered in the case of
 9 a recreation facility (e.g., an auditorium would have a high usage volume compared to an unstaffed
 10 park without amenities). Duration of views is estimated based on the amount of time the typical
 11 viewer would be able to see a project component. For example, a motorist on a winding road
 12 through undulating terrain would have shorter-duration views of a project component than a
 13 motorist on a straight stretch of highway through flat terrain. Frequency of views is estimated
 14 based on how often a typical viewer would be present in the location that defines the viewer group.
 15 For example, local neighborhood residential viewers would have high view frequency, whereas
 16 motorists or transient visitors occasionally passing through the area would have relatively low
 17 view frequency.

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 19 Viewer sensitivity describes a viewer’s expectation or concern for a view based on viewer activity
 20 and awareness, any local or cultural significance of the site or area, and any scenic designations
 21 associated with the viewing locations, such as scenic vistas or highways.

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 23 Visual sensitivity associated with views in a particular area is the combination of viewer sensitivity
 24 and viewer exposure. Generally, when viewer sensitivity for a particular viewer group is low to
 25 moderate, visual sensitivity increases with an increase in total number of viewers, the frequency of
 26 viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed).

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 28 Table 4.1-1 lists the viewer groups in the vicinity of particular project components; defines their
 29 geographic proximity to the project components; qualitatively estimates the volume of viewers,
 30 duration of views, and frequency of views; and identifies the viewer sensitivity of each viewer
 31 group.

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Table 4.1-1 Sensitive Viewer Groups in the Vicinity of the Proposed Project Components

Viewer Group	Viewer Exposure			Viewer Sensitivity	
	Approximate Location Relative to Project Components	Usage Volume	Duration of Views		Frequency of Views
Residential neighborhoods north, west, and south of substation site	Within 0.1 mile west and south and within 0.2 mile north of the proposed Mesa Substation site.	Moderate	Moderate to High	High	Moderately High to High
Visitors to cemetery	Within 0.3 mile east-northeast of the proposed Mesa Substation site.	Low	High	Low	Moderately High
Workers and visitors at business park north of substation site	Within 0.1 mile north of the proposed Mesa Substation site.	High	High	High	Moderately Low

Table 4.1-1 Sensitive Viewer Groups in the Vicinity of the Proposed Project Components

Viewer Group	Viewer Exposure			Viewer Sensitivity	
	Approximate Location Relative to Project Components	Usage Volume	Duration of Views		Frequency of Views
Travelers on Pomona Freeway	Adjacent to and south of the Mesa Substation site.	High	Low	Moderate to High	Low to Moderately Low
Travelers on Potrero Grande Drive	Adjacent to and north of the Mesa Substation site.	Moderately High	Low	Moderately High	Moderate
Commercial area (gas station and motel) west of substation site	Adjacent to and west and north of the Mesa Substation site.	Moderate	Moderate	Moderate	Moderate

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4.1.1.2 Key Observation Points and Other Viewpoints

Key observation points (KOPs) (i.e., representative views) have been identified for portions of the proposed project in the vicinity of the Mesa Substation (Main Project Area) and the Goodrich Substation in Pasadena (North Area) that would be potentially visible to and noticeable by sensitive viewer groups. Figure 4.1-1 shows the location and direction of the view for each KOP within the vicinity of the Main Project Area. Figure 4.1-2 shows the location and direction of the view for each viewpoint within the vicinity of Goodrich Substation in Pasadena.

KOPs have not been included along proposed Telecommunications Routes 1, 2, or 3. Fiber optic cable would either be installed underground or would be strung overhead on existing poles; therefore, the proposed view would not be noticeably different over the long term, as discussed in further detail throughout this section. Views of the South Area (including the 220-kV transmission structure in Commerce and the street line source conversion in Bell Gardens) have also not been included as KOPs. The removal of a lattice steel tower (LST) and its replacement in the same location with a newer LST would not change the existing view of this component. In addition, the conversion of a street light source line from overhead to underground would reduce long-term visual impacts relative to this component. Work at other satellite substations throughout the western Los Angeles Basin Electrical Needs Area would include work within the existing Mechanical Electric Equipment Rooms and/or undergrounding work within the perimeter fence line of the existing substations. Construction work at existing satellite substations would be very short term and new components would not be visible during operations from any views within the vicinity of the substation. For these reasons, KOPs for the proposed project do not represent views of these components. However, short-term and long-term aesthetic impacts associated with these components are discussed in more detail in Section 4.1-3, "Impact Analysis."

Figures 4.1- 3a and 4.1-3b include photos of the existing views from each of the selected KOPs.

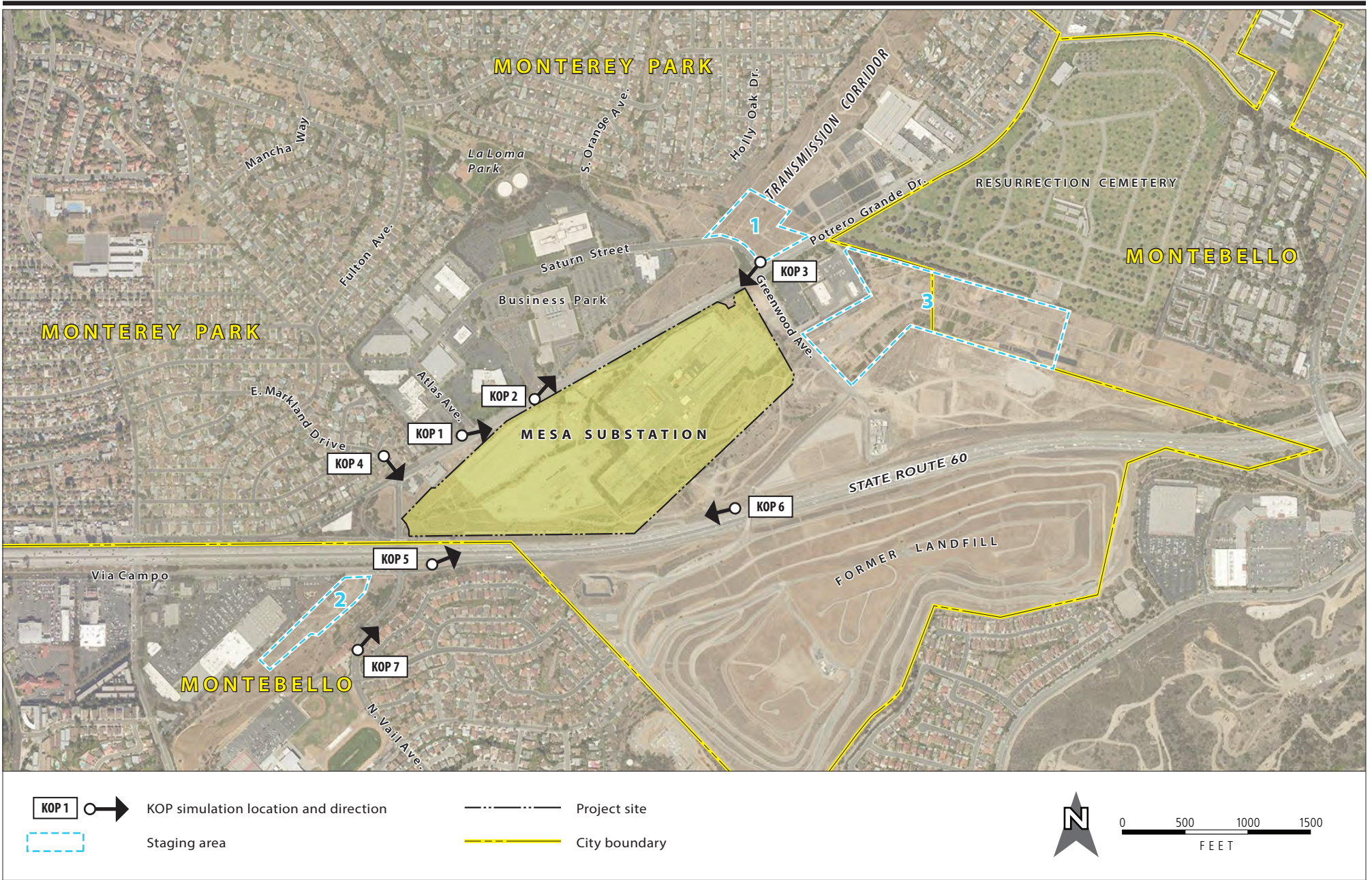


Figure 4.1-1

**Key Observation Point Locations
Mesa Substation Area**

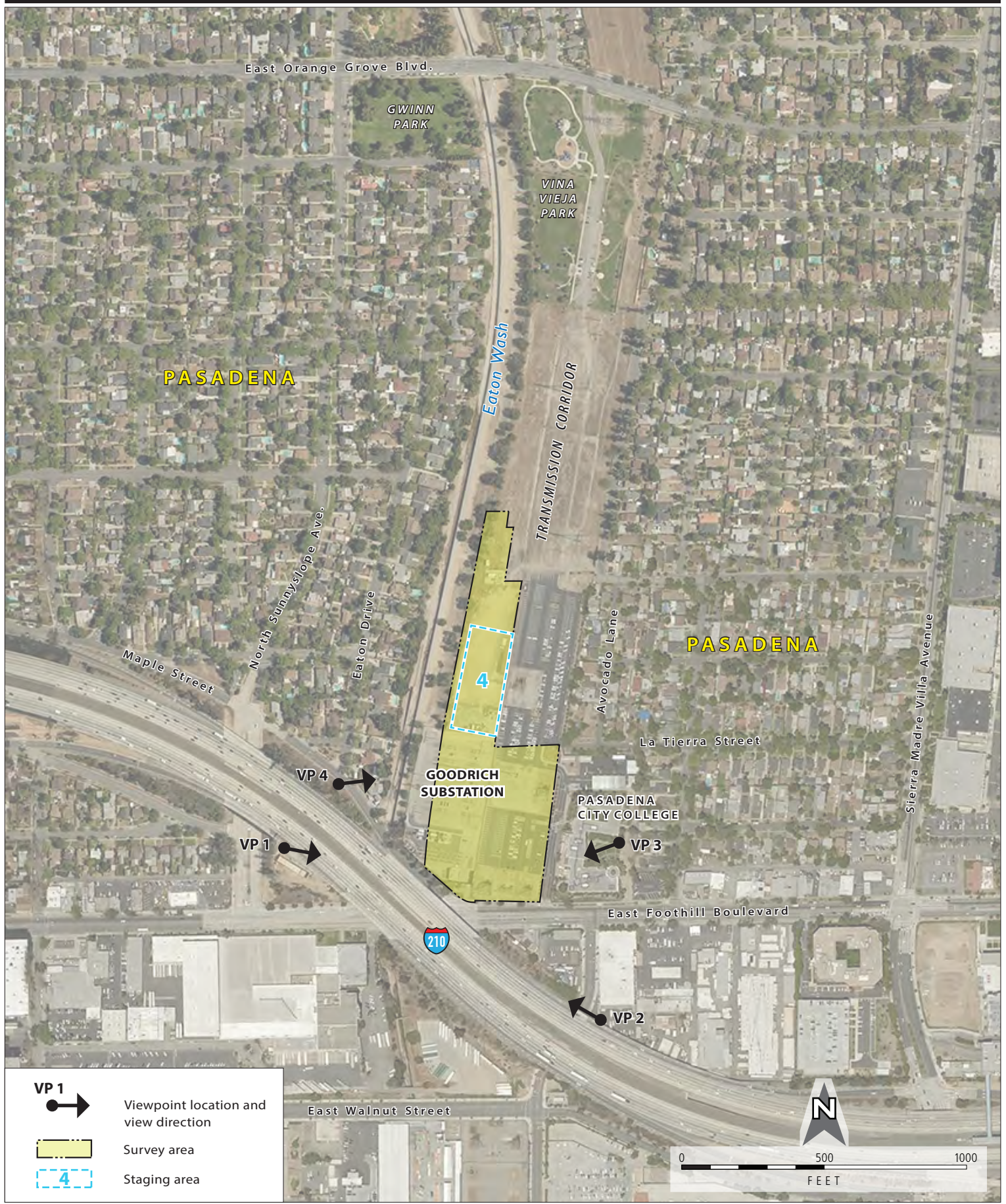


Figure 4.1-2
Viewpoint Locations – Goodrich Substation Area
Mesa 500-kV Substation Project



