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4.1 AESTHETICS

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?			✓	

4.1.0 Introduction

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that can be seen and that contribute to the public's experience and appreciation of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics, potential visibility, and the extent to which its presence would alter the perceived visual character and quality of the environment. The Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) involves installing a new substation in a landscape dominated by industrial, transportation, and commercial structures. The Proposed Project will represent a noticeable change that is consistent with the existing visual environment and will not substantially alter the existing character of the Proposed Project area. As a result, the visual impacts of the Proposed Project will be less than significant.

4.1.1 Methodology

The analysis of potential visual effects associated with the Proposed Project is based on the review of technical data, including maps, drawings, and photographs of the Proposed Project, as well as field observations that were conducted in December 2013, to document existing visual conditions and to identify potentially affected sensitive viewing locations in the Proposed Project vicinity. Computer-generated visual simulations that show the Proposed Project's appearance were also used to demonstrate its anticipated appearance after construction is complete.

Based on review of Proposed Project data, background information, and field observations, the following viewing locations were determined to be potentially sensitive:

- locations along designated scenic roadways where Proposed Project-related change would be seen;
- locations along nearby travel corridors, including the railroad; and
- nearby residential areas.

The analysis that follows addresses the California Environmental Quality Act (CEQA) Guidelines for visual impact analysis. Central to this assessment is an evaluation of representative public views from which the Proposed Project will be visible. To document the visual changes that would occur, visual simulations depict the proposed Vine Substation site within the existing urban context from two close-range public viewpoints. The visual simulations are presented as before-and-after images. The visual impact assessment was based on an evaluation of the changes to the existing visual resources that would result from construction and operation of the Proposed Project.

4.1.2 Existing Conditions

This section includes a description of the visual setting and regulatory framework. Existing visual conditions are characterized in terms of the physical landscape features that comprise visual resources in the Proposed Project area.

Regulatory Background

Because the California Public Utilities Commission has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, the Proposed Project is not subject to local discretionary land-use regulations. The following analysis of local regulations relating to visual resources is provided for informational purposes. As outlined in the following sections, the construction and operation of the Proposed Project will not conflict with any environmental plans, policies, or regulations adopted by agencies with jurisdiction over local aesthetic regulations.

City of San Diego General Plan

The City of San Diego (City) General Plan contains several elements, including Land Use and Community Planning, Urban Design, Recreation, Conservation, and Historic Preservation that address the need to protect the City's visual resources to some degree. The Mobility, Urban Design, Public Facilities, Services and Safety, and Recreation Elements of the San Diego General Plan (2008) contain provisions regarding aesthetics in the Proposed Project area.

Land Use Element

The Land Use Element delineates 50 Community Plan areas within the city, each with its own adopted community plan. The Proposed Project site is located within the Midway/Pacific Highway Corridor Community Plan area. This element also discusses the relationship between the Coastal Zone and Community Plans. However, it does not contain policies regarding aesthetics that apply to the Proposed Project.

Mobility Element

The 1989 Transportation Element (City of San Diego, 1989, p. 69) identified City-designated scenic routes, including North Harbor Drive, which is a portion of San Diego's 52-mile scenic drive; however, due to the intervening buildings and highway structures, the Proposed Project is not visible from this road.

The Mobility Element of the 2008 General Plan (City of San Diego 2008) supersedes the 1989 Transportation Element. While it recommends designating scenic routes within the City, no scenic routes are identified. Additionally, it recommends placing utility lines underground to the extent practicable (p. ME-25).

Urban Design Element

The Urban Design Element recommends minimizing the visual impact of utilities and undergrounding overhead utilities, and includes the following policies relevant to protecting or enhancing the visual environment:

a. Convert overhead utility wires and poles, and overhead structures such as those associated with supplying electric, communication, community antenna television, or similar service to underground.

b. Design and locate public and private utility infrastructure, such as phone, cable and communications boxes, transformers, meters, fuel ports, back-flow preventors, ventilation grilles, grease interceptors, irrigation valves, and any similar elements, to be integrated into adjacent development and as inconspicuous as possible. To minimize obstructions, elements in the sidewalk and public right-of-way should be located in below grade vaults or building recesses that do not encroach on the right of way (to the maximum extent permitted by codes). If located in a landscaped setback, they should be as far from the sidewalk as possible, clustered and integrated into the landscape design, and screened from public view with plant and/or fencelike elements.

Public Facilities, Services and Safety Element

The Public Facilities, Services and Safety Element recommends undergrounding utility lines. It also recommends incorporating public art into utility facilities.

In 2002, San Diego adopted a policy for the undergrounding of overhead utility lines to protect public health, safety, and general welfare.

- PF-M.4 Cooperatively plan for and design new or expanded public utilities and associated facilities (e.g., telecommunications infrastructure, planned energy generation facilities, gas compressor stations, gas transmission lines, electrical substations and other large scale gas and electrical facilities) to maximize environmental and community benefits.

  e. Incorporate public art with public utility facilities, especially in urban areas.

Recreation Element

The Recreation Element has general provisions regarding aesthetics in the Proposed Project area including preserving open space view corridors to the water and significant topographic features; however, the Proposed Project will not affect view corridors to the water nor will it substantially affect significant topographic features.

Midway-Pacific Highway Corridor Community Plan and Local Coastal Program Land Use Plan

The Proposed Project is located in the Midway/Pacific Highway Corridor Community Plan area, which encompasses approximately 800 acres of relatively flat land situated north of the Centre City area between Old Town and Point Loma. The area is composed of two basic elements—the central Midway area and the narrow, linear-shaped Pacific Highway Corridor, which contains some of the City's oldest industrial areas, including the Proposed Project site.

The community's plan also includes a Local Coastal Program (LCP) Land Use Program as a small portion of it is located in the Coastal Zone. The majority of the Proposed Project site is just outside of but adjacent to the LCP area, with the exception of the approximately 0.3-mile portion of the 12 kV distribution relocation that will be placed in an existing conduit within Pacific Highway.

The plan contains general provisions regarding urban design in commercial areas, including the following:

- Improve the aesthetic and functional qualities of commercial areas.
- Unify the streetscape throughout the community with the installation of landscaping in commercial areas and along the public right-of-way (ROW).
- Provide and maintain setback and view corridors from the public ROW.

In addition, the plan recommends that commercial areas located along the Pacific Highway Corridor not obstruct scenic vistas and maintain view corridors from all public ROWs. More detailed urban design guidelines are outlined for the portion of the community south of Sassafras Street. These include incorporating pedestrian-oriented features and landscaping. However, the Proposed Project site lies just outside this area.

California Department of Transportation: Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives the designation. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for them to become designated.

In San Diego County, the Cabrillo Freeway, located approximately 1.25 miles east of the site, is the nearest Designated State Scenic Highway. Because of intervening topography and distance, the Proposed Project site is not visible from this road. Interstate (I-) 5, passing within 125 feet of the Proposed Project is an Eligible State Scenic Highway.

Regional and Local Landscape Setting

Located in southwestern San Diego approximately 0.75 mile north of San Diego Bay, the Proposed Project area is situated on a broad, relatively flat marine terrace that includes the City of San Diego and surrounding communities. Undulating topography and the foothills of the Laguna Mountains are visible east of the Proposed Project site.

The approximately 1.5-acre proposed Vine Substation site is situated on a relatively narrow, rectangular-shaped parcel that is located approximately 1.5 miles north of San Diego's downtown core alongside I-5. The Proposed Project site is located in an area dominated by parking lots, rental car facilities, and low-rise industrial facilities, and is within view of San Diego International Airport, which is located approximately 0.75 mile southwest of the site. The Amtrak Pacific Surfliner, North County Transit District (NCTD) Coaster, and the San Diego Metropolitan Transit System (MTS) Trolley railroad corridor borders the Proposed Project site along its western perimeter. An elevated transition ramp connecting I-5 and Pacific Highway is located northwest of the proposed Vine Substation site, adjacent to the rail corridor.

The residential neighborhood of Midtown is located immediately east of I-5, situated approximately 250 feet above sea level. Open views toward downtown San Diego, San Diego Bay, and the Point Loma peninsula beyond the bay are available from some places within this residential area. Figure 4.1-1: Regional Landscape Context depicts the Proposed Project location within a regional and local landscape context.

The area surrounding the Proposed Project site is sparsely vegetated, with intermittent small street trees and palms and large shrubs visible along the nearby railroad corridor and I-5 embankment. Plants in the area consist largely of ornamental species with little evidence of native vegetation. Electrical utility poles as well as pole-mounted light fixtures along the highway, local streets, and within parking lots are noticeable features of the existing landscape in the vicinity of the Proposed Project site. The proposed Vine Substation site includes existing pole-mounted fixtures used for nighttime lighting.

Proposed Project Visibility and Viewshed

The Proposed Project viewshed is defined as the general area from which it is visible or can be seen. For purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be broken down into distance zones of foreground, middleground, and background. The foreground is defined as the zone within 0.25 to 0.5 mile from the viewer. Landscape detail is most noticeable and objects generally appear most prominent when seen in the foreground. The middleground is a zone that extends from the foreground up to approximately three to five miles from the viewer, and the background extends from about three to five miles to infinity.

For the purpose of this analysis, the potential effects on foreground viewshed conditions are emphasized. The site topography and geography generally limit the Proposed Project's visibility to locations along nearby roads. Passengers on Amtrak Pacific Surfliner and NCTD Coaster trains, and the San Diego MTS Trolley, which run along the adjacent railroad corridor, have fleeting views of the Proposed Project site. From many locations within the surrounding area, views of the Proposed Project are partially or fully screened by intervening topography and structures. These existing visual conditions are more fully described in the sections that follow.

Potentially Affected Public Views

Viewer sensitivity, typically divided into high, moderate, and low categories, is one of the criterion employed for evaluating visual impacts and their degree of significance. The factors considered in assigning a sensitivity level include viewer activity, view duration, viewing distance, and adjacent land uses.

Potentially affected viewer groups within the Proposed Project area include motorists, rail passengers, pedestrians, and residents, as well as adjacent commercial workplaces, including a commercial printing business and a rental car facility. These viewers experience the Proposed Project site within the context of an established commercial and industrial setting.

Motorists constitute the most substantial viewer group, particularly those traveling on southbound I-5, who experience fleeting, elevated views of the site where there are gaps in the roadside vegetation. Motorists on Pacific Highway and those traveling on surface streets, including Kettner Boulevard, Vine Street, and California Street have longer duration views of the Proposed Project site, due in part to slower vehicle speeds and to more open views of the site.

Rail passengers, including local travelers on the Green Line Trolley line from northern San Diego and regional travelers on Amtrak's Pacific Surfliner and NCTD's Coaster, are the second most numerous viewer group. The Proposed Project site is situated adjacent to a stretch of rail corridor between Washington Street Station and Middletown Station, which are approximately 0.3 mile from the proposed Vine Substation site. The Proposed Project site is not visible from these two stations; however, it can be seen from passing trains or trolleys, although the views are brief in duration, typically lasting well under a minute.

Pedestrians on sidewalks along Vine Street and Kettner Boulevard adjacent to the site comprise the third most prominent viewer group. However, given the automobile-oriented aspect of many nearby businesses, pedestrians are relatively few in numbers. Pedestrian views are relatively brief in duration, potentially lasting up to several minutes, before intervening topography interrupts the site view.

The fourth viewer group consists of residents of the Midtown neighborhood located east of I-5. The nearest residences lie approximately 450 feet east of the Proposed Project site. However, as described in the following subsection, the closely spaced buildings and mature vegetation lining the streets, together with the elevated embankment of the I-5 corridor, largely block views toward the site. While the Proposed Project site is potentially visible from the upper stories of a limited number of residences, these views would be seen within the context of an eight-lane freeway, surrounding industrial facilities, and the nearby airport.

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Figure 4.1-1:
Regional Landscape Context
SDG&E Vine 69/12 kV Substation Project

Visual Character of the Proposed Project Site

This section provides a description of the visual character found within the Proposed Project area and includes photographs that document representative views of the Proposed Project. The locations of photograph viewpoints are delineated on Figure 4.1-2: Photograph Viewpoint Locations. Figure 4.1-3: Photographs of the Proposed Project Site and Surrounding Area provides a set of eight photographs to document the existing views of the Proposed Project site.

Photograph 1 is a close-range view of the proposed Vine Substation site looking southeast from California Street that includes visual elements typical of the area immediately surrounding the site. Low-rise commercial and industrial buildings and small trees associated with individual businesses largely screen views of the site upon approaching from the north along this road. Additional open views are available from Vine Street along the northern perimeter of the site. From these areas, the existing parking lot, fence, and remnants of a masonry wall along Vine Street are seen against the vegetated I-5 embankment and retaining wall situated above Kettner Boulevard. An existing wood pole and concrete guy pole are prominent vertical elements visible along Vine Street.