KOP 1 – View east from Potrero Grande Drive at Atlas Avenue



KOP 2 – View northeast from Potrero Grande Drive toward 220-kV corridor



KOP 3 – View southwest from Potrero Grande Drive at Saturn Street



KOP 4 – View southeast from Markland Drive near Woodland Way

Figure 4.1-3a

Key Observation Point Views – Mesa Substation Area
Mesa 500-kV Substation Project



KOP 5 – View northeast from the Pamona Freeway near North Vail Avenue



KOP 6 – View west from the Pamona Freeway near Greenwood Avenue



KOP 7 – View northeast from North Vail Avenue near Appian Way

Figure 4.1-3b

Key Observation Point Views – Mesa Substation Area
Mesa 500-kV Substation Project

1 **KOP 1: View East from Potrero Grande Drive at Atlas Avenue**

2 KOP 1 (Figure 4.1-3a) represents the view toward the proposed Mesa Substation site looking east
3 from the north side of Potrero Grande Drive at its intersection with Atlas Avenue. Atlas Avenue is a
4 primary entry to the business park immediately north of the proposed Mesa Substation site. The
5 primary elements within the view include the roadway; perimeter screening wall, low trees, and
6 other landscaping along the roadway; tall trees in the distant foreground; tall metal lattice
7 transmission towers and conductors; and other tall metal structures associated with the
8 substation. The existing tall metal lattice transmission towers and numerous overhead conductors
9 in the foreground contrast strongly with the other elements in this view in scale, form, line, and
10 texture. Silhouetted against the sky, these towers and conductors are dominant elements in this
11 view. The other tall metal structures associated with the substation visible in the distant
12 foreground and middleground are mostly screened by the tall trees and therefore are less
13 noticeable.

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15 Vividness is low due to the absence of unique, striking, or distinctive elements or patterns in the
16 view. Although the existing vegetation contributes somewhat to the unity of this view by providing
17 some visual coherence and compositional order, the mix of forms, lines, and textures of the
18 dominant elements of the roadway, tall metal lattice transmission towers, and overhead
19 conductors result in overall low intactness and unity for this view. Overall, scenic quality for this
20 view is low.

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22 This and other views from along Potrero Grande Drive are experienced by a moderately high
23 number of viewers on a regular basis, including local area residents traveling for personal reasons
24 and people commuting to and from work at the business park and other locations. Viewer
25 sensitivity for the primary viewer groups traveling along Potrero Grande Drive is moderate. This,
26 combined with the moderately high volume of viewers and frequency of their views, results in
27 moderate sensitivity for this KOP.

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29 **KOP 2: View Northeast from Potrero Grande Drive**

30 KOP 2 (Figure 4.1-3a) represents the view looking northeast along Potrero Grande Drive from the
31 south side of Potrero Grande Drive toward the 220-kV corridor. This KOP represents views by
32 people traveling northeast on this street, including motorists, bicyclists, and pedestrians. The
33 primary elements within the view include the roadway; low and moderate height trees and other
34 landscaping along and near the roadway; tall metal lattice transmission towers and conductors;
35 and portions of a building and parking area in the business park north of the substation. In
36 addition, a portion of the high San Gabriel Mountains is barely visible in the background.

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38 The tall metal lattice transmission towers and overhead conductors in the foreground contrast
39 strongly with the other elements in this view in scale, form, line, and texture. Although the lower
40 portions of the lattice towers are screened by the dense vegetation, most of the upper portions of
41 the towers are highly noticeable. Silhouetted against the sky, these towers and conductors are
42 dominant elements in this view.

43
44 The San Gabriel Mountains, though visible, are barely noticeable in the distance and, although the
45 existing vegetation is fairly extensive, vividness is moderately low due to the absence of unique,
46 striking, or distinctive elements or patterns in the view. However, the existing vegetation provides
47 some visual coherence and compositional order that contributes to the moderate unity of this view.
48 The tall metal lattice transmission towers and overhead conductors, in combination with the
49 roadway, are encroaching elements that contrast in form, line, color, and texture with the other

1 more rounded and natural forms, lines, colors, and textures of vegetation and reduce the visual
2 integrity of the view to a moderate level of intactness. Overall, scenic quality for this view is
3 moderately low.

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5 This and other views from along Potrero Grande Drive are experienced by a moderately high
6 number of viewers on a regular basis, including local area residents traveling for personal business
7 and people commuting to and from work at the business park and other locations. Viewer
8 sensitivity is moderate. This, combined with the moderately high volume of viewers and frequency
9 of their views, results in moderate visual sensitivity for this KOP.

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11 **KOP 3: View Southwest from Potrero Grande Drive at Saturn Street**

12 KOP 3 (Figure 4.1-3a) represents the view toward the proposed Mesa Substation looking
13 southwest from the north side of Potrero Grande Drive at its intersection with Saturn Street. This
14 KOP represents views by people traveling southwest on this street, including motorists, bicyclists,
15 and pedestrians. The primary elements within the view include the roadway; trees of various
16 heights and other landscaping along and near the roadway; tall metal lattice and monopole
17 transmission towers and conductors; a fabric-covered perimeter screening fence; and a horizontal
18 traffic light pole with street signs attached. In addition, residences on the hillside south of the
19 Pomona Freeway and tall metal structures associated with the substation are visible in the
20 middleground distance zone.

21
22 The traffic light pole with street signs, tall metal lattice and monopole transmission towers, and
23 overhead conductors in the foreground contrast strongly with the other elements in this view in
24 scale, form, line, and texture. Although the lower portions of the lattice towers are screened by the
25 dense vegetation, most of the upper portions of the towers are highly noticeable. Silhouetted
26 against the sky, these towers and conductors are dominant elements in this view.

27
28 Although the existing vegetation is fairly extensive in this view, vividness is moderately low due to
29 the absence of unique, striking, or distinctive elements or patterns in the view. However, the
30 existing vegetation provides some visual coherence and compositional order that contributes to
31 the moderate unity of this view. The horizontal traffic light pole with street signs, tall metal lattice
32 and monopole transmission towers, and overhead conductors, in combination with the roadway,
33 are encroaching elements that contrast in form, line, color, and texture with the other more
34 rounded and natural forms, lines, colors, and textures of vegetation and reduce the visual integrity
35 of the view to a moderately low level of intactness. Overall, scenic quality for this view is
36 moderately low.

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38 This and other views from along Potrero Grande Drive are experienced by a moderately high
39 number of viewers on a regular basis, including local area residents traveling for personal business
40 and people commuting to and from work at the business park and other locations. Viewer
41 sensitivity is moderate. This, combined with the moderately high volume of viewers and frequency
42 of their views, results in moderate visual sensitivity for this KOP.

KOP 4: View Southeast from East Markland Drive near Woodland Way

KOP 4 (Figure 4.1-3a) represents the view toward the proposed Mesa Substation looking southeast from a location on Markland Drive south of Woodland Way and north of Potrero Grande Drive. This KOP represents views by people traveling southeast on this street, including motorists, bicyclists, and pedestrians, as well as local residents from in and around their homes. The primary elements within the view include the roadway; trees and other vegetation of various heights; tall metal lattice transmission towers and conductors; vertical metal light poles with arching cobra-head light standards; a small portion of a residence on East Markland Drive; portions of a gas station and convenience market; a portion of the Pomona Freeway and embankment below it; and residences on the hillside south of the freeway.

The tall metal lattice transmission towers, light poles, and overhead conductors in the foreground contrast strongly with the other elements in this view in scale, form, line, and texture. Although the lower portions of the lattice towers are screened by vegetation and structures at the gas station, most of the upper portions of the towers are highly noticeable. Silhouetted against the sky, these towers and conductors are dominant elements in this view.

Vividness is low due to the absence of unique, striking, or distinctive elements or patterns in the view. Although the existing vegetation provides some visual coherence, the mixture of structures, forms, colors, and vertical and horizontal lines reduce the compositional order which contributes to the low unity of this view. The mix of structures, light poles, tall metal lattice transmission towers, and overhead conductors, in combination with the roadway, are encroaching elements that contrast in form, line, color, and texture with the other more rounded and natural forms, lines, colors, and textures of vegetation and reduce the visual integrity of the view to a low level of intactness. Overall, scenic quality for this view is low.

This and other views from along East Markland Drive and the surrounding neighborhood are largely experienced by a moderate number of viewers for moderate to long durations on a regular basis, including neighborhood residents from in and around their homes and local streets and local area residents traveling for personal business or commuting to and from work. Viewer sensitivity for neighborhood and local area residents in the vicinity of East Markland Drive is moderately high to high. Therefore, the overall visual sensitivity of this KOP is moderately high to high.

KOP 5: View Northeast from the Pomona Freeway near North Vail Avenue

KOP 5 (Figure 4.1-3b) represents the view toward the proposed Mesa Substation site looking northeast from the eastbound (southern) lanes of the Pomona Freeway near its crossing of North Vail Avenue and East Markland Drive. This KOP represents views by motorists traveling east on the Pomona Freeway. The primary elements within the view include the freeway, including the median barrier and a freeway sign; metal light poles with arching cobra-head light standards; the tops of trees on and near the substation; tall metal lattice and monopole transmission towers and conductors on and near the substation; and other metal structures on the substation. In addition, the high San Gabriel Mountains are barely visible in the background above the trees and through the lattice towers and other metal structures. Largely because the freeway is elevated above the substation site, views of most of the site for eastbound motorists are screened by the concrete median barrier, terrain, and passing vehicles.

1 The tall metal lattice transmission towers, overhead conductors, and other metal structures in the
2 foreground and middleground are highly noticeable in the view and contrast strongly in form, line,
3 and texture with the mostly horizontal elements associated with the freeway. Silhouetted against
4 the sky, these lattice towers and conductors are dominant elements in this view.

5
6 The San Gabriel Mountains, though visible, are barely noticeable in the distance above the trees and
7 through the lattice towers and other metal structures; consequently, vividness is low due to the
8 absence of unique, striking, or distinctive elements or patterns in the view. Although the presence
9 of vegetation provides some visual coherence, unity is low due to the strong contrast of vertical and
10 horizontal lines and forms and the absence of compositional order. The tall metal lattice
11 transmission towers, horizontal freeway, and other vertical and horizontal structures that together
12 dominate the view, are encroaching elements that reduce the visual integrity of the view to a low
13 level of intactness. Overall, scenic quality for this view is low.

14
15 This and other views for eastbound motorists on the Pomona Freeway are experienced by a very
16 high number of viewers on a regular basis. Although traffic often moves slowly on this section of
17 freeway, mostly during commute periods, most views by motorists are brief in duration due to the
18 high speed of travel. It is assumed that most motorists traveling this section of the freeway are
19 commuting to or from work or traveling for work or personal business. Although viewer sensitivity
20 for these groups is low to moderately low, the very high volume of viewers elevates the overall
21 visual sensitivity of this KOP to moderate.

22 23 **KOP 6: View West from the Pomona Freeway near Greenwood Avenue**

24 KOP 6 (Figure 4.1-3b) represents the view toward the proposed Mesa Substation looking west from
25 the westbound (northern) lanes of the Pomona Freeway near its undercrossing of Greenwood
26 Avenue. This KOP represents views by motorists traveling west on the Pomona Freeway. The
27 primary elements within the view include the freeway and guardrail; trees, shrubs, and other
28 vegetation on and near the substation; and tall metal lattice transmission towers, conductors, and
29 other metal structures on and near the substation. In addition, a chain link perimeter fence, graded
30 road, and small tank structure are visible in the immediate foreground of this view.

31
32 The tall metal lattice transmission towers, overhead conductors, and other metal structures in the
33 foreground and middleground are highly noticeable and contrast strongly in form, line, color, and
34 texture with the vegetation and more horizontal elements in the view. Silhouetted against the sky,
35 these lattice towers, conductors, and tall metal structures are dominant elements in this view.

36
37 Although the existing vegetation is fairly extensive in the view, vividness is moderately low due to
38 the absence of unique, striking, or distinctive elements or patterns in the view. However, the
39 existing vegetation provides some visual coherence and compositional order that contributes to
40 the moderate unity of this view. The tall metal lattice transmission towers, other metal structures,
41 and overhead conductors, in combination with the roadway, tank structure, and fence are
42 encroaching elements that contrast in form, line, color, and texture with the other more natural
43 forms, lines, colors, and textures of vegetation and reduce the visual integrity of the view to a
44 moderately low level of intactness. Overall, scenic quality for this view is moderately low.

45
46 This and other views for westbound motorists on the Pomona Freeway are experienced by a very
47 high number of viewers on a regular basis. Although traffic often moves slowly on this section of
48 freeway, mostly during commute periods, most views by motorists are brief in duration due to the
49 high speed of travel. It is assumed that most motorists traveling this section of the freeway are

1 commuting to or from work or traveling for work or personal business. Although viewer sensitivity
2 for these groups is low to moderately low, the very high volume of viewers elevates the overall
3 visual sensitivity of this KOP to moderate.

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5 **KOP 7: View Northeast from North Vail Avenue near Appian Way**

6 KOP 7 (Figure 4.1-3b) represents the view toward the proposed Mesa Substation looking northeast
7 from a location on North Vail Avenue north of its intersection with Appian Way. This KOP
8 represents views by people traveling northeast on this street, including motorists, bicyclists, and
9 pedestrians, as well as local residents from in and around their homes. The primary elements
10 within the view include the roadway; trees and other vegetation of various heights; tall metal
11 lattice transmission towers and conductors; part of a residence on Via Palermo; a portion of the
12 Pomona Freeway, the embankment below it, and its overcrossing of North Vail Avenue; and a
13 portion of a hillside, large commercial building, and other structures north of the freeway. In
14 addition, a portion of the high San Gabriel Mountains is visible in the background.

15
16 The tall metal lattice transmission towers and overhead conductors in the foreground and
17 middleground contrast strongly in scale, form, line, and texture with the other elements in this
18 view. The LSTs are only partially silhouetted against the sky above the ridgeline. The dark colored
19 vegetation in the foreground and behind them helps them blend somewhat with their surroundings
20 and reduces their contrast to a moderate level. These tall structures dominate middleground views.
21 However, their presence detracts from views of the distant San Gabriel Mountains.

22
23 Vividness is moderate due to the presence of tall and varied vegetation and the distinctive San
24 Gabriel Mountains in the background. Unity is moderately high due to the dominant and varied
25 vegetation providing visual coherence and compositional order. The mix of tall metal lattice
26 transmission towers, overhead conductors, buildings and other structures, in combination with the
27 roadway, are encroaching elements that contrast in form, line, color, and texture with more natural
28 forms, lines, colors, and textures of the varied terrain and vegetation in the view. However, because
29 these encroaching elements are not dominant in the view, the view has moderately high visual
30 integrity and intactness. Overall, scenic quality for this view is moderate.

31
32 This and other views from along North Vail Avenue and the surrounding neighborhood are largely
33 experienced by a moderate number of viewers for moderate to long durations on a regular basis,
34 including neighborhood residents from in and around their homes and local streets and local area
35 residents traveling for personal business or commuting to and from work. Viewer sensitivity for
36 neighborhood and local area residents in the vicinity of North Vail Avenue is moderately high to
37 high. Therefore, the overall visual sensitivity of this KOP is moderately high to high.

38
39 **Goodrich Substation**

40 Figures 4.1-4a and 4.1-4b show existing views from areas within the vicinity of Goodrich
41 Substation in the City of Pasadena.



Viewpoint 1 – View east from eastbound Interstate 210 (Foothill Freeway) near Sunnyslope Avenue



Viewpoint 2 – View northwest from westbound Interstate 210 (Foothill Freeway) near South Kinneloa Avenue

Figure 4.1-4a
Viewpoint Views 1 and 2 – Goodrich Substation Area
Mesa 500-kV Substation Project



Viewpoint 3 – View west from Pasadena City College near East Foothill Boulevard



Viewpoint 4 – View east from Maple Street at Eaton Drive

Figure 4.1-4b
Viewpoint Views 3 and 4 – Goodrich Substation Area
Mesa 500-kV Substation Project

1
2 **4.1.2 Regulatory Setting**

3
4 This section summarizes federal, state, and local laws, regulations, and standards that govern
5 aesthetics in the project area.

6
7 **4.1.2.1 Federal**

8
9 **Federal Aviation Administration**

10 The Federal Aviation Administration (FAA) regulates airspace and flyways for air travel. The FAA
11 requires preparation of a Notice of Proposed Construction or Alteration (Form 7460-1) describing
12 the project’s design and addressing compliance with FAA procedures. The notice must also include
13 the final locations of structures, structure types, and structure heights. The FAA may then conduct
14 its own study of a project and make recommendations to the proponent regarding possible airway
15 marking (e.g., use of marker balls on conductors), lighting (e.g., red warning lights on tall
16 structures), and/or other safety requirements. These lighting and marking recommendations are
17 based on the FAA Advisory Circular 70/7460-IL, Obstruction Marking and Lighting (FAA 2015).

18
19 The FAA regulates regional airspace jurisdiction for airports in the vicinity of the proposed project,
20 including the closest public airport, San Gabriel Valley Airport, which is located 3.6 miles northeast
21 of the nearest project component and 4.5 miles from the proposed Mesa Substation, as well as
22 several private heliports located in the vicinity of the proposed project area, as discussed in Section
23 4.7, “Hazards and Hazardous Materials.” The proposed project’s compliance with FAA regulations
24 was considered in this analysis and FAA regulations would be applicable for placement of tall
25 transmission towers as part of the proposed project.

26
27 **4.1.2.2 State**

28
29 **California Department of Transportation Scenic Highway Program**

30 The California Department of Transportation administers the State Scenic Highway Program to
31 preserve and protect scenic highway corridors from change that would diminish the aesthetic
32 value of lands adjacent to highways (California Streets and Highways Code § 260, et seq.). The State
33 Scenic Highway Program includes a list of highways that are either eligible for designation as
34 scenic highways or have been so designated. These highways are identified in California Streets
35 and Highways Code §263. The program entails regulation of land use and density of development;
36 attention to the design of sites and structures; attention to and control of signage, landscaping, and
37 grading; and other restrictions. The local jurisdiction is responsible for adopting and implementing
38 such regulations. If a highway is listed as eligible for official designation, it is treated similarly to an
39 officially designated scenic highway, and care must be taken to preserve its eligibility status.

40
41 There are currently no Designated or Eligible State Scenic Highways within the project area that
42 may have views of the proposed project. The nearest Designated State Scenic Highway is State
43 Route (SR) 2, located approximately 8 miles north of the proposed 220-kV line loop-in at Goodrich
44 Substation, and the nearest Eligible State Scenic Highway is Interstate 210 (I-210) north of SR 134,
45 located approximately 4 miles west of Goodrich Substation (Caltrans 2012). The proposed project
46 would not be visible from either of these highways.

1 **4.1.2.3 Regional and Local**
2

3 The California Public Utilities Commission (CPUC) has jurisdiction over siting and design and
4 regulates construction of investor-owned transmission projects such as the proposed project.
5 Although the CPUC has preemptive authority over local government land use planning regulations,
6 this analysis assesses the proposed project's consistency with regional and local plan policies,
7 ordinances, and guidelines and whether inconsistency with any of these plan policies, ordinances,
8 or guidelines would result in an impact on aesthetic resources in the project area.
9

10 **County of Los Angeles General Plan**

11 The following policies described in the Land Use element of the County of Los Angeles General Plan
12 (2015) are relevant to the proposed project:
13

- 14 • **Policy LU 6.2:** *Encourage land uses and developments that are compatible with the natural*
15 *environment and landscape.*
- 16 • **Policy LU 10.2:** *Design development adjacent to natural features in a sensitive manner to*
17 *complement the natural environment.*

18
19 The following goals and policy from the Conservation and Open Space Element of the General Plan
20 are applicable to upgrades within the perimeter fence line of the Vincent Substation, which is
21 located in the Antelope Valley covered by the Antelope Valley Area Plan. In addition, the Vincent
22 Substation is located within a designated Significant Ecological Area.
23

- 24 • **Goal COS 14:** *Energy infrastructure that is sensitive to the scenic qualities of the Antelope*
25 *Valley and minimizes potential environmental impacts.*
- 26 • **Goal COS 15:** *Humans and wildlife enjoy beautiful dark Antelope Valley skies unimpeded by*
27 *light pollution.*
- 28 • **Policy COS 15.2:** *Prohibit continuous all-night outdoor lighting in rural areas, unless required*
29 *for land uses with unique security concerns, such as fire stations, hospitals, and prisons.*
30

31 The following policy from the Land Use Element of the General Plan is applicable to installation of
32 fiber optic cable along Telecommunications Route 3 where work would occur adjacent to natural
33 features (e.g. work within the Whittier Narrows Natural Area):
34

- 35 • **Policy LU 10.2:** *Design development adjacent to natural features in a sensitive manner to*
36 *complement the natural environment.*
37

38 **City of Monterey Park General Plan**

39 The City of Monterey Park General Plan was adopted in 2001. The Urban Plan section of the
40 General Plan Land Use Element states that "streets given high priority as elements for upgrading
41 the City's image include Atlantic Boulevard, Garfield Avenue, Garvey Avenue, New Avenue,
42 Monterey Pass Road, and Potrero Grande Drive." The plan also states that these key arterial roads
43 can be readily enhanced by the repetition of distinctive streetscape elements, including:
44