Photograph 2 is an open street-level view looking south toward the proposed Vine Substation site from Kettner Boulevard near Vine Street. Unlike the view shown in Photograph 1 where many of the landscape elements blend in with the elevated backdrop, the same or similar elements—commercial signage, palm trees along Kettner Blvd, and numerous utility poles—appear prominently against the sky in Photograph 2 where the terrain descends gradually toward San Diego Bay, which is partially visible below the distant horizon.

Photograph 3 provides a view from southbound I-5 looking south. Typically, views toward the Proposed Project site from I-5 are screened by large roadside shrubs. However, the underpass at Vine Street provides a break in the roadway vegetation and a brief view of the site is available from southbound traffic lanes, as shown in Photograph 3. In this elevated view, the full extent of the Proposed Project area, as well as adjacent parking lots, existing utility poles, distant office buildings, the Pacific Highway transition ramp, the airport runway, and a larger portion of San Diego Bay are apparent. Palm trees planted intermittently along Kettner Boulevard provide some visual interest but little screening.

Photograph 4 shows a view downhill from the intersection of Vine Street and State Street toward the Vine Street underpass at I-5, which is less than 0.25 mile away. From nearby Midtown, views toward the Proposed Project site are almost completely blocked by the I-5 embankment and the closely spaced buildings and mature vegetation that line the streets of this residential neighborhood. Only a small portion of the Proposed Project site's northern perimeter can be seen through the opening provided by the underpass, and is less noticeable in comparison to the more dominant view of the airport and an adjacent construction site. Views of the northwestern boundary of San Diego Bay and the hills of Point Loma peninsula also provide focal points.

Photograph 5 is a view from Kettner Boulevard looking northwest toward the southern portion of the proposed Vine Substation site. From this vantage point, intervening structures that include low buildings associated with car rental facilities, signs and fencing, and street traffic partially screen views of the Proposed Project site.

Photograph 6 offers an elevated view of the Proposed Project site looking northwest from the transition ramp that connects I-5 to Pacific Highway. From this perspective, the visibility of the Proposed Project site is considerably diminished when viewed against the hillside backdrop, particularly when seen within the context of commercial and industrial elements that dominate the landscape.

From below the highway ramp, Photograph 7 provides a view looking northwest along the railroad corridor near Sassafras Street toward the western perimeter of the Proposed Project site. Existing vegetation lining the east side of the tracks largely screens views toward the proposed Vine Substation site when seen from this perspective.

Photograph 8, which was taken from the pedestrian overpass crossing the Pacific Highway, is an elevated close-range overview of the Proposed Project site looking northeast. The railroad tracks, trolley catenary structures, and existing overhead utility lines dominate the foreground while the I-5 embankment and some hillside residences form the backdrop.

Physical Characteristics of the Proposed Project

The Proposed Project involves the construction of the proposed Vine Substation on an approximately 1.5-acre parcel of land that is currently lease for long-term airport parking. As part of the Proposed Project design, the Vine Substation will be enclosed by a 10-foot-tall "Lapaz" brown-colored masonry perimeter wall. Facility components include transformer banks and firewalls, in addition to a control shelter. These components range in height from approximately eight to 16 feet. In addition, two 30-foot-high rack structures located near the western perimeter of the substation site will be installed. With the exception of the rack structures, the substation components will not be visible from the perspective of most viewers at street level in the immediate vicinity of the site. Figure 3-7: Vine Substation Profile View in Chapter 3 – Project Description provides a section and elevation drawing that illustrates substation profile views with the perimeter screening wall.

In addition to the previously described Vine Substation components, the Proposed Project involves the relocation of existing and installation of new distribution facilities. The bulk of the changes associated with these distribution facilities will occur underground; therefore, they will not be visible following construction. The 12 kV distribution relocation will involve the installation of approximately nine new above-ground switches which will be housed in painted enclosures. The enclosures will be mounted on concrete pads within the existing sidewalks and will be consistent with other aboveground facilities in the area. The project will also involve modifications to the existing power line facilities. These modifications include removing two approximately 70-foot-tall existing wood poles and one approximately 28-foot-tall steel guy pole. Three new approximately 100-foot-tall self-supported tubular steel poles will be installed on the west side of the proposed Vine Substation. The Proposed Project will also involve extending an existing telecommunication system; however, this work will be located primarily below ground or in association with the modified power line facilities.

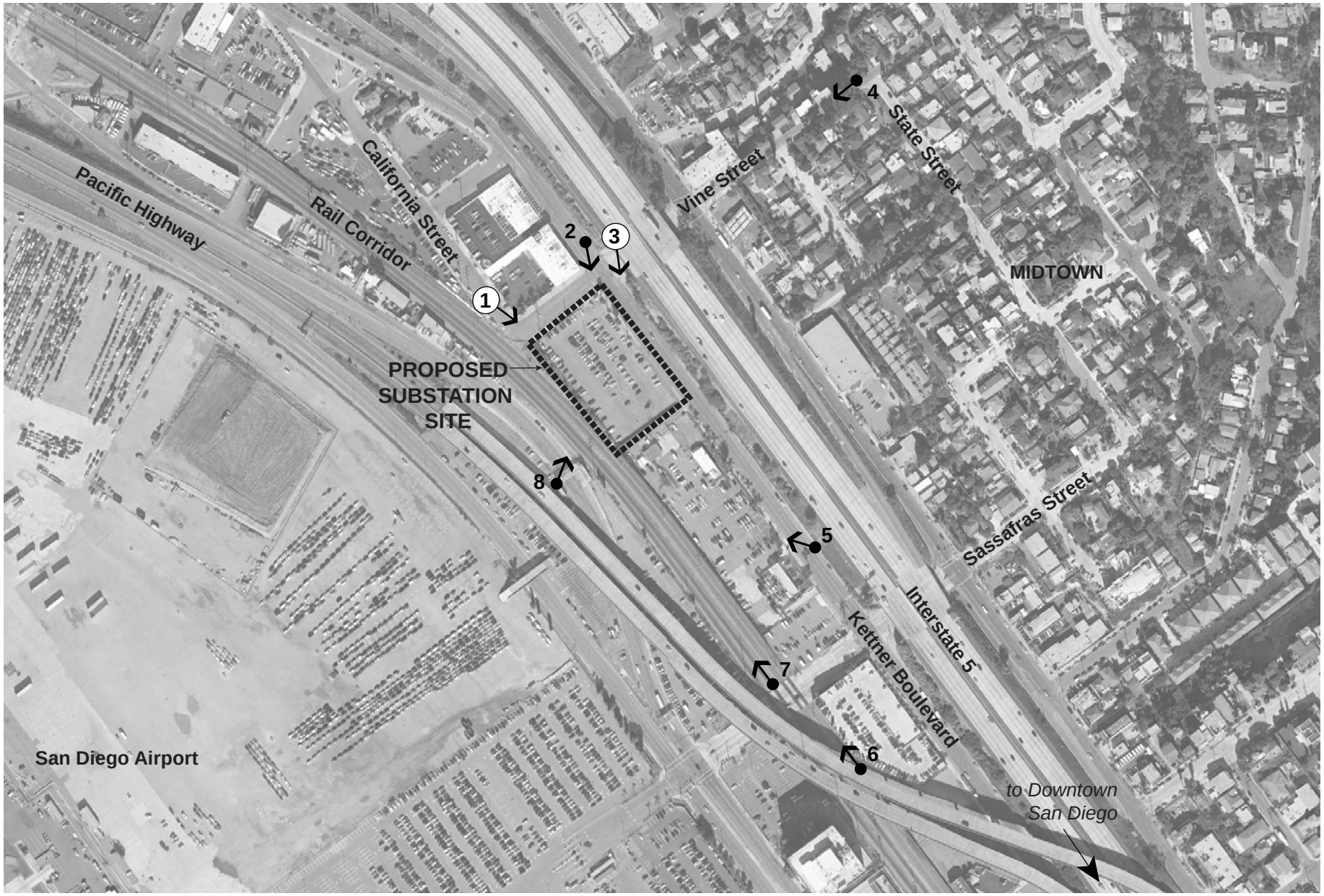

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Figure 4.1-2:
Photograph Viewpoint Locations
SDG&E Vine 69/12 kV Substation Project

1. California Street near Vine Street looking southeast

2. Kettner Boulevard near Vine Street looking south

Figure 4.1-3:
Photographs of Proposed Project Site and Surrounding Area
SDG&E Vine 69/12 kV Substation Project

Conceptual Landscape Plan

Landscaping will be installed at the proposed Vine Substation as part of the Proposed Project design. Figure 4.1-4: Conceptual Landscape Plan presents the proposed landscaping to be installed at the new Vine Substation following construction activities. The conceptual landscape plan calls for informal clusters of small and medium height shrubs outside the perimeter wall along Vine Street and Kettner Boulevard. Given the lack of existing landscaping at the site, the new landscaping will enhance the streetscape in the Proposed Project area. In addition, the proposed clusters of small and medium shrubs will provide some screening of lower portions of the perimeter wall. Suggested plant species are drought-tolerant and consistent with SDG&E requirements for planting near substation facilities.

Lighting

Substation lighting will be provided by approximately eight flood lights mounted on interior substation walls, one at each of the entry gates, and four lights mounted on the control shelter. Lighting may also be installed on the steel rack. All on-site lighting will be oriented downward to minimize glare onto surrounding property. With the exception of the gate entry lights, which will remain on at all times, the substation lighting will not be turned on unless it is required for nighttime work and/or emergencies. Nighttime maintenance is not expected to occur more than once per year.

In addition, due to the proximity of the proposed Vine Substation site to San Diego International Airport, flashing red beacons or white strobe lights on two to three poles located along the railroad tracks outside of the proposed Vine Substation site will be installed if necessary to comply with Federal Aviation Administration (FAA) requirements.

4.1.3 Impacts

Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to aesthetic resources would be considered significant if the Proposed Project:

- Has a substantial adverse effect on a scenic vista
- Substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrades the existing visual character or quality of the site and its surroundings
- Creates a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

In applying these criteria to determine significance, the extent of the Proposed Project's visibility from sensitive viewing locations, the degree to which the Proposed Project components will contrast with or be integrated into the existing landscape, the extent of change in the landscape's composition and character, and the number and sensitivity of viewers are taken into account. Proposed Project conformance with public policies regarding visual quality is also considered.

Computer-generated visual simulations were used to evaluate the visual impacts of the Proposed Project, a description of which are included in the discussions that follow.

Question 4.1a – Scenic Vista Effects – *No Impact*

CEQA requires that the Proposed Project be evaluated as to whether its implementation has a substantial, adverse effect on a scenic vista. For the purposes of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality. Using this definition, there are no scenic vistas in the Proposed Project viewshed; therefore, the Proposed Project will not have a substantial effect on a scenic vista, and there will be no impact.

Question 4.1b – Scenic Resource Damage within a State Scenic Highway – *No Impact*

In San Diego County, the Cabrillo Freeway, which is located approximately 1.25 miles from the Proposed Project site, is the nearest designated State Scenic Highway. Because of intervening topography and distance from the site, the Proposed Project will not be visible from this roadway.

I-5, an eligible State Scenic Highway, passes within 125 feet of the Proposed Project site. Brief views of the Proposed Project will primarily be available from the southbound direction along this roadway; however, some views may also be available when traveling in the northbound direction. The speed limit on I-5 is 65 miles per hour; thus, motorists will only be provided a momentary glimpse of the Proposed Project while passing by. In addition, as noted below in the response to Question 4.1c, these views will be seen within the context of a developed, industrial landscape and will not obstruct views of San Diego Bay and the downtown San Diego skyline. Therefore, the Proposed Project will not substantially damage scenic resources within a State Scenic Highway, and there will be no impact.

Question 4.1c – Visual Character Degradation

Construction – Less-than-Significant Impact

Construction-related visual impacts will result from the presence of equipment, materials, and work crews along the underground distribution line route and at the Kettner Substation and proposed Vine Substation site. Views of the Proposed Project will generally occur from vantage points along Kettner Boulevard, Vine Street, California Street, Pacific Highway, and I-5, and to a lesser extent, from West Hawthorn and West Laurel streets. Construction activities will be noticeable to varying degrees and will be seen by motorists, rail passengers, and pedestrians. However, construction activities will be temporary in nature, taking place over an approximately 19-month period, and will occur within an industrial setting where trucks, trains, and other large machinery are found. Therefore, impacts to visual resources as the result of construction will be considered to be less than significant.

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LANDSCAPE CONCEPT

The Vine Substation landscape plan calls for informal clusters of small and medium height shrubs to be planted within the setback area between the perimeter wall and the sidewalk along Kettner Boulevard and Vine Street. Landscaping will enhance the appearance of the substation site and also screen lower portions of the wall. The suggested plant palette consists of drought tolerant species that are approved by SDG&E for planting near substation facilities.

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NOTES:

1. Landscape layout is preliminary and subject to change based on final engineering and other factors.
2. A drip irrigation system will be installed to provide regular watering of new landscaping.
3. Bark mulch to a depth of 3 inches will be applied within the planting strip for water conservation and weed suppression.
4. All planting shall meet clearance requirements for underground and overhead conductors and be consistent with SDG&E and CPUC safety, operations, and maintenance requirements for landscaping in proximity to transmission facilities.

PRELIMINARY CONCEPT
Subject to change based on additional information and final engineering design.

PLANT PALETTE LEGEND

SYMBOL	TYPE OF PLANT	APPROXIMATE QUANTITY	SUGGESTED SPECIES	CONTAINER SIZE	APPROXIMATE MATURE HEIGHT/SPREAD
	Medium height broad leaf evergreen shrub	21	Leptospermum scoparium "Gaiety Girl" or "Ruby Glow" (Red New Zealand Tea Tree)	5 Gallon	5' / 4'
	Small broad leaf evergreen shrub	16	Rhaphiolepis indica (Indian Hawthorn)	5 Gallon	3'-5' / 5'
		15	Baccharis pilularis "Twin Peaks" (Coyote Brush)	1 Gallon	2'-3' / 5'

Plant size estimates based on information contained in:
SDG&E. (no date). Plant List for SDG&E /Sempra Installations.

Figure 4.1-4:
Conceptual Landscape Plan
SDG&E Vine 69/12 kV Substation Project

Operation and Maintenance – Less-than-Significant Impact

As shown in Figure 4.1-5: Existing View and Visual Simulation – California Street and Figure 4.1-6: Existing View and Visual Simulation – Southbound I-5, to varying degrees, portions of the Proposed Project will be visible to the public from some locations within the Proposed Project vicinity. The Proposed Project includes the relocation of 12 kV distribution lines; however, this component will be located underground and will generally not be visible during operation and maintenance of the Proposed Project. The three TSPs that will be installed west of the proposed Vine Substation to accommodate the 69 kV loop-in will replace four existing structures located south and west of the site, and will be seen as an incremental change to the existing view. The proposed Vine Substation will represent a noticeable change to the existing visual environment; however, the simulations demonstrate that the presence of the proposed Vine Substation will not substantially alter existing landscape character and visual quality within the Proposed Project area.

Figure 4.1-5: Existing View and Visual Simulation – California Street portrays an existing view of the Proposed Project site along with a visual simulation of the proposed Vine Substation looking south from California Street near Vine Street. This close-range perspective approximates the view experienced by passengers traveling on the adjacent rail corridor as well as passing local motorists and pedestrians in the immediate vicinity of the Proposed Project site. An open-surface parking facility currently occupies the Proposed Project site in the center foreground and a remnant masonry wall and chain-link fencing topped by razor wire enclose the paved parking area. A stand of shrubs partially screens the facility from the railroad corridor, which lies outside the view to the right. A wooden pole supported by a white guy pole is prominent in the foreground, while several steel floodlight standards can be seen within the fenced area. Concrete retaining walls and the vegetated embankment of the I-5 corridor are clearly visible above the roadway a short distance beyond the parking facility. A section of highway guardrail, Cobra head light standards, roadway signs, and a billboard along the I-5 right-of-way can also be seen along with part of the elevated roadway structure connecting I-5 to Pacific Highway in the distance on the right. On the left, portions of several residences are also visible above I-5.

The Figure 4.1-5: Existing View and Visual Simulation – California Street simulation view shows the proposed Vine Substation replacing the existing parking lot. A ten-foot-high masonry perimeter wall encloses the facility, effectively screening substation equipment, with the exception of the taller components that are encompassed by steel racks that are visible above the wall. The Vine Street entrance gate with multiple lighter-colored warning signs can be seen in the left foreground. The existing wooden pole and guy pole visible in the existing view have been removed, while new overhead conductors connect the substation with two new TSPs located out of the view to the right. Augmenting the existing stand of vegetation along the western perimeter of the site, which partially screens the wall and substation equipment visible above the wall, new landscaping has been installed along Vine Street at the base of the wall. Figure 4.1-4: Conceptual Landscape Plan illustrates the anticipated landscaping that will be installed at the proposed Vine Substation.

The Figure 4.1-5: Existing View and Visual Simulation – California Street simulation view demonstrates a noticeable change to the visual character of the area as seen from this close range

perspective, and shows that the Proposed Project represents an incremental improvement to the visual environment. The introduction of landscaping along Vine Street also results in a minor improvement to the streetscape. In addition, the earth-toned masonry perimeter wall (in place of the chain link fence) that will be constructed as part of the Proposed Project reduces visual clutter within this predominantly industrial landscape.

Figure 4.1-6: Existing View and Visual Simulation – Southbound I-5 presents a before-and-after view toward the proposed substation site as seen by southbound motorists on I-5 from approximately 150 feet away at the Vine Street overpass. From this elevated vantage point, a break in roadside vegetation permits a brief view of the Proposed Project site along with a panoramic view of the downtown San Diego skyline, San Diego Bay, and portions of the airport. In the existing view, a nearly full parking lot occupies the Proposed Project site in the foreground. Parked cars on the site appear nearly contiguous with other nearby expanses of parked cars south and west of the site. Except for several palm trees along Kettner Boulevard and vines along a far perimeter fence, the area beyond I-5 is nearly completely devoid of vegetation. The view toward San Diego Bay and Coronado Island on the horizon is interrupted by infrastructure associated with the railway corridor and Pacific Highway overpass just west of the site, and in the distance, airport construction and maintenance activities as well as maritime activities along the bay frontage.

The Figure 4.1-6: Existing View and Visual Simulation – Southbound I-5 simulation view shows the proposed Vine Substation, seen in the foreground. This elevated perspective provides an overview of substation equipment and the perimeter wall in its entirety. Replacing the existing utility pole along Vine Street, two taller TSPs are visible west of the site along the railroad tracks. Like the poles they replace, these poles are a minor intrusion into the bay view. Along Kettner Boulevard, existing palm trees have been removed and replaced by low shrubs along the perimeter wall that extends along the Vine Street frontage. Given this elevated perspective, the height of facility equipment, in particular the racks that extend above the perimeter wall seen in the simulation, is not particularly noticeable from this I-5 motorist perspective. Moreover, when seen from this perspective, the rectangular form of the overall facility serves to minimize visual contrasts with nearby structures including adjacent warehouses, office buildings and the Pacific Highway ramp.

A comparison of the views provided in Figure 4.1-6: Existing View and Visual Simulation – Southbound I-5 indicates that the Proposed Project represents an incremental visual change to the urban landscape that will be briefly visible from this location, and given the industrial setting, will not be particularly noticeable. Although some components of the Proposed Project are taller than existing site features, these elements will not substantially affect views of San Diego Bay or the downtown San Diego skyline. Therefore, the Proposed Project will not substantially alter or degrade the character of views from I-5 or other public vantage points, and the impact will be less than significant.

Existing view from California Street near Vine Street looking southeast (VP 1)

Visual simulation of Proposed Project

See Figure 4.1-2 for viewpoint location.

VISUAL SIMULATION SOURCE: BLACK AND VEATCH

Figure 4.1-5:
Existing View and Visual Simulation – California Street
SDG&E Vine 69/12 kV Substation Project

Existing view from Interstate 5 southbound looking south (VP 3)

Visual simulation of Proposed Project

See Figure 4.1-2 for viewpoint location.

VISUAL SIMULATION SOURCE: BLACK AND VEATCH

Figure 4.1-6:
Existing View and Visual Simulation – Southbound I-5
SDG&E Vine 69/12 kV Substation Project

Question 4.1d – New Light or Glare

Construction – Less-than-Significant Impact

For the most part, construction of the Proposed Project will occur during daytime hours. For some construction activities, work may be required at night. If nighttime construction is necessary, any temporary lighting used during construction will be directed on site and away from potentially sensitive receptors, including residences. Given the primarily industrial setting, potential temporary lighting effects will be less than significant.

Operation and Maintenance – No Impact

As previously noted, floodlights will be installed at approximately eight locations within the substation facility. However, with the exception of the two entry gate lights which will remain on at all times, the floodlights will not be turned on unless required for nighttime work and/or emergencies. In addition, all new lighting will be directed downward and on site. The approximately six existing pole-mounted floodlights used for nighttime illumination of the parking lot on the site will be removed, resulting in an overall reduction of lighting within the Proposed Project location. FAA safety lighting may also be installed on two to three new poles west of the site along the railroad tracks; however, due to the site's proximity to San Diego International Airport, similar safety lighting is typical in this setting. As previously described, the Proposed Project's existing industrial/commercial setting, includes numerous sources of overhead lighting, located both on site and off site along adjacent streets, I-5, and nearby parking facilities. As a result, new Proposed Project lighting will be a minor incremental effect that will not add a substantial new source of lighting to the area.

The Proposed Project will include a galvanized finish on steel substation structures and poles that will weather, creating a non-glare surface. The Proposed Project may also include replacing existing power line insulators with new grey polymer, non-specular insulators, which will reduce potential glare. In addition, the proposed Vine Substation site is currently being used as a long-term parking lot. By removing the automobiles from the site, the potential glare from these vehicles will be removed from the Proposed Project site. As a result, no significant impact from light and glare will occur during operation and maintenance of the Proposed Project.

4.1.4 Applicant-Proposed Measures

The Proposed Project will not result in any significant impacts related to aesthetics; therefore, no applicant-proposed measures are proposed.

4.1.5 References

City of San Diego General Plan. Land Use and Community Planning Element. Online. http://www.sandiego.gov/planning/genplan/pdf/generalplan/landuse2010.pdf. Site visited March 17, 2014.

Pacific-Midway Highway Corridor Community Plan and Local Coastal Program Land Use Plan. Online. https://www.sandiego.gov/planning/community/profiles/midwaypacifichwycorridor/pdf/midwayfullversion.pdf. Site visited March 17, 2014.

Visual Technical Memorandum, Vine 69/12 kV Substation Project. Environmental Vision. March 2014.

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4.2 AGRICULTURE AND FORESTRY RESOURCES

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

4.2.0 Introduction

This section describes the agricultural resources in the vicinity of the proposed San Diego Gas & Electric Company Vine 69/12 Kilovolt Substation Project (Proposed Project) and analyzes potential impacts to these resources from construction and operation of the Proposed Project. The California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) has not designated any farmland within three miles of the Proposed Project. The Proposed Project will have no impact to agricultural resources because the Proposed Project components will not cross any land that is under a Williamson Act contract, zoned for agricultural use, or designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance.

4.2.1 Methodology

Research involved the review of the City of San Diego's 2008 General Plan, 2012 General Plan Amendments, and its Municipal Code. A review of the DOC's FMMP, the Joint Powers Agency of the City of San Diego and County of San Diego geographic information system (GIS) database (SanGIS) for Williamson Act parcels, and general plan and zoning maps for the Proposed Project area was also conducted. In addition, a field visit to the site was conducted on December 10, 2013 to confirm land uses.

4.2.2 Existing Conditions

The regulatory requirements and overall existing agricultural conditions of the Proposed Project are described in the following subsections.

Regulatory Background

Federal and State

Department of Conservation Farmland Mapping and Monitoring Program Important Farmland Designations

The DOC Division of Land Resource Protection generates maps depicting Important Farmlands. These farmlands are categorized according to specific criteria, including soil quality and irrigation conditions. Approximately 94 percent of the FMMP study area is based on the United States Department of Agriculture Natural Resource Conservation Service soil classification system, which evaluates both physical and chemical conditions, including soil temperature, moisture regime, pH, flooding, groundwater depth, erodibility, permeability, and sodium content. FMMP maps are updated every two years using an aerial imagery review, field reconnaissance, computer mapping analyses, and public input. The minimum land use mapping unit is 10 acres, and smaller units of land are generally incorporated into surrounding map classifications.