- 45 • **Street Trees**—*A well-formulated street tree master plan for all major arterials and attendant*
46 *management policies to monitor, maintain, replace and augment the City's street tree*
47 *inventory should be prepared.*

- 1 • **Underground Utilities**—*The existing overhead utility lines contribute to the visual clutter*
2 *experienced along key arterial streets. The lines also limit tree species and pruning height. A*
3 *program to place utilities underground along key streets would facilitate street tree planting*
4 *and eliminate unsightly clutter.*
- 5 • **Enhanced Paving**—*A distinctive enhanced paving style for selected crosswalks and median*
6 *paving should be identified and specified as part of a phased program of right-of-way*
7 *improvements.*
- 8 • **Lighting**—*Distinctive nighttime illumination along major arterials to be considered include*
9 *accent lighting for landscaping and key landmark buildings, decorative pedestrian lighting*
10 *fixtures, and the use of high-pressure sodium bulbs to create warm illumination tones.*
11

12 This guidance applies to project activities in the Main Project Area, which is located between
13 Potrero Grande Drive and Pomona Freeway. In addition, the Land Use Plan portion of the Land Use
14 Element includes the following goal:

- 15 • **Goal 10.0:** *Maintain the quality and character of Monterey Park’s residential neighborhoods.*
16
17

18 **City of Industry General Plan**

19 The Land Use Element of the City of Industry 2014 General Plan includes the following policy that
20 is relevant to the proposed project:

- 21 • **Policy LU5-3:** *Prohibit outside storage and mechanical equipment that is visible from the*
22 *street.*
23
24

25 **City of Pasadena General Plan**

26 The Land Use Element of the City of Pasadena General Plan (2004) includes the following
27 objectives and policies that are applicable because project components proposed for Goodrich
28 Substation are located in a Specific Plan area and adjacent to residential areas:
29

- 30 • **Objective 5:** *Preservation of Pasadena’s character and scale, including its traditional urban*
31 *design form and historic character, shall be given highest priority in the consideration of*
32 *future development.*
 - 33 - **Policy 5.4: Neighborhood Character and Identity:** *Urban design programs, including*
34 *principles and guidelines, shall recognize, maintain and enhance the character and*
35 *identity of existing residential and commercial neighborhoods.*
 - 36 - **Policy 5.9: Contextual and Compatible Design:** *Urban design programs shall ensure*
37 *that new development shall respect Pasadena’s heritage by requiring that new*
38 *development respond to its context and be compatible with the traditions and character of*
39 *Pasadena, and shall promote orderly development which is compatible with its*
40 *surrounding scale and which protects the privacy, and access to light and air of*
41 *surrounding properties.*
- 42 • **Objective 7:** *Preserve the character and scale of Pasadena’s established residential*
43 *neighborhoods.*
44

1 The Historical/Cultural Element of the City of Pasadena General Plan (City of Pasadena not dated)
2 includes the following objective that is applicable because project components proposed for
3 Goodrich Substation are located adjacent to open space and residential neighborhoods:

- 4
- 5 • **Objective:** *Relating new development to existing environment in scale, material, and*
6 *character so that Pasadena's inherent human scale, visual, and functional diversity may be*
7 *maintained and enhanced*
- 8

9 The Open Space and Conservation Energy Element of the City of Pasadena General Plan (City of
10 Pasadena 2012) includes the following implementation measure that is applicable to the proposed
11 project if any night work occurs at Goodrich Substation:

- 12
- 13 • **Implementation Measure:** *Prohibit continuous all-night outdoor lighting in sports stadiums*
14 *and construction sites unless required for security reasons.*
- 15

16 **Other General Plans**

17 The General Plans listed below were reviewed for the proposed project; no specific policies or
18 goals addressing aesthetics were identified that were applicable to the proposed project:

- 19
- 20 • City of Bell Gardens General Plan (1995)
- 21 • City of Commerce 2020 General Plan (2008)
- 22 • City of Montebello General Plan (1975)
- 23 • City of Rosemead General Plan (2010)
- 24 • City of South El Monte General Plan (2000)
- 25 • City of Santa Clarita General Plan (2011)
- 26

27 **4.1.3 Impact Analysis**

28

29 **4.1.3.1 Methodology and Significance Criteria**

30

31 **Methodology**

32 The Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects
33 (FHWA 1988) has been commonly used to assess the potential aesthetic impacts of various types of
34 development projects on public and private lands within a variety of different landscapes, including
35 natural, rural, suburban, and urban settings. Other commonly used visual assessment
36 methodologies, including the U.S. Department of the Interior Bureau of Land Management's
37 (BLM's) Visual Resource Management Program (BLM 1986) and the U.S. Forest Service's (USFS's)
38 Scenery Management System (USFS 1995), contain some concepts and standards applicable for
39 projects proposed on private land, but are generally more suited to lands managed by these federal
40 agencies.

41

42 The FHWA has recently revised its guidelines for visual impact assessment (FHWA 2015) to allow
43 different levels of documentation and to be more readily understood and practical in its
44 application. However, the new FHWA guidelines now focus more on transportation projects and no
45 longer incorporate several key concepts from the earlier guidelines applicable to assessing various
46 types of projects, such as transmission lines, substations, and similar industrial-type development

1 projects, in rural, suburban, and urban landscapes. Although the new FHWA guidelines incorporate
2 many elements from the FHWA 1988 guidelines, these earlier guidelines remain most applicable
3 for assessing aesthetic impacts of proposed projects within diverse landscape types and on private
4 lands. Therefore, due to the nature and setting of this proposed project, the methodology for this
5 aesthetic impact assessment relies primarily on the process, concepts, and terminology outlined in
6 the earlier FHWA (1988) guidelines, while incorporating some elements from other established
7 visual assessment systems (e.g., BLM and USFS), as applicable.
8

9 This aesthetic impact assessment process involves identification of the following:

- 10 • Aesthetic character and quality of the region and the immediate project area.
- 11 • Important viewing locations (e.g., roads, trails, residential neighborhoods, parks, and
12 overlooks) and the general visibility of the project area and the site using descriptions and
13 photographs.
- 14 • Viewer groups and their sensitivity (i.e., general viewer awareness and concern for views
15 and changes to those views).
- 16 • Relevant federal, state, and local government policies and concerns for protection of
17 aesthetic resources.
- 18 • Aesthetic impacts of the proposed project and their levels of significance.
- 19 • Mitigation measures that would reduce aesthetic impacts of the proposed project and
20 reduce significant impacts to less than significant levels.
- 21
- 22

23 The aesthetic character and quality of the proposed project area, viewing locations, viewer
24 sensitivity, and relevant government policies are described above (see Sections 4.1.1 and 4.1.2).
25 Aesthetic impacts of the proposed project, their levels of significance, and mitigation measures
26 (MMs) are described in Section 4.1.3.3. The criteria for describing aesthetic character and quality
27 include vividness, intactness, and unity, as defined below:
28

- 29 • Vividness is the visual power or memorability of landscape components as they combine in
30 striking or distinctive visual patterns.
- 31 • Intactness is the visual integrity of the natural and human-built landscape and its freedom
32 from encroaching elements. This factor can be present in well-kept urban and rural
33 landscapes, as well as in natural settings.
- 34 • Unity is the visual coherence and compositional harmony of the landscape considered as a
35 whole. It frequently attests to the careful design of individual components in the landscape.
36 (FHWA 1988)
37

38 **Significance Criteria**

39 Significance criteria were defined based on the checklist items in Appendix G of the CEQA
40 Guidelines. An impact is considered significant if the project would:

- 41 a) Have a substantial adverse effect on a scenic vista.
- 42 b) Substantially damage scenic resources, including, but not limited to, trees, rock
43 outcroppings, and historic buildings within a state scenic highway;
44

- 1 c) Substantially degrade the existing visual character or quality of the site and its
2 surroundings; or
3 d) Create a new source of substantial light or glare which would adversely affect day or
4 nighttime views in the area.
5

6 There are no scenic vistas within the proposed project area. Therefore, the proposed project would
7 have no impact under criterion (a), and impacts associated with a substantial adverse effect on a
8 scenic vista are not discussed further. There are no Designated or Eligible State Scenic Highways
9 within the project area that may have views of the proposed project. Therefore, the proposed
10 project would have no impact on scenic resources within a Designated or Eligible State Scenic
11 Highway and there would be no impact under criterion (b), and such impacts are not discussed
12 further. Visual impacts of the proposed project are assessed for the remaining three significance
13 criteria below in Section 4.1.3.3, "Environmental Impacts."
14

15 **4.1.3.2 Applicant Proposed Measures**

16 There are no applicant proposed measures (APMs) associated with aesthetics for this project.
17
18

19 **4.1.3.3 Environmental Impacts**

20
21 **Impact AE-1: Substantially degrade the existing visual character or quality of the site and its**
22 **surroundings.**
23

24 **Construction**

25 ***Main Project Area***

26 Construction activities in and near the substation site would be noticeable to residents in nearby
27 neighborhoods and travelers along various nearby streets and the Pomona Freeway. Construction
28 activities and features that may increase visual contrast and degrade visual character and quality
29 include the following:
30

- 31 • Staging and construction work areas.
- 32 • Vehicles and equipment used for excavation and grading activities, transporting and lifting,
33 watering to control dust, worker transport, and other construction activities.
- 34 • Soil and vegetation removal and grading for the substation site, temporary staging and
35 construction work areas, temporary pull and tension sites, and new or improved access
36 roads.
- 37 • Temporary outdoor storage of materials, stockpiling of spoils from excavation, security
38 fencing, and construction signage.
- 39 • Helicopter activities for stringing conductors and installation of marker balls.

40
41 Construction of the proposed project would take place over a 55-month period.
42

43 **Substation Construction Activities**

44 ***LESS THAN SIGNIFICANT***

45 At the proposed Mesa Substation site, work would occur throughout the entire 55-month period.

1
2 Representative viewpoints of passerby along the north side of the site are shown in KOPs 1, 3, and
3 4. Mature landscaping along the boundaries of the existing Mesa Substation site would be removed,
4 which would make existing infrastructure and construction activities more visible until the new
5 perimeter wall is installed. Once installed, the new wall would generally screen views of ground-
6 level construction activities for viewers at KOPs 1, 3, and 4. Impacts at these KOPs would be less
7 than significant.

8
9 Construction activities would still be visible from KOPs 5, 6, and 7 for the approximately 55-month
10 construction period regardless of the presence of the wall, due to the elevated positions of KOPs 5,
11 6, and 7. Views from KOPs 5 and 6 represent views for those traveling east and west along Pomona
12 Freeway. The visual sensitivity for KOPs 5 and 6 is considered moderate due largely to the high
13 volume of users; however, the overall scenic quality for these views is considered to be low due to
14 existing infrastructure that dominates the view and reduces the visual integrity of these views to
15 low levels of intactness and unity. Given the low quality of the existing views from KOPs 5 and 6,
16 the presence of construction activities, even on a long-term basis, would not substantially degrade
17 the existing visual character or quality of views of the site from these KOPs. Impacts for KOPs 5 and
18 6 would be less than significant.