The DOC has established the following eight land use classifications:

- Prime Farmland: Prime Farmland has the optimum combination of physical and chemical conditions that are able to sustain long-term agricultural production. The soil quality, growing season, and moisture supply on Prime Farmlands provides conditions to produce sustained high yields. Prime Farmlands must have been used for irrigated production within four years of the mapping date.

- Farmland of Statewide Importance: Farmland of Statewide Importance is similar to Prime Farmland; however, these farmlands have minor shortcomings, such as a higher slope or decreased ability to store soil moisture. Similar to Prime Farmlands, Farmlands of Statewide Importance must have been used for irrigated production within four years of the mapping date.

- Unique Farmland: Unique Farmland has lower-quality soils and is used for the production of California's leading agricultural products. Unique Farmlands are typically irrigated, but may also include non-irrigated vineyards or orchards found in certain climatic zones. Unique Farmlands must have been cropped within four years of the mapping date.

- Farmland of Local Importance: Farmlands of Local Importance are farmlands that are vital to the local agricultural economy, as identified by each county's local advisory committee and board of supervisors.

- Grazing Land: Grazing Land is land on which existing vegetation is suitable for livestock grazing.

- Urban and Built-Up Land: Urban and Built-Up Land is defined as land that is occupied by buildings or other structures at a minimum density of one unit to 1.5 acres (or approximately six structures to 10 acres). These lands are used for development purposes, including residential, commercial, industrial, construction, public administration, institutional, transportation yards, airports, cemeteries, golf courses, sewage treatment, sanitary landfills, and water control structures.

- Other Land: Other Land includes all lands that are not in any other map category, such as waterbodies smaller than 40 acres; low-density rural developments; confined livestock, poultry, or aquaculture facilities; and brush, timber, wetland, and riparian areas not suitable for livestock grazing.

- Water: Water includes all perennial waterbodies that are a minimum of 40 acres.

For the purposes of this section, "Important Farmlands" include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

Williamson Act Land Designations

The Williamson Act, also known as the California Land Conservation Act of 1965 (California Government Code [CGC] Section 51200 et seq.), preserves agricultural and open space lands from conversion to urban land uses by establishing a contract between local governments and private landowners to voluntarily restrict their land holdings to agricultural or open space use. In return, landowners receive property tax assessments based on farming or open space use, rather than assessments based on the full market property value, which is typically 20 percent to 75 percent higher. Williamson Act contracts are valid for a minimum of 10 years and are automatically renewed each year for an additional 10-year term, in the absence of a notice of nonrenewal.

The Williamson Act also allows local governments to establish Agricultural Preserves, parcels of land for which cities or counties are willing to enter into Williamson Act contracts. Agricultural Preserves must include a minimum of 100 acres and typically avoid areas in which public utility improvements and associated land acquisitions may be necessary (CGC § 51230). Although the Williamson Act does not specify compatible land uses for property located adjacent to contract lands or Agricultural Preserves, it does state that cities and counties must determine compatible land use types while recognizing that temporary or permanent population increases frequently impair or hamper agricultural operations (CGC § 51220.5).

County of San Diego

Farmland of Local Importance is land of value to the local economy, as defined by each county's local advisory committee and adopted by its board of supervisors. Farmland of Local Importance is either currently producing, or has the capability to produce agricultural products, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the San Diego County Board of Supervisors.

City of San Diego

The City of San Diego's 2008 General Plan and 2012 General Plan Amendments were reviewed for agricultural resource policies that are relevant to the Proposed Project. None were identified within these plans.

San Diego Unified Port District

The Proposed Project area is subject to the regulations and policies contained within the San Diego Unified Port District's Port Master Plan; however, this plan does not contain any regulations or policies that address agricultural uses.

Agricultural Setting

The Proposed Project is not located on and will not cross any Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, or land under a Williamson Act contract. None of the Proposed Project area is under active crop cultivation nor is it used for livestock grazing. The area is not designated or zoned by the City of San Diego for agricultural uses.

4.2.3 Impacts

Significance Criteria

Standards of significance were derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Impacts to agricultural resources would be considered significant if the Proposed Project:

- Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use permanently or for a long period of time
- Conflicts with existing zoning for agricultural use
- Conflicts with a Williamson Act contract such that it must be cancelled
- Involves other changes in the existing environment, which—due to their location or nature—could result in the permanent or long-term conversion of farmland to a non-agricultural use

Question 4.2a – Farmland Conversion – *No Impact*

The Proposed Project is not located on nor does it span any land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. As a result, no impact will occur.

Question 4.2b – Zoning or Williamson Act Contract Conflicts – *No Impact*

The Proposed Project is not located in nor does it span any land zoned for agricultural use under a Williamson Act contract. Therefore, there will be no conflicts with agricultural zoning or Williamson Act contracts, and no impact will occur.

Question 4.2c – Other Farmland Conversion – *No Impact*

The Proposed Project is not located on nor does it span any land used for agricultural purposes or with the potential to be used for agriculture. Therefore, there will be no conversion of farmland to a non-agricultural use as a result of the Proposed Project, and there will be no impact.

Question 4.2d – Loss or Conversion of Forest Land – *No Impact*

The Proposed Project is not located on nor does it span any land zoned for forest or timberland use or with the potential to be rezoned for forest or timberland use. Therefore, there will be no conversion of forest land to a non-forest use as a result of the Proposed Project, and there will be no impact.

Question 4.2e – Other Farmland or Forest Land Conversion – *No Impact*

The Proposed Project does not have the potential to convert any other farmland or forest land to a non-agricultural or non-forest use. Therefore, there will be no impact.

4.2.4 Applicant-Proposed Measures

Because the Proposed Project will have no impact on agricultural resources, no applicant-proposed measures are proposed.

4.2.5 References

California Public Utilities Commission. Memorandum. *Applicants Filing Proponent's Environmental Assessment*. November 24, 2008.

California Resources Agency. 2007. Title 14 California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act. CEQA Guidelines.

City of San Diego. Municipal Code. Online. http://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni.shtml. Site visited December 5, 2013.

City of San Diego. *General Plan*. Online. http://www.sandiego.gov/planning/genplan/#genplan. Site visited December 5, 2013.

DOC. California Important Farmland Finder. Online. http://maps.conservation.ca.gov/ciff/ciff.html. Site visited December 5, 2013.

DOC. FMMP. Farmland of Local Importance. Online. http://www.consrv.ca.gov/dlrp/fmmp/Documents/Local_definitions_00.pdf. Site visited December 5, 2013.

DOC. FMMP. Important Farmland Map Categories. Online. http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx. Site visited December 5, 2013.

DOC. FMMP. Online. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx. Site visited March 8, 2010.

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San Diego County. GIS Zoning Data. Software. Program used December 5, 2010.

San Diego Unified Port District. Land Use Management. *Port Master Plan*. Online. http://www.portofsandiego.org/environment/land-use/port-master-plan.html. Site visited March 7, 2014.

SanGIS. Williamson Act parcel database information. Online. http://www.sangis.org/Index.htm. Site visited March 15, 2010.

State of California. 1965. Government Code Section 51200 et seq. The Williamson Act or The California Land Conservation Act of 1965.

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4.3 AIR QUALITY

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			✓	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			✓	
d) Expose sensitive receptors to substantial pollutant concentrations?			✓	
e) Create objectionable odors affecting a substantial number of people?			✓	

4.3.0 Introduction

This section describes the existing air quality within the San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) area and evaluates the potential air quality impacts associated with construction and operation of the Proposed Project. Although some temporary impacts will result during construction, operation, and maintenance activities, the potential air quality impacts from the Proposed Project will be less than significant with implementation of SDG&E's ordinary construction restrictions.

4.3.1 Methodology

The existing air quality within San Diego County was researched using data obtained from the San Diego County Air Pollution Control District's (SDAPCD's) network of air quality monitoring stations. Recent regulations and guidance documents from the California Air Resources Board (CARB), California Public Utilities Commission, California Energy Commission, and the SDAPCD were also reviewed.

The majority of the Proposed Project's air emissions were assessed by estimating emission rates from construction, operation, and maintenance activities, and then comparing them to established significance criteria. In other cases, such as the odor and sensitive receptor analysis, the impact

assessment was based on subjective criteria, including experience with similar projects. Air pollutant emission rates were estimated using the publicly available software California Emissions Estimator Model (CalEEMod). This computer model allows users to generate estimates of construction and operational emissions of various pollutants, including inhalable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), reactive organic gases (ROGs), sulfur oxides (SO_x), oxides of nitrogen (NO_x), and carbon dioxide. CalEEMod also allows users to input minimization measures and evaluate their effects on emission rates.

Diesel particulate matter (DPM) and other particulate matter (PM) are expected to be the two primary pollutants during construction of the Proposed Project, primarily from on- and off-road construction vehicles and soil-disturbing activities. DPM emissions can be inferred from the $PM_{2.5}$ modeling results.

The primary operation and maintenance emissions will result from maintenance vehicle travel to and from the Proposed Project area and heavy equipment use during repair activities. Similar to the construction phase, DPM and PM will be the two primary pollutants.

4.3.2 Existing Conditions

This section describes the regulations and regulatory agencies applicable to air quality for the Proposed Project, regional climate and meteorology, and existing air quality conditions in the area.

Regulatory Background

Federal

The 1970 federal Clean Air Act (CAA) established national ambient air quality standards (AAQS) for six pollutants: CO, ozone (O_3), PM_{10}, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These six criteria pollutants are known to have adverse impacts on human health and the environment. To protect human health and the environment, the United States (U.S.) Environmental Protection Agency (EPA) has set primary and secondary maximum ambient thresholds. The primary thresholds were set to protect human health, particularly that of children and the elderly, as well as individuals that suffer from chronic lung conditions (e.g., asthma and emphysema). The secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings. The combined primary and secondary standards are termed the National AAQS (NAAQS).

The 1977 CAA required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that exceeds ambient air quality standards. The SIP serves as a tool to reduce pollutants that are known to cause impacts that exceed the ambient thresholds and to achieve compliance with the NAAQS. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for the criteria pollutants.

In July 1997, the U.S. EPA developed new health-based NAAQS for O_3 and PM_{10}. However, these standards were not fully implemented until 2001, after the resolution of several lawsuits. The new federal O_3 standard of 0.08 parts per million (ppm), established in 1997, was based on a longer averaging period (eight hours versus one hour), recognizing that prolonged exposure to

O_3 is more damaging. In March 2008, the EPA further lowered the eight-hour O_3 standard from 0.08 ppm to 0.075 ppm. The new federal PM standard is based on finer particles (2.5 microns and smaller versus 10 microns and smaller), recognizing that finer particles may have a higher residence time in the lungs and contribute to greater respiratory illness. In February 2007, the NO_2 AAQS was amended to lower the existing one-hour standard of 0.25 ppm to 0.18 ppm, which is not to be exceeded, and established a new annual standard of 0.030 ppm, which is also not to be exceeded. Table 4.3-1: State and Federal Ambient Air Quality Standards contains a list of the NAAQS and California Ambient Air Quality Standards (CAAQS).

State

The California CAA of 1988 requires air districts to develop and implement strategies to attain CAAQS. For some pollutants, the California standards are more stringent than the national standards. Regional air quality management districts, such as the SDAPCD, had to prepare an air quality plan specifying how federal and state standards would be met.

CARB enforces the CAAQS and works with the state's Office of Environmental Health Hazard Assessment (OEHHA) in identifying toxic air contaminants (TACs) and enforcing rules related to TACs, including the Air Toxic Hot Spots Information and Assessment Act of 1987. Enacted to identify toxic air contaminant hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, the act requires that business or other establishments identified as significant sources of toxic emissions provide the affected population with information about health risks posed by the emissions.

CARB also regulates mobile emission sources in California—such as construction equipment, trucks, and automobiles—and oversees the air districts. Relevant programs related to oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Emission Reduction programs, the Portable Equipment Registration Program (PERP), and the Airborne Toxic Control Measure for DPM from Portable Engines. The Mobile Sources Emission Reduction programs are aimed at reductions of NO_x, volatile organic compounds (VOCs), CO, and PM_{10}. CARB has also adopted specific control measures for the reduction of DPM from off-road, in-use diesel vehicles (rated 25 horsepower and higher), such as back hoes, dozers, and earthmovers used in construction projects. Additional DPM control measures are also in place for heavy-duty, on-road, diesel trucks operated by public utilities and municipalities. The PERP and Airborne Toxic Control Measure for DPM from Portable Engines provide for statewide registration and control of DPM from portable engines rated 50 horsepower and higher.

San Diego County Air Pollution Control District

The air districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their respective geographic areas and for preparing the air quality plans that are required under the federal and California CAAs. The SDAPCD is the primary agency responsible for planning, implementing, and enforcing federal and state ambient standards in San Diego County. The plans, rules, and regulations presented in the following subsections apply to all sources in the jurisdiction of the SDAPCD.

Table 4.3-1: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard	Federal Standard	
			Primary	Secondary
O_3	1 hour	0.09 ppm (180 micrograms per cubic meter [µg/m^3])	Not Applicable (NA)	NA
	8 hours	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	0.075 ppm (147 µg/m^3)
PM_{10}	24 hours	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual arithmetic mean	20 µg/m^3	50 µg/m^3	50 µg/m^3
$PM_{2.5}$	24 hours	NA	35 µg/m^3	35 µg/m^3
	Annual arithmetic mean	12 µg/m^3	15 µg/m^3	15 µg/m^3
CO	1 hour	20 ppm (23 milligrams per cubic meter [mg/m^3])	35 ppm (40 mg/m^3)	NA
	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	NA
	8 hours (Lake Tahoe)	6 ppm (7 mg/m^3)	NA	NA
NO_2	1 hour	0.18 ppm (339 µg/m^3)	NA	NA
	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)
SO_2	1 hour	0.25 ppm (655 µg/m^3)	NA	NA
	3 hours	NA	NA	0.5 ppm (1,300 µg /m^3)
	24 hours	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	NA
	Annual arithmetic mean	NA	0.030 ppm (80 µg/m^3)	NA
Lead	30 days	1.5 µg/m^3	NA	NA
	Rolling 3 months	NA	0.15 µg/m^3	0.15 µg/m^3
	Quarterly	NA	1.5 µg/m^3	1.5 µg/m^3

Sources: CARB 2014d; EPA 2014b

Table Notes:
1. California standards for O_3, CO (except Lake Tahoe), SO_2 (one hour and 24 hours), NO_2, suspended PM—PM_{10} and $PM_{2.5}$—and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. NAAQS (other than O_3, PM, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest eight-hour concentration in a year—averaged over three years—is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units used to promulgate the standard. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; "ppm" in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure that can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects established. These actions allow for implementation of control measures at levels below the ambient concentrations specified for these pollutants.
9. National lead standard, rolling three-month average; final rule signed October 15, 2008.

San Diego County Air Pollution Control District Air Quality Plans

The SDAPCD's air quality plans collectively provide an overview of the region's air quality and air pollution sources and identify the pollution-control measures needed to expeditiously attain and maintain air quality standards. The SDAPCD's air quality plans include the San Diego Regional Air Quality Strategy (RAQS) and the San Diego portion of the California SIP, which address state and federal requirements, respectively.

Ozone Air Quality Management Plan

The SDAPCD SIP predicts that state and local programs will allow San Diego County to reach attainment status for the previously applicable 0.08 ppm federal eight-hour O_3 AAQS (per the SIP submitted to the EPA in June 2007). It is anticipated that the EPA will designate San Diego County as a nonattainment area for the new 0.075 ppm eight-hour O_3 standard in the future. The SDAPCD will have to submit an updated SIP to address the new stringent standard at that time.

The SDAPCD maintains the RAQS, which acts as a road map demonstrating how the district will eventually meet the state O_3 AAQS. The RAQS details the measures and regulations that focus on managing and reducing O_3 precursors, such as NO_x and VOCs. The RAQS control measures concentrate on stationary sources that are under the SDAPCD's jurisdiction; however, all emission sources and control measures are included, such as any under the jurisdiction of CARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and U.S. EPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment).

Particulate Matter Air Quality Management Plan

The CCAA does not require local districts to establish an air quality management plan for state PM_{10} nonattainment, but the SDAPCD has prepared a report entitled Measures to Reduce Particulate Matter in San Diego County. The SDAPCD is considering rulemaking for source category-specific PM control measures for emissions from residential wood combustion and from fugitive dust generated at construction sites and from unpaved roads.

San Diego County Air Pollution Control District Regulation IV – Prohibitions, Rule 50 – Visible Emissions

This rule prohibits any activity that will create air contaminant emissions darker than 20-percent opacity for more than an aggregate of three minutes in any consecutive 60-minute time period.

San Diego County Air Pollution Control District Regulation IV – Prohibitions, Rule 51 – Nuisance

This regulation prohibits any activity that will discharge air contaminants that cause or have a tendency to cause injury, detriment, nuisance, or annoyance to people and the public or damage to any business or property.

San Diego County Air Pollution Control District Regulation IV – Prohibitions, Rule 55 – Fugitive Dust Control

This regulation prohibits any activity that will discharge visible dust emissions into the atmosphere beyond the property line bounding the activity for more than three minutes during

any 60-minute period. This regulation also prohibits visible roadway dust due to track-out or carry-out.

San Diego County Air Pollution Control District Rule XV – Federal Conformity

The federal conformity rule prohibits any federal actions that may be inconsistent with the SDAPCD's efforts to achieve attainment with the NAAQS.

Regional Climate and Meteorology

Climate in the San Diego Air Basin (SDAB) is generally warm, with low annual rainfall occurring mostly during the winter months. Climate plays an important role in the air quality of the SDAB. When cool, moist air from the coast travels toward the higher elevations, a temperature inversion can occur. This inversion layer prevents polluted air from rising and dispersing. According to the SDAPCD, most air quality exceedances are recorded on the lower mountain slopes that experience an inversion layer.

Local meteorological conditions in the vicinity of the Proposed Project conform to the regional pattern of strong onshore winds by day (especially in summer) and weak offshore winds at night (particularly during the winter). These local wind patterns are driven by the temperature difference between the ocean and the warm interior topography. In the summer, moderate breezes between eight and 12 miles per hour blow onshore and up through the valley from the southwest by day. Light onshore breezes may continue overnight when the land remains warmer than the ocean. In the winter, the onshore flow is weaker and the wind flow reverses to blow from the northeast in the evening as the land becomes cooler than the ocean.

The climate of the City of San Diego, as with all of Southern California, is largely controlled by the strength and position of the Pacific High. This high-pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon shine, clean daytime onshore breezes and little temperature change throughout the year. Limited rainfall occurs in the winter as the fringes of mid-latitude storms occasionally move through the area. Average temperatures in January range from 47 degrees Fahrenheit (°F) at night to 63°F during the day. The warmest month is August, when the high temperatures average 74°F. Annual rainfall is approximately 10 inches in the Proposed Project area.

Air Quality

Criteria Air Pollutants

O_3, CO, NO_2, SO_2, lead, PM_{10}, and $PM_{2.5}$ are all criteria air pollutants (CAPs) that are regulated in California. Non-methane ethane VOCs, also referred to as ROGs, are also regulated as precursors to the formation of O_3. These criteria pollutants and their effects on humans are discussed in the following subsections.

Ozone

O_3 is a colorless gas that is not directly emitted as a pollutant, but is formed when hydrocarbons and NO_x react in the presence of sunlight. Low wind speeds or stagnant air mixed with warm temperatures typically provide optimum conditions for the formation of O_3. Because O_3 formation does not occur quickly, O_3 concentrations often peak downwind of the emission

source. As a result, O_3 is of regional concern as it impacts a larger area. When inhaled, O_3 irritates and damages the respiratory system.

Particulate Matter

PM, which is defined as particles suspended in a gas, is often a mixture of substances, including metals, nitrates, organic compounds, and complex mixtures, such as diesel exhaust and soil. PM can be traced back to both natural and man-made sources. The most common sources of natural PM are dust and fires, while the most common man-made source is the combustion of fossil fuels.

PM causes irritation to the human respiratory system when inhaled. The extent of the health risks due to PM exposure can be determined by the size of the particles. The smaller the particles, the deeper they can be deposited in the lungs. PM is often grouped into two categories—inhalable PM less than 10 microns in diameter (PM_{10}) and fine PM less than 2.5 microns in diameter ($PM_{2.5}$).

Carbon Monoxide

CO is a colorless, odorless, and tasteless gas that is directly emitted as a by-product of combustion. CO concentrations tend to be localized to the source, with the highest concentrations being associated with cold, stagnant weather conditions. CO is readily absorbed through the lungs into the blood, where it reduces the ability of the blood to carry oxygen.

Nitrogen Oxides

NO_x is a generic name for the group of highly reactive gases that contain nitrogen and oxygen in varying amounts. Many types of NO_x are colorless and odorless. However, when combined with particles in the air, the common pollutant NO_2 can often be seen as a reddish-brown layer over many urban areas.

NO_x form when fuel is burned at high temperatures. Typical man-made sources of NO_x include motor vehicles, fossil-fueled electricity generation utilities, and other industrial, commercial, and residential sources that burn fuels. NO_x can harm humans by affecting the respiratory system. Small particles can penetrate the sensitive parts of the lungs and can cause or worsen respiratory disease and can aggravate existing heart conditions.

As discussed previously, O_3 is formed when NO_x and VOCs react with sunlight.

Sulfur Oxides

SO_x are formed when sulfur-containing materials are processed or burned. SO_x sources include industrial facilities (e.g., petroleum refineries and cement manufacturing and metal processing facilities), locomotives, large ships, and some non-road diesel equipment.

A wide variety of health and environmental impacts are associated with SO_x because of the way it reacts with other substances in the air. A number of people are particularly sensitive to SO_x emissions, including children, the elderly, people with asthma, and people with heart or lung disease. When inhaled, these particles gather in the lungs and contribute to increased respiratory symptoms and disease, difficulty breathing, and premature death.

Volatile Organic Compounds

VOCs (or ROGs) are a group of chemicals that react with NO_x and hydrocarbons in the presence of heat and sunlight to form O_3. Examples of VOCs include gasoline fumes and oil-based paints. This group of chemicals does not include methane or other compounds determined by the U.S. EPA to have negligible photochemical reactivity.

Air Quality Designations

Three air quality designations can be given to an area for a particular pollutant:

- Nonattainment: This designation applies when air quality standards have not been consistently achieved.
- Attainment: This designation applies when air quality standards have been achieved.
- Unclassified: This designation applies when insufficient monitoring data exists to determine a nonattainment or attainment designation.

The current CAAQS and NAAQS attainment status is provided in Table 4.3-2: SDAPCD Attainment Status. The SDAPCD is currently designated as a nonattainment area for O_3 and PM.

Table 4.3-2: SDAPCD Attainment Status

Criteria Air Pollutants	State	Federal
O_3 (eight-hour)	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Unclassified/Attainment
PM_{10}	Nonattainment	Unclassified
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Attainment
Sulfates	Attainment	NA
Lead	Attainment	Attainment
Hydrogen Sulfide	Unclassified	NA
Visibility Reducing Particles	Unclassified	NA

Source: CARB 2014c

Toxic Air Contaminants

TACs are the listed toxic pollutants as established by OEHHA. Under Assembly Bill 1807, CARB is required to use certain criteria in prioritizing, identifying, and controlling air toxics. In selecting substances for review, CARB must consider pollutants that may pose a threat to human health or cause or contribute to serious illnesses or death. For many TACs, no threshold level exists below which adverse health impacts may not be expected to occur. This contrasts with the CAPs, for which acceptable levels of exposure can be determined and for which the federal and state governments have set AAQS.

PM emissions generated by diesel combustion, or DPM, are of particular concern in California. In 1998, the OEHHA completed a 10-year comprehensive human health assessment of diesel exhaust. The results of this assessment formed the basis for CARB to formally identify DPM as a TAC that poses a threat to human health. Because no established AAQS exist for TACs, they are managed on a case-by-case basis, depending on the quantity and type of emissions and the proximity of potential receptors. DPM emissions result from a wide variety of sources, including on-road and off-road vehicles and stationary and portable internal combustion engines. In California, diesel internal combustion engines were estimated to generate 28,000 tons of PM emissions in 2000.

Ambient Air Quality

Violations of NAAQS and CAAQS for O_3, PM, and CO have occurred historically in the Proposed Project area. The frequency of violations and current air quality conditions at the two monitoring sites nearest to the Proposed Project area are summarized for O_3, PM_{10}, and $PM_{2.5}$ in Table 4.3-3: Recent Air Quality Concentrations and Table 4.3-4: Frequency of Air Quality Standard Violations.[1] As shown in these tables, the air quality in the surrounding areas has been relatively stable over the past five years and has improved in some cases.