19
20 KOP 7 represents the view for neighborhood residents looking northeast from a location on North
21 Vail Avenue north of its intersection with Appian Way. The visible portion of the active work area
22 would be partially shielded from viewers. The construction activities would be temporary and
23 would also be consistent in visual character and quality with the existing substation infrastructure
24 at the Mesa Substation site. Impacts for KOP 7 would therefore be less than significant.

25 26 **Staging Yard Use**

27 *LESS THAN SIGNIFICANT WITH MITIGATION*

28 The applicant proposes to prepare and use seven staging yards throughout the duration of
29 construction. The locations of these staging yards are shown in Figures 2-3b (Staging Yards 1, 2, 3,
30 and 6), 2-3e (Staging Yard 4), 2-3f (Staging Yard 5) and 2-3d (Staging Yard 7). Staging yard
31 activities would include storage of equipment and materials (construction trailers, construction
32 equipment, steel, conductor, wire reels, cable, hardware, insulators, signage, fuel, joint compound,
33 and other consumable materials), vehicle parking, and stockpiling of spoils from excavation.

34
35 Staging Yards 3, 4, and 5 are located in areas where they are wholly or substantially obscured from
36 sensitive viewers, either due to their configuration (Staging Yards 3 and 4) or location in an
37 industrial area (Staging Yard 5). Thus, presence of construction and materials staging activities at
38 these staging yards would not result in a substantial degradation of existing visual quality. Impacts
39 would be less than significant at Staging Yards 3, 4, and 5. Staging Yards 1, 2, 6, and 7 would be
40 visible to residents of the area and would be located in areas that are currently not used for
41 industrial purposes. They would be used for up to the entire duration of construction (55 months).
42 The presence of raw construction materials and equipment and construction activities in these
43 areas visible to sensitive viewers and located in non-industrial, non-commercial areas would result
44 in a substantial degradation of visual quality. This would be a significant impact. MM AES-1 would
45 require these staging yards to be screened to reduce impacts to sensitive viewers. Impacts would
46 be less than significant with mitigation.

1 **Telecommunications Route Construction Activities**

2 *LESS THAN SIGNIFICANT*

3 Construction along Telecommunications Routes 1, 2, and 3 would be transient and minimal,
4 moving to different work areas as the fiber optic cable is installed in new and existing underground
5 conduit and along existing overhead poles. Most work would involve a truck and crew stringing
6 telecommunications lines on existing structures. There would be minimal trenching, which would
7 require a small crew and a few pieces of equipment at most. Due to the short duration and minimal
8 intensity of activities, impacts due to telecommunications construction would be less than
9 significant.

10

11 **Transmission and Subtransmission Construction Activities**

12 *LESS THAN SIGNIFICANT*

13 Transmission, subtransmission, and distribution work adjacent to the substation would require
14 work in various locations for short durations as poles are installed or removed, and conductor is
15 installed. Construction activities would add more encroaching elements to the landscape. Due to
16 the intermittent and temporary (i.e., less than about one week) nature of the construction activities
17 at any one location, visual impacts from construction activities would be less than significant. The
18 areas of disturbance created by construction activities, if untreated, may be present for a long
19 period of time and therefore could be seen by a substantial number of viewers. However, these
20 areas of disturbance would be located in areas where there is existing transmission line
21 infrastructure such that they would not substantially degrade the existing visual character or
22 quality of the site. Impacts would be less than significant.

23

24 ***North Area***

25 *LESS THAN SIGNIFICANT*

26 Figures 4.1-4a and 4.1-4b show existing views from areas within the vicinity of Goodrich
27 Substation in the City of Pasadena. The temporary tubular steel pole (TSP) and loop-in that would
28 be installed as part of the proposed project and that would be present during the construction
29 phase would be visible from I-210 as well as nearby residences and a community college. However,
30 other existing tall metal lattice transmission towers, a cell phone tower, and other tall metal
31 structures associated with Goodrich Substation would be visible alongside the temporary
32 infrastructure. The additional contrast would be minimal and vividness, intactness, and unity of
33 views from these areas would not be substantially reduced.

34

35 Construction activities associated with the temporary TSP and the telecommunications trenching
36 would add more encroaching elements to the landscape. Construction at this location would be low
37 intensity, take a minimal amount of time, and also take place immediately adjacent to the existing
38 substation. The activities would not substantially degrade visual quality and would be consistent
39 with the electrical infrastructure and other industrial looking elements nearby. Impacts would be
40 less than significant.

41

1 **South Area**

2 *LESS THAN SIGNIFICANT*

3 Work in the City of Commerce includes the replacement of a single LST with a new LST. Work in the
4 City of Bell Gardens includes the conversion of a street light source line from overhead to
5 underground within an existing street. Construction activities associated with each of these
6 proposed project components would be temporary and limited in scope. Construction activities
7 would not substantially degrade the existing visual character or quality of the site. Impacts would
8 be less than significant.

9
10 **Satellite Substations**

11 *LESS THAN SIGNIFICANT*

12 Work at three satellite substations, Walnut Substation in Industry, Pardee Substation in the City of
13 Santa Clarita, and Vincent Substation in the City of Palmdale, would require ground disturbance
14 activities within the perimeter fence line of the existing substations. The activities would therefore
15 be consistent with the existing industrial look of the substations. Impacts would be less than
16 significant.

17
18 **Operation and Maintenance**

19 **Main Project Area**

20 **Transmission, Subtransmission, and Distribution Lines**

21 *LESS THAN SIGNIFICANT*

22 **KOP 2: View Northeast from Potrero Grande Drive and KOP 4: View Southeast from East**
23 **Markland Drive near Woodland Way**

24 Figures 4.1-5a and 4.1-5b show existing views and visual simulations of the proposed project from
25 KOPs 2 and 4 respectively. While the project involves removal of existing structures, many of these
26 structures would be replaced with similar infrastructure in a slightly different alignment, as
27 demonstrated in Figures 4.1-5a and 4.1-5b. The vertical and geometric forms and lines of
28 transmission, subtransmission, and distribution lines installed near the proposed Mesa Substation
29 would be in strong contrast to the mostly horizontal or rounded forms and lines of flat or varied
30 terrain and the rounded, natural forms and lines of vegetation present in the views. Where present,
31 these structures would be silhouetted against the sky above the horizon line, which would draw
32 viewer attention and increase their contrast in many landscapes. Given that there would be an
33 overall net reduction or maintenance of the total number of structures at KOPs 2 and 4 (and
34 approximately one less 500-kV structure, eight fewer 220-kV structures, and 41 fewer
35 subtransmission poles overall), the result would be either maintenance or slight improvement of
36 the existing visual quality of the area. In addition to the contrast produced by their form, line, and
37 texture, transmission lines could also produce strong contrast due to the reflectivity of conductors
38 or color or finish of structures, especially if they have a shiny, metallic, galvanized finish. For
39 transmission, subtransmission, and distribution lines at KOPs 2 and 4, there would be an overall
40 reduction in conductors and structures due to undergrounding of existing lines, again resulting in
41 maintenance or slight improvement of the existing visual quality of the area. Impacts would be less
42 than significant at KOP 2 and KOP 4.

43
44 Installation of marker balls may be recommended by the FAA on structures over 200 feet above
45 ground per FAA Advisory Circular 70/7460-1L (FAA 2015). The location and other details of

1 marker balls would be recommended by the FAA after SCE submits an FAA Form 7460-1 once
 2 engineering has been completed to the point where actual heights of structures are known. The
 3 three proposed 500-kV structures would range from approximately 140 to 200 feet aboveground.
 4 Conductors would be placed 12 to 14 feet below the top of the LST (see Figure 2-5). The ground
 5 surface is about level in the area of the two conductor spans. Notably, the recently constructed
 6 TRTP 500-kV transmission line does not have marker balls. Together, this indicates that no
 7 conductor would be located over 200 feet from the ground and that no marker balls are likely to be
 8 required. If, however, during final engineering, the conductor is placed more than 200 feet above
 9 the ground, then marker balls may be required along these two spans, which together measure
 10 about 1,200 linear feet. The nearest transmission span with marker balls has a linear spacing of as
 11 little as 170 feet. At a 170-foot interval distribution, there would be up to three marker balls per
 12 span, and all marker balls would be aviation orange. It would be speculative at this time to predict
 13 whether the FAA would recommend lighting of any marker balls, but they have not made this
 14 recommendation for other similar projects. Motorists on SR-60 would see the marker balls as they
 15 travel along the freeway. However, there are marker balls on the transmission lines that cross SR-
 16 60 and are adjacent to SR-60 about 0.6 miles east (about 30 seconds driving) of the project area.
 17 For motorists on SR-60, the marker balls would be consistent with the visual character and quality
 18 of SR-60. Impacts would be less than significant. Motorists traveling down Saturn Street in
 19 Monterey Park would have views of the marker balls against the sky. The skyline, however, is
 20 characterized by encroachment of transmission infrastructure. The marker balls would not be
 21 visually dominant at a distance of about 900 feet (the distance of the transmission line to the
 22 intersection of Saturn Street with Potrero Grande Drive). The visual impact would be minimal, and
 23 the marker balls would not change the visual character or quality. Impacts would be less than
 24 significant.

25
 26 **Telecommunications Routes**

27 *LESS THAN SIGNIFICANT WITH MITIGATION*

28 The addition of new overhead telecommunications lines would not be noticeable to viewers. The
 29 majority of telecommunications lines would be installed on existing distribution poles that already
 30 have several existing lines on them; therefore, the overall aesthetic impact of the addition of a
 31 single line would not be noticeable. In all areas where telecommunications routes have been
 32 installed underground in newly trenched areas (i.e., at the far eastern extent of
 33 Telecommunications Routes 1 and 3, the extent of Telecommunications Route 1 near the Mesa
 34 Substation, and some portions of Telecommunications Route 2 along North Wilcox Avenue and
 35 West Lincoln Avenue), pavement would be restored such that there would be no residual visual
 36 quality or character effect where trenching takes place in roadways.

37
 38 Work areas located in unpaved, more natural-looking areas (at the far eastern extent of
 39 Telecommunications Routes 1 and 3) could look disturbed. The disturbance would occur in a linear
 40 pattern. This would not substantially degrade the area at the far eastern extent of
 41 Telecommunications Route 1, given the existing ground disturbance and other infrastructure in the
 42 area. However, the far eastern extent of Telecommunications Route 3 would be located in the
 43 Whittier Narrows Natural Area, where the area is less disturbed. A linear disturbed area would be a
 44 substantial degradation in visual quality until it naturally revegetates, which would take several
 45 years to occur. This would be a significant impact. SCE's commitment to restoring work areas, per
 46 APM BIO-02 and APM BIO-02 (see Section 4.3, "Biological Resources"), only requires restoration of
 47 certain types of vegetation, and impacts would remain significant. MM AES-2 would extend the
 48 restoration requirement to all disturbed areas. Impacts would be less than significant with
 49 mitigation.

50



KOP 2 – Existing view from Potrero Grande Drive near substation entrance looking northeast



KOP 2 – Visual simulation of the Proposed Project

Figure 4.1-5a
KOP 2: Visual Simulation
View Northeast from Potrero Grande Drive
Mesa 500-kV Substation Project

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KOP 4 – Existing view from East Markland Drive near Woodland Way looking southeast



KOP 4 – Visual simulation of the Proposed Project

Figure 4.1-5b
KOP 4: Visual Simulation
View Southeast from East Markland Drive Near Woodland Way
Mesa 500-kV Substation Project

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1 **North and South Areas**

2 *LESS THAN SIGNIFICANT*

3 Work within the North and South Areas include the replacement of a single LST with a similar LST
4 in the City of Commerce, installation of a temporary pole and 220-kV tie-in at Goodrich Substation
5 in Pasadena that would be removed following construction, and the conversion of an existing
6 streetlight source line. The new LST in Commerce would not be noticeably different from the
7 existing LST; therefore, impacts would be less than significant. The new telecommunications
8 components at Goodrich Substation would be underground in an already disturbed area and
9 therefore would not be noticeable during operation. No visual impact would result from operation
10 and maintenance at Goodrich Substation due to the 220-kV tie-in because operation and
11 maintenance would be the same as under existing conditions. Conversion of the overhead street
12 light source line to underground would remove from view an existing overhead line that contrasts
13 somewhat with its surroundings. Although minor, removal of this element would result in a
14 beneficial aesthetic impact; therefore, there would be no impact associated with this component.
15

16 **Existing Substations**

17 *NO IMPACT*

18 Components installed at Walnut, Vincent, and Pardee substations would be undergrounded and not
19 visible during operations. There would be no impact.
20

21 **Mesa Substation**

22 *SIGNIFICANT WITH MITIGATION*

23 At the Mesa Substation, the applicant would implement Landscape Option 1 or 2 along the
24 substation perimeter wall. Landscape Option 1's chief feature is small trees planted along the
25 perimeter of the substation wall along Potrero Grande Drive. Landscape Option 2 uses small and
26 medium height shrubs and does not include trees. Landscape Option 1 may not be feasible due to
27 security concerns associated with placement of trees along the perimeter wall. Trees may not be a
28 feasible landscaping option, depending on the design outcome per the North American Electric
29 Reliability Corporation Critical Infrastructure Protection (CIP) requirements in CIP-014-2 (Physical
30 Security). If Landscape Option 1 is determined to be infeasible due to physical security
31 requirements (e.g., if the North American Electric Reliability Corporation [NERC] does not allow
32 SCE to implement the vegetation and design under Landscape Option 1), the applicant would
33 implement Landscape Option 2. Where the visual impacts would be different under Landscape
34 Option 1 than under Landscape Option 2, separate analyses are provided.
35

36 **KOP 1: View East from Potrero Grande Drive at Atlas Avenue**

37 Figures 4.1-5c and 4.1-5d show two potential views of the proposed project from KOP 1 looking
38 east toward the proposed Mesa Substation from the north side of Potrero Grande Drive at its
39 intersection with Atlas Avenue. With implementation of the proposed project, the existing LSTs and
40 conductors would be removed and replaced with three taller LSTs and one TSP. The 500-kV
41 switchracks, 220-kV switchracks, and transmission line towers on the substation site are visible
42 silhouetted against the sky in the simulations. A new 12-foot-high perimeter screening wall would
43 replace the existing masonry wall. All of the existing mature trees and other vegetation on and
44 immediately adjacent to the substation site in the existing views would be removed. Vegetation to
45 be removed includes a number of tall trees that currently screen the lower portions of transmission

1 structures and most of the other metal structures at the substation. The vegetation currently serves
2 to soften the geometric patterns of the existing substation and transmission infrastructure.

3
4 The new LSTs would be similar in appearance to the existing LSTs but would be taller. More LSTs
5 would be located closer to viewers traveling along Potrero Grande Drive. The LSTs would therefore
6 be more dominant than the existing LSTs. The new TSP and other tall metal structures would add
7 new forms and lines to the view. These changes, in combination with removal of the existing tall
8 trees and other vegetation on and around the site, would produce moderately strong contrast and
9 reduce the intactness and unity of views from Potrero Grande Drive.

10
11 Figure 4.1-5c shows a visual simulation of the proposed project from KOP 1 with the
12 implementation of Landscape Option 1. Figure 4.1-5d shows a visual simulation of the proposed
13 project from KOP 1 with the implementation of Landscape Option 2 along Potrero Grande Drive.

14 **Landscape Option 1**

15
16 The simulation in Figure 4.1-5c shows a new masonry screening wall and new street trees lining
17 the sidewalk along the edge of the site and Potrero Grande Drive. Although the new, taller LSTs,
18 TSP, and other metal structures would remain dominant in this view, the row of street trees
19 extending above the new masonry wall would help partially screen views of the lower portions of
20 elements in the substation and would partially screen the wall. The trees are shown at
21 approximately 15 to 20 years old, which may be approximately 5 to 10 years after planting,
22 depending on their species and size and age at planting. The trees would also somewhat reduce the
23 contrast produced by the new, tall metal structures and wall by softening the angular patterns of
24 the wall and metal structures. Contrast would remain moderately strong and intactness and unity
25 for views from Potrero Grande Drive would be substantially reduced during this extended period of
26 time unless the street trees are similar in size to the existing vegetation within a few years after
27 construction. Contrast would be moderately strong, the sole TSP would be dominant as a strong
28 vertical feature, and the new landscaping would not soften vertical lines as much as the existing
29 vegetation. Visual sensitivity is moderate. The existing vividness, intactness, and unity would
30 therefore be substantially reduced. Landscape Option 1 would therefore result in a significant
31 impact.

32
33 MM AES-2 would require that the applicant provide landscape screening and aesthetic treatment
34 along Potrero Grande Drive to reduce aesthetic impacts of the proposed project. MM AES-3
35 requires design approval of the final Landscape and Aesthetic Treatment Plan by CPUC prior to
36 construction. With implementation of MM AES-2 and MM AES-3, impacts under this criterion
37 would remain significant and unavoidable for several years for views from KOP 1 before trees grow
38 to maturity. As the trees in the landscaping mature, they would screen more of the substation and
39 soften the contrast, and impacts would then be less than significant.



KOP 1 – Existing view from Potrero Grande Drive at Atlas Avenue looking east



KOP 1 – Visual Simulation of the Proposed Project

Figure 4.1-5c
**Visual Simulation, KOP 1– Landscape Option 1:
View East from Potrero Grande Drive at Atlas Avenue**
Mesa 500-kV Substation Project

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KOP 1 – Existing view from Potrero Grande Drive at Atlas Avenue looking east



KOP 1 – Visual simulation of the Proposed Project with shrub and groundcover landscaping

Mesa Substation Supplemental Revised Visual Simulations, September 2015

Figure 4.1-5d
**Visual Simulation, KOP 1– Landscape Option 2:
View East from Potrero Grande Drive at Atlas Avenue**
Mesa 500-kV Substation Project

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1 **Landscape Option 2**

2 The simulation in Figure 4.1-5d shows a new masonry screening wall and new low and medium
3 height shrubs and groundcover in the area between the sidewalk and wall along the edge of the site
4 and Potrero Grande Drive. Boulders of various sizes and gravel and/or crushed rock would also be
5 placed in the planting areas. The new plantings shown in the simulation are approximately 3 to 6
6 feet in height, which represents their appearance at approximately eight years old, or
7 approximately three to five years after planting. The new masonry screening wall would help
8 screen views of the lower portions of some elements in the substation; however, a large portion of
9 the tall, metal structures associated with the switchracks and other substation elements would be
10 visible silhouetted against the sky above the long, linear perimeter wall. The low plantings,
11 boulders, and masonry wall would provide some decorative interest, but would not provide
12 substantial screening or reduce the contrast produced by the combination of new metal structures
13 and absence of taller vegetation. These changes would result in strong contrast and a substantial
14 reduction in vividness, intactness, and unity in comparison to the mature vegetation that would
15 otherwise help soften and screen views of the proposed project. Because the existing vividness,
16 intactness, and unity would be substantially reduced; contrast is strong; and visual sensitivity is
17 moderate, the proposed project with Landscape Option 2 would substantially degrade the existing
18 visual character and quality of the site and its surroundings. Aesthetic impacts at KOP 1 would be
19 significant.

20
21 To reduce aesthetic impacts of the proposed project for KOP 1 under Landscape Option 2, MM
22 AES-3 would require that the applicant provide landscape screening and aesthetic treatment along
23 Potrero Grande Drive. MM AES-3 requires design approval of the final Landscape and Aesthetic
24 Treatment Plan by CPUC prior to construction. However, the landscaping allowed under this option
25 still excludes trees and other larger plants that would serve a visual screening function and that
26 would be taller than the walls to reduce contrast. Thus, impacts under this criterion would be
27 somewhat reduced by implementing MM AES-2 and MM AES-3 but would remain significant at KOP
28 1 for this option, even after implementation of mitigation.

29
30 **KOP 3: View Southwest from Potrero Grande Drive at Saturn Street**

31 Figures 4.1-5e and 4.1-5f show two potential views of the proposed project from KOP 3 looking
32 southwest toward the proposed Mesa Substation from the north side of Potrero Grande Drive at its
33 intersection with Saturn Street. With implementation of the proposed project, the existing LSTs,
34 TSPs, and conductor would be removed and replaced with taller LSTs, TSPs, and new conductor.
35 The 500-kV and 220-kV switchracks, metal buildings, and transmission towers on the substation
36 site would be visible. The taller structures would be silhouetted against the sky. A new perimeter
37 wall, approximately 12 feet high, would replace the existing masonry wall and screening fence
38 along Potrero Grande Drive. All of the existing mature trees and other vegetation on and
39 immediately adjacent to the substation site and visible in the existing view would be removed.
40 Vegetation to be removed includes a number of tall trees that currently screen the lower portions
41 of transmission structures and most of the other metal structures at the substation; the vegetation
42 also softens the otherwise geometric patterns at the current substation site.
43

1 Although the new LSTs would be similar in appearance to the existing LSTs, they would be taller
2 and closer to viewers traveling along Potrero Grande Drive. As a result, they would be more
3 dominant than the existing LSTs. The new TSPs, tall metal switchracks, and new metal operations
4 and test and maintenance buildings would add new geometric forms and lines to the view. These
5 changes, in combination with removal of the existing tall trees and other vegetation on and around
6 the site, would produce strong contrast and reduce the intactness and unity of views from Potrero
7 Grande Drive.
8

9 Figure 4.1-5e shows a visual simulation of the proposed project from KOP 3 with implementation
10 of Landscape Option 1. Figure 4.1-5f shows a visual simulation of the proposed project from KOP 3
11 with implementation of Landscape Option 2 along the substation perimeter wall facing Potrero
12 Grande Drive.
13