Sensitive Receptors

Some exposed population groups—including children, the elderly, and the ill—can be especially vulnerable to airborne chemicals and irritants and are termed "sensitive receptors." In addition, due to sustained exposure durations, all persons located within residential areas are considered to be sensitive receptors. The area is characterized by light- and medium-industrial and office uses, parking lots, and rental car facilities. The nearest sensitive receptors to the Proposed Project site are residential neighborhoods located approximately 450 feet east of the proposed Vine Substation. Interstate (I-) 5, a major transportation corridor in San Diego County, separates the Proposed Project site from these receptors. Section 4.10 Land Use provides more information about residences in close proximity to the Proposed Project components.

4.3.3 Impacts

Significance Criteria

San Diego County Air Pollution Control District Thresholds

To determine whether a significant impact will occur during construction, the SDAPCD informally recommends quantifying construction emissions and comparing them to significance thresholds (pounds per day) found in the SDAPCD regulations for stationary sources (pursuant to Rule 20.1, et seq.) and shown in Table 4.3-5: Air Quality Significance Thresholds. If emissions during Proposed Project construction exceed the thresholds that apply to stationary sources, then construction activities will have the potential to violate air quality standards or contribute substantially to existing violations.

[1] The Overland monitoring station is located approximately 7.2 miles northeast of the Proposed Project area at 5555 Overland Drive in San Diego. The Beardsley monitoring station is located approximately 6.5 miles north-northwest of the Proposed Project area at 1110A Beardsley Street in San Diego.

Table 4.3-3: Recent Air Quality Concentrations

Monitoring Site	Year	O_3, Maximum 1-hour (ppm)	PM_{10}, Maximum 24-hour ($\mu g/m^3$)	$PM_{2.5}$, Maximum 24-hour ($\mu g/m^3$)
Beardsley	2012	0.071	45.0	39.8
	2011	0.082	48.0	34.7
	2010	0.078	40.0	29.7
	2009	0.085	59.0	52.1
Overland	2012	0.050	22.0	20.0
	2011	0.097	47.0	29.9
	2010	0.100	33.0	18.7
	2009	0.105	50.0	25.1

Source: CARB 2014b

Table 4.3-4: Frequency of Air Quality Standard Violations

Monitoring Site	Year	Number of Days in Exceedance of Standard			
		State 1-hour O_3	State 24-hour PM_{10}	National 24-hour PM_{10}	National 24-hour $PM_{2.5}$
Beardsley	2012	0	0	0	1.0
	2011	0	0	0	0
	2010	0	0	0	0
	2009	0	18.2	0	3.4
Overland	2012	0	– –	– –	– –
	2011	1	0	0	0
	2010	2	0	0	0
	2009	2	0	0	0

Source: CARB 2014b

Notes: "– –" = insufficient or unavailable data. Days over PM_{10} CAAQS are based on monitoring every sixth day.

Table 4.3-5: Air Quality Significance Thresholds

Pollutant	Significance Threshold	
	Pounds per Day	Tons per Year
$PM_{2.5}$	55*	10*
PM_{10}	100	15
NO_x	250	40
SO_x	250	40
CO	550	100
VOCs	75**	13.7***

Source: SDAPCD, 2014

* EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the South Coast Air Quality Management District (SCAQMD).
** Threshold for VOCs based on the threshold of significance for VOCs from the SCAQMD for the Coachella Valley.
*** Threshold based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

California Environmental Quality Act Guidelines

In addition to the previously mentioned criteria, Appendix G of the California Environmental Quality Act (CEQA) Guidelines determines that impacts to air quality would be significant if the Proposed Project:

- Conflicts with or obstructs implementation of the applicable air quality plan
- Violates any air quality standard or contributes substantially to an existing or projected air quality violation
- Results in a cumulatively considerable net increase of any criteria pollutant for which the Proposed Project region is classified as nonattainment under an applicable federal or state ambient air quality standard
- Exposes sensitive receptors to substantial pollutant concentrations
- Creates objectionable odors affecting a substantial number of people

Question 4.3a – Applicable Air Quality Plan Conflicts – *Less-than-Significant Impact*

A potentially significant impact on air quality will occur if the Proposed Project conflicts with or obstructs the implementation of the applicable air quality plan. Although the Proposed Project will result in CAP emissions within the basin, the primary focus is that the Proposed Project's emissions are properly anticipated in the regional air quality planning process and reduced where feasible. To determine if the emissions were captured during the air quality planning process, it is necessary to assess the Proposed Project's consistency with the RAQS. Consistency with the RAQS is determined by evaluating if the Proposed Project's emissions exceed the CAP

thresholds established by the SDAPCD and if the Proposed Project will result in growth that has been anticipated.

The CalEEMod computer model was used to simulate the anticipated emissions during construction using site-specific information to generate emission rates based on the Proposed Project's anticipated size, schedule, land use, and construction methods. Using this data, the model calculated the maximum daily emissions for a range of pollutants. The CalEEMod input and output are provided in Attachment 4.3–A: CalEEMod Input and Output Files.

PM and NO_x are generally the primary air pollutants resulting from construction activities. The simulated PM emissions are the composite of two types of sources—fugitive dust and tailpipe emissions. Typical fugitive dust sources include earth-moving activities (e.g., grading of the substation pad and excavation of the underground duct bank trenches), the loading and unloading of fill and spoil materials, and vehicle travel across unpaved areas. Tailpipe emissions result from the combustion of fossil fuels in both off-road construction equipment and on-road vehicles. The results of the CalEEMod simulations included in Attachment 4.3–A: CalEEMod Input and Output Files indicate that the peak unmitigated emissions will be in compliance with all applicable SDAPCD thresholds, as indicated in Table 4.3-6: Peak Daily Unmitigated Construction Emissions.

To reduce impacts to the extent possible, SDG&E will implement the following air emissions control measures as part of its ordinary construction restrictions as described in Chapter 3 – Project Description:

- **Fugitive Dust Control.** All unpaved construction areas will be watered up to two times daily during construction to reduce dust emissions and to meet SDAPCD Rule 55 requirements. SDG&E or its contractor will keep the construction area sufficiently dampened to control dust caused by construction and hauling, and will provide at all times reasonable dust control of areas subject to windblown erosion.

- **Bulk Material Transport.** All loads will be secured by covering or be sufficiently watered and use of at least two feet of freeboard to avoid carry-over.

- **Equipment Emissions.** SDG&E or its contractor will maintain and operate construction equipment to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues will have their engines turned off after five minutes when not in use. Construction activities will be phased and scheduled to avoid emission peaks, and equipment use will be curtailed during second-stage smog alerts.

- **Volatile Organic Compound (VOC) Reduction.** Low- and non-VOC-containing coatings, sealants, adhesives, solvents, asphalt, and architectural coatings will be used to reduce VOC emissions.

These control measures were entered into CalEEMod, as appropriate, and the resulting mitigated emissions are presented in Table 4.3-7: Peak Daily Mitigated Construction Emissions. As a result, with the implementation SDG&E's ordinary construction restrictions, the construction phase of the Proposed Project will not exceed the applicable SDAPCD thresholds.

Table 4.3-6: Peak Daily Unmitigated Construction Emissions

Year	Emissions (pounds per day)					
	$PM_{2.5}$	PM_{10}	NO_x	SO_x	CO	VOC
2016	14.37	26.26	185.45	0.18	124.01	16.76
2017	5.27	6.68	103.86	0.14	73.59	10.02
Threshold	55	100	250	250	550	75
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Table 4.3-7: Peak Daily Mitigated Construction Emissions

Year	Emissions (pounds per day)					
	$PM_{2.5}$	PM_{10}	NO_x	SO_x	CO	VOC
2016	11.63	21.27	185.45	0.18	124.01	16.76
2017	5.27	6.68	103.86	0.14	73.59	10.02
Threshold	55	100	250	250	550	75
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

The Proposed Project is not a trip-generating project, such as a residential or commercial development, nor will it result in population growth. Once construction of the Proposed Project has been completed, emissions will be relatively low, resulting only from scheduled maintenance and operation activities. The anticipated emissions from operation and maintenance activities were simulated using CalEEMod and the results are presented in Table 4.3-8: Peak Daily Operational Emissions. As indicated, all emissions will be well below the applicable thresholds. Therefore, the Proposed Project will not conflict with or obstruct implementation of the applicable air quality plan, and thus will have a less-than-significant impact in regard to plan consistency.

Question 4.3b – Air Quality Standard Violations

Construction – Less-than-Significant Impact

The site development phase of the Proposed Project will require various pieces of heavy equipment, including bulldozers, excavators, loaders, and compactors. Street-legal haul trucks will be employed during material export or import activities. In addition, portable cranes and heavy hauling trucks will be employed for equipment delivery and installation. Concrete trucks, back hoes, crew trucks, and pick-up trucks will arrive and depart the proposed Vine Substation site during installation of foundations, ground grid, and underground ducts. Until the substation is

energized, crew trucks, boom trucks, and pick-up trucks will arrive and depart from the site daily for construction activities, testing and check-out, final power line tie-ins, and circuit cabling.

Table 4.3-8: Peak Daily Operational Emissions

Category	Emissions (pounds per day)					
	$PM_{2.5}$	PM_{10}	NO_x	SO_x	CO	VOC
Off-Road	0.05	0.06	1.60	< 0.01	2.16	0.10
Threshold	55	100	250	250	550	75
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

It is anticipated that approximately 48 workers will be on site at the proposed Vine Substation at any one time during construction. A similar number of workers will be employed to install the 69 kV loop-in and 12 kV distribution relocation. Daily transportation of construction workers is not expected to cause a significant effect on air quality, because no more than 100 workers will be in any one location at any time during the peak of construction and emissions will not exceed any applicable threshold. In addition, the number of trips generated will be minimal and constitute an insignificant percentage of current daily volumes in the area, as described in Section 4.16 Transportation and Traffic. Moreover, SDG&E will encourage carpooling during construction.

Construction of the Proposed Project will generate short-term air quality impacts during grading and construction operations. CalEEMod was used to simulate emissions from construction activities based on the schedule and construction equipment lists provided in Chapter 3 – Project Description. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials transported on site or off site. The results of this simulation are presented in Table 4.3-6: Peak Daily Unmitigated Construction Emissions.

As described in response to Question 4.3a, SDG&E's ordinary construction restrictions were entered into the CalEEMod model, as appropriate, and the resulting mitigated emissions are presented in Table 4.3-7: Peak Daily Mitigated Construction Emissions. A detailed discussion of the Proposed Project's potential to impact air quality from fugitive dust, construction equipment exhaust, and TAC sources is provided in the subsections that follow.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM_{10}) emissions that have the potential to temporarily impact local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Proposed Project area. Fugitive dust emissions are associated with land clearing, excavation, cut and fill, and truck travel on unpaved roadways. Fugitive dust emissions can vary substantially from day to day, depending on the level of activity, specific operations,

and weather conditions. Fugitive dust from grading and construction is expected to be short-term and will cease when these activities are completed.

Fugitive dust emissions were simulated using CalEEMod and the resulting maximum daily unmitigated and mitigated emissions are presented in Table 4.3-9: Maximum Daily Fugitive Dust Emissions from Construction. As shown, the unmitigated emissions will be below the applicable thresholds. Nonetheless, SDG&E will implement its ordinary construction restrictions described in response to Question 4.3a to further reduce these emissions. These measures include adherence to ordinary construction restrictions (e.g., watering inactive and perimeter areas, cleaning track-out, and containing dirt and dust within the Proposed Project area) and compliance with the SDAPCD's Fugitive Dust Rule 55. As a result, impacts from fugitive dust will be less than significant.

Table 4.3-9: Maximum Daily Fugitive Dust Emissions from Construction

Year	Unmitigated (pounds per day)		Mitigated (pounds per day)	
	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
2016	14.37	26.26	11.63	21.27
2017	5.27	6.68	5.27	6.68
Threshold	55	100	55	100
Threshold Exceeded?	**No**	**No**	**No**	**No**

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with transporting machinery and supplies to and from the Proposed Project area, emissions produced on site as the equipment is used, and emissions from trucks transporting fill material to the Vine Substation site. Emitted pollutants will include CO, VOC, NO_x, PM_{10}, and $PM_{2.5}$. As presented in Table 4.3-6: Peak Daily Unmitigated Construction Emissions, the maximum daily uncontrolled emissions for each year of construction of the Proposed Project will not exceed the SDAPCD's standards for all pollutants. Therefore, impacts associated with construction will be less than significant.

Toxic Air Contaminants

DPM will be emitted from on- and off-road vehicles that use diesel as fuel during the construction phase of the Proposed Project. Potential health effects associated with exposure to DPM are long-term and are evaluated on the basis of a lifetime of exposure (70 years). Because construction activities will be short-term, emissions will not impact any sensitive receptors for any length of time.

CARB has adopted airborne toxic control measures (ATCMs) applicable to off-road diesel equipment and portable diesel engines with a rating of 50 brake horsepower or greater. The purpose of these ATCMs is to reduce emissions of PM from engines subject to the rule. The

ATCMs require diesel engines to comply with PM emissions limitations on a fleet-averaged basis. CARB has also adopted an ATCM that limits diesel-fueled commercial motor vehicle idling. The rule applies to motor vehicles with gross vehicular weight ratings greater than 10,000 pounds that are licensed for on-road use. The rule restricts vehicles from idling for more than five minutes at any location, with exceptions for idling that may be necessary in the operation of the vehicle.

All off-road diesel equipment, on-road heavy-duty diesel trucks, and portable diesel equipment used for the Proposed Project will meet the state's applicable ATCMs for control of diesel PM or NO_x in the exhaust (e.g., ATCMs for portable diesel engines, off-road vehicles, and heavy-duty on-road diesel trucks, and five-minute diesel engine idling limits) that are in effect during implementation of the Proposed Project. The mobile fleets used in the Proposed Project are expected to be in full compliance with these ATCMs. This will ensure that pollutant emissions in diesel engine exhaust do not exceed applicable federal or state air quality standards. As a result, impacts will be less than significant.

Operation and Maintenance – No Impact

As shown in Table 4.3-8: Peak Daily Operational Emissions, operation and maintenance of the Proposed Project will generate limited CAP emissions and will be in compliance with all applicable thresholds. Therefore, the operation and maintenance of the Proposed Project will not result in any impacts related to existing air quality standards.

Question 4.3c – Criteria Pollutant Increases

Construction – Less-than-Significant Impact

As shown previously in Table 4.3-6: Peak Daily Unmitigated Construction Emissions and Table 4.3-7: Peak Daily Mitigated Construction Emissions, the construction of the Proposed Project will lead to a small, temporary increase in CAPs. SDG&E ordinary construction restrictions will be implemented, which include minimizing vehicle idling time and controls for dust emissions, to reduce the impacts of the construction. As a result, the temporary criteria pollutant emissions will not exceed the applicable SDAPCD thresholds and impacts will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operational emissions were simulated using CalEEMod, assuming the levels of traffic described in Section 3.7 Operation and Maintenance. The results of these simulations are presented in Table 4.3-8: Peak Daily Operational Emissions. These increases in CAPs will be significantly less than those projected for the construction phase, and will be well below the acceptable significance thresholds. As a result, CAP increases due to operation and maintenance of the Proposed Project will be considered less than significant.

Question 4.3d – Sensitive Receptor Exposure – *Less-than-Significant Impact*

The Proposed Project site is located in an industrial and commercial area and in proximity to I-5 and Kettner Boulevard. Although sensitive receptors have been identified within 350 feet of the proposed substation, impacts to these receptors will be less than significant with the implementation of SDG&E's ordinary construction restrictions described in response to Question 4.3a. These restrictions include reducing idling time and implementing dust control

measures. In addition, emissions resulting from operation and maintenance activities associated with the Proposed Project were also determined to be in compliance with the applicable SDAPCD thresholds. Neither the construction nor operation and maintenance phases of the Proposed Project will contribute to the violation of an existing air quality standard. As a result, the Proposed Project will have a less-than-significant impact to sensitive receptors.

Question 4.3e – Odor

Construction – Less-than-Significant Impact

Due to the nature of the Proposed Project, odor impacts are unlikely. Typical odor nuisances include hydrogen sulfide, ammonia, chlorine, and other sulfide-related emissions. No significant sources of these pollutants will exist during construction. An additional potential source of Proposed Project-related odor is diesel engine emissions. These emissions will be temporary in nature and will be limited by the relatively small number of vehicles on site and the distance from any sensitive receptors. In addition, the Proposed Project site is located in close proximity to I-5, which supports a high volume of freeway traffic and generates odors that will be consistent with the construction equipment used during the Proposed Project. Therefore, impacts will be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project will not result in detectable odors. As a result, there will be no impact.

4.3.4 Applicant-Proposed Measures

Because the Proposed Project will have a less-than-significant impact on air quality and SDG&E standard construction restrictions will be implemented, no applicant-proposed measures are proposed.

4.3.5 References

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LIST OF ATTACHMENTS

4.4 BIOLOGICAL RESOURCES

Will the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States (U.S.) Fish and Wildlife Service?			✓	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

4.4.0 Introduction

This section describes the biological resources in the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project), and identifies potential impacts to habitats and species that could result from the construction, operation, and maintenance of the Proposed Project. In addition, potential impacts to riparian communities, jurisdictional wetlands and waters, and migratory wildlife corridors are addressed. The SDG&E Subregional Natural Community Conservation Plan (NCCP), City of San Diego General Plan, and City of San Diego Multiple Species Conservation Program (MSCP) were also reviewed to confirm that the construction of the Proposed Project will not conflict with the aforementioned plans' goals, objectives, and policies. With the implementation of SDG&E's NCCP, which is included as an ordinary construction/operating restriction in Chapter 3 – Project Description, impacts to biological resources from the Proposed Project will be reduced to a less-than-significant level.

4.4.1 Methodology

Data regarding biological resources within the Proposed Project site[1] were obtained through a field reconnaissance survey and a literature review of applicable reference materials and reports. The primary objective of the reconnaissance-level survey was to assess the existing conditions of the biological resources in the Proposed Project site, focusing on conducting a plant and wildlife species inventory, assessing the potential occurrence of sensitive species, and determining if jurisdictional resources are present.

Literature Review

Preliminary investigations included a study of aerial photographs, United States (U.S.) Geological Survey (USGS) topographic maps, National Wetland Inventory maps, and literature and database searches. Other sources of information included the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, as well as the San Diego County Bird Atlas.

All planning documents that are relevant to the Proposed Project site were reviewed, including two City of San Diego plans—the City of San Diego MSCP and City of San Diego General Plan. The SDG&E Mira Sorrento Substation Project Proponent's Environmental Assessment and the Draft Initial Study and Mitigated Negative Declaration for SDG&E's Mira Sorrento Distribution Substation Project were also reviewed.

A search of the California Natural Diversity Database (CNDDB), maintained by the California Department of Fish and Wildlife (CDFW), was conducted for the 7.5-minute USGS quadrangle spanned by the Proposed Project, as well as all surrounding quadrangles.

[1] The Proposed Project site includes all areas directly adjacent to the Proposed Project footprint. The Proposed Project footprint is defined as all areas that will be directly impacted by construction activities. This area includes the parcel that the proposed Vine Substation will be located on, portions of Kettner Boulevard and Pacific Highway where underground duct banks and associated facilities will be installed, and areas adjacent to Pacific Highway and California Street where poles associated with the 69 kV loop-in will be installed or removed.

The Carlsbad office of the U.S. Fish and Wildlife Service (USFWS) also provided a list of threatened and endangered species known to occur near or within the Proposed Project site. This list is included in Attachment 4.4-A: USFWS Species Lists.

Determination of the potential occurrence for listed, sensitive, or noteworthy species was based on known ranges and habitat preferences for the species, species occurrence records from the CNDDB, and species occurrence records from other sites in the vicinity of the survey area.

General Biological Surveys

Insignia Environmental biologist Jeff Coward conducted a reconnaissance-level biological survey of the Proposed Project footprint on January 2, 2014. The biologist documented the dominant plant communities and potential habitat for wildlife species. He also documented plant and animal species observed directly or detected from calls, tracks, scat, nests, or other signs. The wildlife survey was performed during the day; therefore, nocturnal animals were identified by evidence that was apparent at the time of the survey. The potential for sensitive plant and animal species, determined by the presence of diagnostic habitat elements, was documented. A more detailed discussion of the reconnaissance-level biological survey is provided in Attachment 4.4-B: Biological Survey Memo.

Delineation of Jurisdictional Waters

A field investigation of the approximately 1.5-acre proposed Vine Substation site, as well as the Proposed Project footprint along Kettner Boulevard from the Vine Substation site near Vine Street to SDG&E's existing Kettner Substation near West Palm Street was conducted by Jeff Coward on January 2, 2014 to identify any jurisdictional waters regulated under the federal Clean Water Act (CWA), California Porter-Cologne Water Quality Control Act, and California Fish and Game Code Sections 1600 through 1606. Prior to conducting the site visit, aerial photographs and USGS topographic maps of the site were examined. Once on site, the Proposed Project footprint was evaluated to determine the presence of any jurisdictional areas or drainage channels. The remainder of the survey area was also examined by the biologist for the presence of potential waters of the U.S. A more detailed discussion of the field investigation is provided in Attachment 4.4-B: Biological Survey Memo.

4.4.2 Existing Conditions

Regulatory Setting

The following sections describe federal, state, and local regulations regarding biological resources that apply to the Proposed Project.

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. The FESA prohibits take of endangered wildlife, where "take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (16 U.S. Code [U.S.C.] §§ 1532(19), 1538). For

plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S.C. § 1538(c)).

Under Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS may issue an incidental take statement, allowing take of the species that is incidental to another authorized activity, provided that the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties with the development of a habitat conservation plan (HCP), such as SDG&E's NCCP.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) recognizes international treaties between the U.S. and other countries that have been accorded to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities:

- falconry;
- raptor propagation;
- scientific collection;
- special purposes (e.g., rehabilitation, education, migratory game bird propagation, and salvage); and
- take of depredating birds, taxidermy, and waterfowl sale and disposal.

The regulations governing migratory bird permits can be found in Title 50 of the Code of Federal Regulations (CFR) Part 13 (General Permit Procedures) and Title 50 of the CFR Part 21 (Migratory Bird Permits).

Clean Water Act

The purpose of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredge or fill material into waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR § 328.3(b)). The U.S. Environmental Protection Agency has veto authority over the USACE's administration of the Section 404 program and may override a USACE decision with respect to permitting.

Substantial impacts to waters of the U.S. may require an Individual Permit. Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, provided that such permits' other respective conditions are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit

actions. For the Proposed Project, this certification or waiver will need to be issued by the San Diego Regional Water Quality Control Board (RWQCB).

State

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA. Section 2080 of the California Fish and Game Code prohibits the take, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. "Take" is defined in Section 86 of the California Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful projects. State lead agencies are required to consult with the CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the CESA and the FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, including fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the CESA and/or the FESA. Fully protected species may not be taken or possessed at any time (California Fish and Game Code § 4700).

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State" (California Fish and Game Code §§ 1900 to 1913). The NPPA is administered by the CDFW, which has the authority to designate native plants as endangered or rare and to protect them from take.

California Fish and Game Code Sections 1600-1606

Sections 1601 through 1606 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions as described in the Section 1602 notification submitted by the applicant and, if necessary, prepares a Lake or Streambed Alteration Agreement that includes measures to protect affected fish and wildlife resources.

California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800

The State of California has incorporated the protection of birds into Sections 3503, 3503.5, 3513, and 3800 of the California Fish and Game Code.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and applies to both surface and ground water. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as "waters of the State," include isolated waters that are no longer regulated by the USACE. Any person discharging, or proposing to discharge, waste to waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

Local

City of San Diego General Plan

The City of San Diego General Plan provides a framework of policies and objectives to guide long-term development. The Conservation Element portion of the City of San Diego General Plan provides biological resource policies that may be relevant to the Proposed Project, including policies for urban runoff management, protection and restoration of waterbodies, preservation of biologically diverse ecosystems, and conservation of sensitive species and their habitats.

City of San Diego Multiple Species Conservation Program

The City of San Diego uses its MSCP Subarea Plan as the basis for the implementing agreement contract between the city and the wildlife agencies and ensures implementation of the Subarea Plan. The Subarea Plan allows the city to issue take permits at the local level, and was prepared pursuant to general standards developed by the USFWS and the CDFW to meet the requirements of the California Natural Community Conservation Planning Act (NCCP Act) of 1992. The Subarea Plan is consistent with the MSCP plan and serves to implement the city's portion of the MSCP preserve.

In cooperation with the wildlife agencies, property owners, developers, and environmental groups, the City of San Diego also developed its Multi-Habitat Planning Area (MHPA). The MHPA delineates specific core biological resource areas and corridors within the city boundaries that are intended for long-term conservation; however, limited development may occur within the MHPA.