14 **Landscape Option 1**

15 The simulation in Figure 4.1-5e shows a new masonry screening wall, new street trees lining the
16 sidewalk along the edge of the site and Potrero Grande Drive, and new metal operations and test
17 and maintenance buildings. The trees are shown at approximately 15 to 20 years old, which may be
18 approximately 5 to 10 years after planting, depending on their species, size, and age at planting.
19 With installation of the new street trees and screening wall under Landscape Option 1, vividness
20 would be only slightly reduced in the long term from the existing condition. In the short term,
21 vividness would be substantially reduced before the trees reached mature height. The trees would
22 also somewhat reduce the contrast produced by the new, tall metal structures and wall by
23 softening the angular patterns of the wall and metal structures. The new masonry screening wall
24 and row of street trees would help screen views of the lower portions of elements in the substation
25 and slightly reduce the contrast; however, the trees would not substantially screen views of the
26 new metal buildings or central TSP in the view, intactness and unity would be substantially
27 reduced, and contrast would be moderately strong. Because the existing vividness, intactness, and
28 unity would be reduced, contrast is moderately strong, and visual sensitivity is moderately high,
29 the proposed project would substantially degrade the existing visual character and quality of the
30 site and its surroundings. Therefore, aesthetic impacts for KOP 3 would be significant under
31 Landscape Option 1.
32

33 To reduce aesthetic impacts of the proposed project for KOP 3 under Landscape Option 1 and
34 ensure the site's visual character and quality are maintained at a level similar to the existing
35 condition, MM AES-3 would require that the applicant provide aesthetic treatment for the
36 operations and test and maintenance buildings and also provide landscape and aesthetic treatment
37 along Potrero Grande Drive. MM AES-3 requires design approval of a final Landscape and Aesthetic
38 Treatment Plan by CPUC prior to construction. Ultimately, the majority of the visible infrastructure
39 is present against most of the visible sky and cannot be effectively screened or modified to reduce
40 its visual dominance. With implementation of MM AES-3 and MM AES-4, impacts under this
41 criterion would be somewhat reduced, but would remain significant at KOP 3.
42
43



KOP 3 – Existing view from Potrero Grande Drive at Saturn Street looking southwest



KOP 3 – Visual Simulation of the Proposed Project

Figure 4.1-5e
**Visual Simulation, KOP 3 – Landscape Option 1:
View Southwest from Potrero Grande Drive at Saturn Street**
Mesa 500-kV Substation Project

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KOP 3 – Existing view from Potrero Grande Drive at Saturn Street looking southwest



KOP 3 – Visual simulation of the Proposed Project with shrub and groundcover landscaping

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Figure 4.1-5f
**Visual Simulation, KOP 3 – Landscape Option 2:
View Southwest from Potrero Grande Drive at Saturn Street**
Mesa 500-kV Substation Project

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1 **Landscape Option 2**

2 The simulation in Figure 4.1-5f shows a new masonry screening wall, new low and medium height
3 shrubs and groundcover in the area between the sidewalk and perimeter wall along the edge of the
4 site on Potrero Grande Drive, and new metal operations and test and maintenance buildings.
5 Boulders of various sizes and gravel and/or crushed rock would also be placed in the planting
6 areas. The new plantings shown in the simulation are approximately 3 to 6 feet in height, which
7 represents their appearance at approximately eight years old, or approximately three to five years
8 after planting. The new masonry screening wall would help screen views of some of the lower
9 portions of elements in the substation and slightly reduce the contrast; however, a large portion of
10 the tall metal structures associated with the switchracks and other substation elements and the
11 new buildings would be more noticeable silhouetted against the sky above the long, linear
12 perimeter wall. The low plantings, boulders, and masonry wall would provide some decorative
13 interest, but would not provide substantial screening or reduce the contrast produced by the
14 combination of new metal structures and buildings and absence of tall vegetation. These changes
15 would result in strong contrast and a substantial reduction in vividness, intactness, and unity with
16 the loss of mature vegetation that would otherwise help soften and screen views of the proposed
17 project. Because the existing vividness, intactness, and unity would be reduced; contrast is strong;
18 and visual sensitivity is moderately high, the proposed project for this option would substantially
19 degrade the existing visual character and quality of the site and its surroundings. Therefore,
20 aesthetic impacts for KOP 3 would be significant under Landscape Option 2.

21
22 To reduce aesthetic impacts of the proposed project for KOP 3 under Landscape Option 2 and
23 ensure the site's visual character and quality are maintained at a level similar to the existing
24 condition, MM AES-3 would require that the applicant provide aesthetic treatment for the
25 operations and test and maintenance buildings and landscape and aesthetic treatment along
26 Potrero Grande Drive. MM AES-3 requires design approval of a final Landscape and Aesthetic
27 Treatment Plan by CPUC prior to construction. Ultimately, the majority of the visible infrastructure
28 impedes into most of the sky and cannot be effectively screened or modified to reduce its visual
29 dominance. With implementation of MM AES-3, impacts under this criterion would be somewhat
30 reduced, but would remain significant at KOP 3.

31
32 **KOP 5: View Northeast from the Pomona Freeway near North Vail Avenue**

33 Figure 4.1-5g shows existing views and post-project views of the Mesa Substation from KOP 5
34 looking northeast from the eastbound (southern) lanes of the Pomona Freeway near its crossing of
35 North Vail Avenue and East Markland Drive. With implementation of the proposed project, the
36 existing LSTs, TSPs, and conductor would be removed and replaced with taller LSTs, TSPs, and new
37 conductor. The 500-kV, 220-kV, and 66-kV switchracks and the transmission towers on the
38 substation site would be visible silhouetted against the sky. The tall trees and other vegetation on
39 the substation site that help screen the lower portions of LSTs and other metal structures in the
40 existing view would be removed. The remaining vegetation visible in the simulation is northeast of
41 and off the substation site and would remain; the light-colored substation equipment would
42 contrast with this darker vegetation and be noticeable to motorists.

43
44 The new LSTs would be similar in appearance to the existing LSTs and there would be fewer LSTs.
45 The new LSTs would be taller and appear more dominant than the existing LSTs. The new TSPs
46 would be taller and closer in this view and they would appear dominant to viewers for this KOP. In
47 combination with the switchracks, the electrical substation equipment would be more dominant in
48 the middleground and would add new forms and lines to the view. These changes, in combination
49 with removal of the existing tall trees and other vegetation on and around the site, would reduce

1 the intactness and unity of views from the Pomona Freeway. The new structures in the substation
2 would be more noticeable due to their taller heights, closer proximity to viewers, and mix of forms
3 and lines producing a more cluttered appearance. However, the increase in contrast would be at
4 most moderate and the vividness, intactness, and unity would be only somewhat reduced due to
5 the merely incremental change over current visual conditions. The proposed project would not
6 substantially reduce vividness, intactness, and unity, and contrast would be moderate. Visual
7 sensitivity is moderate. Therefore, the proposed project would not substantially degrade the
8 existing visual character and quality of the site and its surroundings for views from KOP 5. Impacts
9 would be less than significant.

11 **KOP 6: View West from the Pomona Freeway near Greenwood Avenue**

12 Figure 4.1-5h shows existing and potential views of the proposed project from KOP 6 looking west
13 from the westbound (northern) lanes of the Pomona Freeway near its undercrossing of Greenwood
14 Avenue. With implementation of the proposed project, the existing LSTs, TSPs, and conductors
15 would be removed and replaced with taller LSTs, TSPs, and new conductors. The 220-kV and 66-kV
16 switchracks and transformer arrays and the transmission towers on the substation site would be
17 visible and silhouetted against the sky. The tall trees and other vegetation on the substation site
18 that help screen the lower portions of LSTs and other metal structures in the existing view would
19 be removed, leaving only low grasses adjacent to the substation. The trees currently serve to soften
20 the transition between the transmission structures and the natural groundcover. The remaining
21 vegetation visible in the foreground of the simulation is outside the perimeter wall of the
22 substation but within the site boundary. The additional vegetation visible beyond the new
23 substation in the simulation is outside the substation site. The lighter substation equipment would
24 stand out against this darker vegetation in the distance.

26 The new LSTs would be slightly lighter in color than the existing LSTs. They would be slightly taller
27 but would be fewer in number. The new TSPs would be close to SR-60 and would appear as
28 dominant elements to viewers for KOP 6. Overall, fewer transmission elements would be dominant
29 with the proposed project than for the existing view. The new TSPs, metal switchracks, and
30 transformer arrays would add new forms, lines, and textures to the view. The grey horizontal
31 masonry wall with regularly spaced, light-colored vertical elements would add a new horizontal,
32 linear element that would contrast only slightly in form, line, color, and texture with the natural,
33 non-linear landscape since the wall blends in with the new substation infrastructure. The most
34 noticeable change would be the substation equipment itself, which would be consistent with the
35 existing visual character of the area. The changes, in combination with removal of the existing tall
36 trees and other vegetation on and around the site, would somewhat reduce the intactness and
37 unity of views from the Pomona Freeway. New metal structures in the substation would be more
38 noticeable due to their taller heights; closer proximity to viewers; and mix of forms, lines, and
39 textures producing a more cluttered appearance at ground level at the site. The increase in contrast
40 produced by the proposed project would be moderate given that the existing conditions are of
41 moderately low scenic quality. Visual sensitivity in the area is moderate. Therefore, the proposed
42 project would only slightly reduce the visual quality of the area. Impacts related to the substation
43 and transmission infrastructure would be less than significant.



KOP 5 – Existing View Northeast from the Pomona Freeway Near North Vail Avenue



KOP 5 – Visual simulation of the Proposed Project

Figure 4.1-5g
KOP 5: Visual Simulation
View Northeast from the Pomona Freeway Near North Vail Avenue
Mesa 500-kV Substation Project

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KOP 6 – Existing view from westbound State Route 60 near Greenwood Avenue



KOP 6 – Visual simulation of the Proposed Project

Figure 4.1-5h
KOP 6: Visual Simulation
View West from the Pomona Freeway Near Greenwood Avenue
Mesa 500-kV Substation Project

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1 During the scoping period for the proposed project, the City of Monterey Park indicated that graffiti
2 is common in the area and that the introduction of a new 12-foot-high wall visible to those
3 traveling west on Pomona Freeway would likely provide an attractive surface for people to spray
4 graffiti. If the wall as shown in KOP 6's visual simulation contained graffiti, it would substantially
5 reduce the intactness of the area because of the degradation of visual integrity. Graffiti would also
6 substantially reduce the unity of the area because it would increase the contrast with the wall and
7 substation equipment. This would result in a significant impact. MM AES-4 would require the
8 installation of vegetative screening along the southeast side of the perimeter wall to screen views
9 of the wall from SR 60. It would also require abatement of graffiti within 48 hours of reporting. MM
10 AES-4 would reduce impacts associated graffiti to less than significant.

11 12 **KOP 7: View Northeast from North Vail Avenue near Appian Way**

13 Figure 4.1-5i shows existing and potential views of the proposed project from KOP 7 looking
14 northeast from a location on North Vail Avenue north of its intersection with Appian Way. With
15 implementation of the proposed project, the existing LSTs and conductors would be removed and
16 replaced with new LSTs, TSPs, and conductors. The new LSTs and TSPs would be taller and
17 somewhat wider than the existing LSTs and would be silhouetted to a greater degree than the
18 existing structures against the sky above the buildings, houses, and trees on the low ridge and
19 hillside north of the substation site.

20
21 Although similar in form, line, and texture to the existing LSTs, the new LSTs would appear more
22 dominant in the view due to their greater heights, lighter color, and more noticeable silhouettes.
23 LSTs would interfere with the view of the San Gabriel Mountains in the background for residential
24 viewers in the neighborhood because the new LSTs and TSPs would extend higher above the
25 ridgeline than the existing LSTs. The LSTs detract somewhat from views of the distant San Gabriel
26 Mountains. In comparison, the new LSTs are encroaching and dominant elements that make the
27 San Gabriel Mountains far less noticeable. The new LSTs produce moderate to high contrast and
28 substantially reduce the vividness, intactness, and unity of views from this representative KOP and
29 the surrounding residential neighborhood. Because visual sensitivity is moderately high to high,
30 contrast is moderate to high, and vividness, intactness, and unity would be substantially reduced,
31 the proposed project would substantially degrade the existing visual character and quality of the
32 site and its surroundings. Aesthetic impacts for KOP 7 would be significant.

33
34 MM AES-5 would require finishes on all new transmission and other structures with metal surfaces
35 to be non-reflective, new conductors would be non-specular, and the lower portions of
36 transmission structures and other structures lower to the ground would be darkened. Using a
37 darker finish on structures and other metal surfaces in and near the substation would somewhat
38 reduce their contrast by reducing potential glare and color contrast for components of the
39 proposed project and help blend them into the landscape setting so that they are less noticeable.
40 Ultimately, the height of the transmission structures cannot be changed, nor can screening be done
41 to obscure the structures. There would still be significant skylining and a change in dominant
42 features in the view. Thus, impacts would remain significant after implementation of MM AES-5.

1 **Impact AE-2: Create a new source of substantial light or glare, which would adversely affect**
2 **day or nighttime views in the area.**

3 *LESS THAN SIGNIFICANT WITH MITIGATION*
4

5 **Construction**

6 Project construction equipment and materials may generate glare during daytime hours; however,
7 impacts would be temporary and dependent upon the location of the sun and the orientation of the
8 construction equipment, which would frequently change location within the construction site.

9 Because glare would be intermittent and temporary, daytime impacts from glare during
10 construction would be less than significant.

11
12 Temporary lighting may be required at night to protect the safety of the construction worker in
13 active construction areas. Any temporary nighttime lighting would be oriented and shielded to
14 minimize its effect on any nearby sensitive receptors. Impacts of nighttime safety lighting would be
15 less than significant.

16
17 In addition, staging areas may be lit for security purposes in the evenings. Given that the
18 construction period is 55 months long and staging yards may be used for the duration of
19 construction, the lighting would be considered long term. Long-term nighttime lighting as
20 proposed for nighttime activities at staging areas would create a new source of substantial light for
21 nearby sensitive receptors if not properly oriented and shielded. If nighttime lighting is required at
22 any of the seven identified staging yards, MM AES-6 would be implemented. MM AES-6 would
23 require that the applicant shield lighting and orient it away from sensitive receptors to minimize its
24 effect on any nearby sensitive receptors. Implementation of this mitigation measure would reduce
25 impacts to less than significant.

26
27 **Operation and Maintenance**

28 Lighting during operations of the proposed project would be required for regular maintenance and
29 inspection throughout the proposed project area and at the proposed Mesa Substation for safety
30 and security, and for regular maintenance and inspection activities.

31
32 For proposed components outside of the proposed Mesa Substation, such as the
33 telecommunications routes, transmission lines, subtransmission lines, distribution lines, and other
34 existing substations, lighting during operations would only be used for occasional maintenance and
35 inspection that occurs at night (which would usually be emergency in nature) and would be
36 intermittent and temporary and comparable to current operation and maintenance activities.
37 There would be no impact.



KOP 7 – Existing view from North Vail Avenue near Appian Way looking northeast



KOP 7 – Visual simulation of the Proposed Project

Figure 4.1-5i
KOP 7: Visual Simulation
View Northeast from North Vail Avenue Near Appian Way
Mesa 500-kV Substation Project

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1 The Mesa Substation would contain permanent lighting. As described in Chapter 2, lighting at the
2 proposed Mesa Substation during operations would consist of light-emitting diode lights in all
3 areas where nighttime operations or maintenance activities would occur. Lights for maintenance
4 would be directed downward, controlled manually, and turned off during all times when lights are
5 not needed. In addition, entry gate lighting would only be on when the gate is operating and would
6 stay on briefly after the gate closes. The new substation would occupy a larger area than the
7 existing substation and is likely to require more lighting over this larger area for illumination of
8 areas including parking areas, roadways, walkways, and building entries. In addition, the FAA could
9 recommend that safety warning lighting be installed on some tall transmission structures. If
10 determined necessary and installed, these lights would be red in color and, although directed
11 upwards and outwards toward potential aviation traffic, be visible to residents and other viewers
12 in the vicinity. The urbanized area in the vicinity of the existing Mesa Substation contains a variety
13 of sources of lighting, including the Pomona Freeway; street lights along roads, parking areas,
14 businesses, and residences; and the substation itself. The new source of light at the Mesa Substation
15 would be substantial and would adversely affect nighttime views in the area because new lighting for
16 the substation would be introduced over a larger area and new lights could be required on some
17 tall transmission towers. Impacts would be significant. MM AES-6 would be implemented to reduce
18 the effects of lighting. Impacts would be less than significant with implementation of MM AES-6.

19
20 The proposed project would introduce new sources of glare to the area. Some components of the
21 project have reflective surfaces. The new transmission towers would be reflective when first
22 installed but would weather to a dull gray finish. New telecommunications cable would be a dull
23 aluminum gray. New conductors would be non-specular. Elements of the proposed project,
24 including new transmission towers, switchracks, galvanized metal fences, light-colored concrete or
25 masonry retaining walls, buildings with metal roofs or other surfaces, light poles, and other project
26 elements that are light in color or have shiny, reflective surfaces could produce substantial glare
27 that would adversely affect daytime views in the area. This impact would be significant.
28 Implementation of MM AES-5 would require that, to reduce glare and color contrast, the finishes on
29 all new transmission and other structures with metal surfaces be non-reflective, new conductors
30 be non-specular, and other structures use a dulling finish to help blend these structures with their
31 surroundings. Therefore, with implementation of MM AES-5, this impact would be less than
32 significant.

33 34 **4.1.4 Mitigation Measures**

35
36 **MM AES-1: Staging Area Screening.** For Staging Yards 1, 2, 6, and 7, the applicant shall at a
37 minimum screen most views of the interiors of these areas using perimeter screening fences or
38 other effective screening. Perimeter screening fences will be a minimum of 6 feet high and covered
39 with a dark-colored (e.g., dark green, brown, or black) fabric or other material that provides at least
40 50 percent screening and covers the fence exterior.

41
42 **MM AES-2: Minimize Clearing and Ground Disturbance and Restore Disturbed Areas to Pre-
43 Project Conditions.** Clearing and ground disturbance required for construction, including but not
44 limited to, access roads, pulling sites, construction and maintenance pads, and construction
45 laydown areas, shall be the minimum required, and the applicant shall restore all disturbed areas
46 not required for operation and maintenance to pre-construction conditions to the extent feasible.
47 Restoration would not be feasible if, for example, a landowner other than SCE does not wish the
48 area to be restored. Areas around new or rebuilt transmission structures that must be cleared
49 during the construction process or other areas of ground disturbance shall be regraded and

1 revegetated to be restored to an appearance that would replicate pre-construction conditions. The
2 CPUC shall verify appropriate restoration of disturbed areas. For all paved areas (e.g., streets,
3 sidewalks, and parking areas) disturbed by construction, the applicant shall restore these areas to
4 pre-project conditions in compliance with permits for work within these areas.

5
6 **MM AES-3: Landscape and Aesthetic Treatment along Potrero Grande Drive.** Prior to
7 construction, the applicant shall prepare a Landscape and Aesthetic Treatment Plan that will, at a
8 minimum, provide vegetative screening and other aesthetic treatments along Potrero Grande Drive
9 and in the vicinity of the new entry drive at the substation, and provide aesthetic treatment of the
10 operations and test and maintenance buildings and their immediate surroundings. The Landscape
11 and Aesthetic Treatment Plan shall not conflict with NERC CIP requirements in CIP-014-2 (Physical
12 Security) or related NERC findings. Aesthetic treatments along Potrero Grande Drive shall include
13 design enhancements for the masonry screening wall, adjacent walkway, pavement surfaces, and
14 planting areas and may include raised and median planters or other design enhancements.
15 Aesthetic treatment of the operations and test and maintenance buildings and their immediate
16 surroundings shall include improved color selection and design for the buildings and landscaping
17 of their surroundings that will help screen views of the buildings and blend them with their
18 surroundings. All color finishes for built elements shall be flat and non-reflective. The final
19 Landscape and Aesthetic Treatment Plan along Potrero Grande Drive shall be prepared by a
20 professional landscape architect licensed to work in California. The applicant shall consult with the
21 City of Monterey Park in development of the Landscape and Aesthetic Treatment Plan and both this
22 plan and the final designs for the buildings shall be subject to design review and approval by the
23 City. The Landscape and Aesthetic Treatment Plan shall be provided to the CPUC for final review
24 and receive final approval from the CPUC prior to construction of these buildings and aesthetic
25 treatments along Potrero Grande Drive. The final approved Landscape and Aesthetic Treatment
26 Plan shall be fully implemented within four months of beginning operation of the new substation.

27
28 **MM AES-4: Graffiti Deterrence.** Prior to construction, the applicant shall prepare a Graffiti
29 Prevention and Abatement Plan that will, at a minimum, provide measures for the installation of
30 vegetative screening and the removal of graffiti within 48 hours of report or implement other
31 measures to screen or substantially reduce aesthetic impacts associated with graffiti on the new
32 12-foot-high perimeter wall facing SR 60 along the southeast edge of the proposed Mesa Substation
33 site, such as vegetative screening or other measures intended to fully or mostly screen views from
34 SR 60 of the southeast-facing portion of the wall that is likely to provide a surface that attracts
35 graffiti generally considered unattractive or offensive. The Graffiti Prevention and Abatement Plan
36 shall be provided to the CPUC for final review and approval prior to beginning construction. The
37 final approved Graffiti Prevention and Abatement Plan shall be fully implemented, including
38 installation of all plants for vegetative screening, within four months of beginning operation of the
39 new substation.

40
41 **MM AES-5: Glare Reduction.** To reduce potential glare from components of the proposed project
42 and help blend them into the landscape setting, the finishes on all new transmission and other
43 structures with metal surfaces shall be non-reflective and new conductors shall be non-specular.
44 With the exception of LSTs, TSPs, and switchracks, all metal structures up to 35 feet high and
45 visible from the vicinity of KOP 7 shall have finishes that are dark in color or otherwise colored to
46 help blend the structures with their surroundings.

47
48 **MM AES-6: Night Lighting.** To minimize the effect on any nearby sensitive receptors, night lighting
49 for construction activities, staging areas and other areas used for construction, and nighttime
50 facility operations shall be the minimum necessary to ensure safety and security for nighttime

1 activities and operations. All night lighting used for construction or operations and maintenance
2 shall orient lights downward and be shielded to eliminate off-site light spill at times when the
3 lighting is in use. Lighting at the proposed Mesa Substation shall consist of light-emitting diode
4 lights in all areas where nighttime operations or maintenance activities would occur and be either
5 motion-activated or use timers to the maximum extent feasible to ensure safety and security and
6 reduce the impact of additional light pollution at night.

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