San Diego Gas & Electric Company Subregional Natural Community Conservation Plan

Under Section 10(a) of the FESA, SDG&E developed this comprehensive multiple species and habitat NCCP to effectively preserve and enhance covered sensitive species and their native habitats during operation, maintenance, and expansion of its electric and natural gas transmission system (16 U.S.C. § 1539). In addition, the NCCP is also a permit issued pursuant to California Fish and Game Code Section 2081 with an implementation agreement with the CDFW for the

management and conservation of multiple species and their associated habitats as established according to the CESA and the state's NCCP Act.[2]

The purpose of the Subregional NCCP is to establish and implement a long-term agreement between SDG&E, the USFWS, and the CDFW for the preservation and conservation of sensitive species and their habitats while allowing SDG&E to develop, install, maintain, operate, and repair the necessary facilities to provide energy services to customers living within SDG&E's service area. The NCCP does not cover major expansions of SDG&E's electric system and only covers new electric substations that will result in no more than 20 acres of habitat disturbance.

The NCCP identifies 61 Operational Protocols designed to avoid and minimize potential impacts to sensitive species and their habitats, and to provide appropriate mitigation where such impacts are unavoidable, thus ensuring survivability and conservation of protected species and their habitats. These 61 protocols, as detailed in Attachment 4.4-C: SDG&E NCCP and Operational Protocols, include provisions for personnel training, pre-activity studies, maintenance, and repair and construction of facilities, such as access roads, survey work, and emergency repairs. SDG&E's NCCP does not exempt projects subject to permits from the California Public Utilities Commission or several other federal and state agencies. Therefore, many projects—including the Proposed Project—will be subject to California Environmental Quality Act (CEQA) review. It is intended that the subsequent environmental reviews use the NCCP to evaluate the impacts to covered species and their habitats.

Under its NCCP, SDG&E performs pre-activity studies prior to field operation in a natural area and/or when work is performed off of access roads in natural areas. As the Proposed Project is not in a natural area, a pre-activity survey was not conducted. SDG&E consults with the USFWS and CDFW when impacts to narrow endemic species may occur. As described in the Implementing Agreement for the SDG&E NCCP, SDG&E, the USFWS, and the CDFW agree that for absent unforeseen circumstances, the mitigation measures provided in SDG&E's NCCP constitute the only mitigation measures that will be required for any activity covered by the NCCP when a project results in an impact to a covered species or its habitat.

The Proposed Project falls within the area where SDG&E's utility operations are governed by the NCCP. For the Proposed Project, SDG&E has adopted the mitigation measures and Operational Protocols contained in the NCCP, as detailed in Attachment 4.4-C: SDG&E NCCP and Operational Protocols. With the implementation of SDG&E's NCCP which is included as an ordinary construction/operating restriction in Chapter 3 – Project Description, SDG&E will minimize potential impacts and ensure the protection and conservation of listed and covered species and their habitats. While the Proposed Project is located within areas included in both the City of San Diego's General Plan and MSCP Subarea Plan, SDG&E's public utility activities, such as the Proposed Project, are generally not subject to the discretionary regulatory jurisdiction of such local governments; therefore, they are not governed by the terms and conditions of such plans. However, in implementing its NCCP for the Proposed Project, SDG&E will coordinate with the City of San Diego and other jurisdictions to achieve

[2] California Fish and Game Code Sections 2081(b) and (c) allow the CDFW to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. (*See also* the California Code of Regulations, Title 14, Section 783.4(a),(b)).

consistency to the extent feasible. Where consistency is not feasible, SDG&E's NCCP provides appropriate protocols and mitigation measures to protect natural community and natural resource values in these conservation-planning areas.

Physical Setting

The Proposed Project is located in the southwestern portion of the City of San Diego, approximately two miles northwest of downtown San Diego and directly adjacent to and east of the San Diego International Airport. The majority of the Proposed Project site is characterized by light- and medium-industrial office uses, parking lots, and rental car facilities.

The proposed Vine Substation site is located on the southwestern corner of the intersection of Vine Street and Kettner Boulevard, just west of Interstate (I-) 5 and east of Pacific Highway. The proposed Vine Substation parcel is currently a long-term airport parking lot. It is bordered to the north by Vine Street and a commercial printing business, to south by an Advantage Rental Car facility, to the east by Kettner Boulevard, and to the west by railroad tracks used by the Amtrak Pacific Surfliner, North County Transit District Coaster, and the San Diego Metropolitan Transit District Trolley. The proposed 12 kV distribution relocation and the telecommunication system extension runs along Kettner Boulevard between West Hawthorn Street and Vine Street within a public right-of-way (ROW). Existing uses along the relocated distribution circuits include I-5 to the east, and rental car facilities, offices, and airport parking lots to the west. The proposed 69 kV loop-in is located west of the proposed Vine Substation site adjacent to railroad tracks and Pacific Highway.

The elevations for the Proposed Project footprint range from 30 feet to 70 feet above mean sea level, with the lower elevations in the southwest corner of the proposed Vine Substation site. Annual average precipitation for the Proposed Project is approximately 10 inches per year, with the majority of precipitation falling between December and April. Rainfall between June and October averages less than 0.5 inch per month.

Vegetation Communities and Sensitive Habitats

The majority of the Proposed Project footprint consists of developed land. Two additional vegetation communities—ornamental vegetation and disturbed habitat—occur within the Proposed Project footprint. Vegetation and habitat type are prime factors in determining the suitability of a site for use by certain wildlife species and the occurrence of certain plant species. The following subsections provide descriptions of each habitat type and/or vegetation community and the location of each habitat within the Proposed Project footprint.

Ornamental Vegetation

Ornamental vegetation includes lands that have been planted with landscaping and are maintained on an ongoing basis. Such landscaping materials may include native and non-native plant materials; however, such manicured plantings have been artificially installed and do not naturally occur on site. At the Proposed Project site, ornamental vegetation occurs intermittently within the proposed Vine Substation site and along Kettner Boulevard, Pacific Highway, and California Street (i.e., the northern and southern edges of the Proposed Project site). This

vegetation is dominated by species such as English ivy (*Hedera helix*), Mexican fan palm (*Washintonia robusta*), pepper tree (*Schinus* sp.), and horseweed (*conyza bonariensis*).

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads) or lands containing a preponderance of non-native plant species. This type of habitat can also include areas that are mowed or landscaped regularly and, thus, preclude the development of native vegetation communities. Disturbed habitat was observed along the ROW for the proposed 12 kV distribution relocation, 69 kV loop-in, and telecommunication system extension. In addition, a small strip of disturbed habitat was observed along the perimeter of the proposed Vine Substation site. Disturbed habitat includes all areas within the Proposed Project footprint or in the immediate Proposed Project vicinity that have been previously disturbed and have not returned to native habitat. The disturbed habitat within the Proposed Project footprint consists of little to no vegetation, although some non-native grasses were observed in these areas.

Developed Land

Developed land includes areas where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is cleared, tended, and maintained. Developed land occurs in the majority of the Proposed Project footprint.

General Biological Survey Results

The majority of the Proposed Project footprint consists of developed land. Developed land consists of paved roadways, existing paved parking lots, office buildings, and an existing substation. Two vegetation communities, as described previously, occur within the Proposed Project footprint—ornamental vegetation and disturbed habitat. Ornamental vegetation occurs adjacent to the proposed Vine Substation site and along Kettner Boulevard, Vine Street, Pacific Highway, and California Street. The majority of ornamental vegetation in the Proposed Project footprint and surrounding areas consists of English ivy, Mexican fan palm, pepper tree, and horseweed. Disturbed habitat was observed along the ROW for the proposed distribution circuits and along the perimeter of the proposed Vine Substation site. The disturbed habitat within the Proposed Project footprint consisted of little to no vegetation, although some non-native grasses were observed in these areas.

During the January 2 reconnaissance-level survey of the Proposed Project footprint, only one wildlife species—rock dove (*Columbia livia*)—was observed flying over the proposed Vine Substation site. This species is typical of urban areas.

Sensitive Vegetation Communities

Sensitive vegetation communities include riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the USFWS and the CDFW. No sensitive natural communities—as defined by the USACE, RWQCB, CDFW, and/or the City of San Diego—exist in the Proposed Project footprint. The Proposed Project is mostly industrial in nature, consisting of public roads, light- and medium-industrial office uses, parking lots, and rental car facilities. Based on the results of the general survey, focused surveys were considered unnecessary.

Special-Status Species

Based on habitat suitability and CNDDB search results of all surrounding quadrangle maps, no special-status species, as described in the following subsections, have a moderate or high potential to occur in the Proposed Project footprint.

Sensitive Plants

Special-status plant species include those species listed by the USFWS and CDFW as endangered, threatened, proposed, or candidate species, and those listed as sensitive or rare. In addition, sensitive plant species include those occurring on the CNPS Inventory of Rare and Endangered Vascular Plants of California.

A total of 14 special-status plant species were originally identified as having potential to occur within the Proposed Project site; however, because the Proposed Project site is mostly developed and much of the area is paved, no special-status plant species are expected to occur within the Proposed Project footprint. Therefore, all special-status plant species that were identified during the literature review were determined to have no potential to occur within the Proposed Project footprint.

Sensitive Wildlife Species

Special-status wildlife species include those species listed by the USFWS or CDFW as endangered, threatened, proposed; those listed by the CDFW as Fully Protected or Species of Special Concern (SSC); and those listed as regionally sensitive in SDG&E's NCCP. The special-status wildlife species with potential to occur in the Proposed Project footprint include the following:

- American peregrine falcon (*Falco peregrinus anatum*) is a California fully protected species and has low potential to occur because some marginal nesting habitat in the form of tall buildings and bridges is present in the vicinity of the Proposed Project site.

- Mexican long-tongued bat (*Choeronycteris mexicana*) is an SSC and has a low potential to occur because some marginal habitat in the form of overpasses and buildings is present in the vicinity of the Proposed Project site.

No suitable habitat for other special-status wildlife species is present within the Proposed Project footprint; however, special-status avian species (e.g., western snowy plover [*Charadrius alexandrines nivosus*] and California least tern [*Sternula antillarum browni*]) may fly through the Proposed Project site to reach more suitable habitat in the San Diego Bay or inland areas.

Critical Habitat

Under the FESA, to the extent prudent and determinable, the USFWS is required to designate critical habitat for endangered and threatened species (16 U.S.C. § 1533 (a)(3)). Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter.

Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. A critical habitat designation delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species.

There are no USFWS-designated critical habitats located in the Proposed Project footprint or within one mile of the Proposed Project footprint. Critical habitat for western snowy plover does not occur within the Proposed Project footprint, but exists approximately three miles southwest of the Proposed Project on Coronado Island.

Wildlife Migration Corridors

Wildlife corridors are defined as areas that connect suitable habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features—such as canyon drainages, ridgelines, or areas with vegetation cover—provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetics between populations. Wildlife corridors are considered sensitive by resource and conservation agencies.

No major migration corridors traverse the Proposed Project, largely due to its location within a highly urbanized area and adjacent to several roadways carrying high volumes of traffic. As such, the Proposed Project site does not represent an important corridor for wildlife movement, and development of the Proposed Project will not interfere with wildlife movement.

The Pacific Flyway is located just south of the Proposed Project within the San Diego Bay; therefore, some avian species may pass through the Proposed Project site to reach the San Diego Bay. The Pacific Flyway is one of the six major north-south migration routes for waterfowl in the U.S., Mexico, and Canada. The Pacific Flyway links breeding grounds in the north to more southerly wintering areas and is, therefore, utilized by an abundance of bird species during migration. As part of the Pacific Flyway, the San Diego Bay waterbodies provide high-quality rest and forage areas for numerous birds during the migratory seasons.

Terrestrial wildlife species tend to travel along natural drainages that provide protective cover from predators and a foraging source. There are no natural drainage features within the Proposed Project footprint. Furthermore, development occurs throughout the area; therefore, the quality of the site as a wildlife movement corridor for terrestrial species is diminished.

Preserve Areas

A preserve area is a protected area of importance for wildlife, flora, or other special interest. A preserve area is reserved and managed for conservation and to provide special opportunities for study or research. There are no preserve areas in the Proposed Project footprint.

Wetlands and Jurisdictional Waters

As described in Attachment 4.4-B: Biological Survey Memo, a small concrete-lined drainage channel is located on the west side of the proposed Vine Substation site. The channel is an approximately 12-inch wide concrete v-ditch that was designed for storm water conveyance.

There was no vegetation or accumulated sediment observed within the channel. The channel is Municipal Separate Stormwater Sewer System (MS4) and is also referred to in Section 4.9 Hydrology and Water Quality. Wetlands or jurisdictional waters as defined by Section 404 of the Clean Water Act are not present within the Proposed Project footprint.

4.4.3 Impacts

The following discussion describes the Proposed Project's potential to impact sensitive species and habitat that may occur as a result of construction and operation of the Proposed Project. SDG&E will be operating under its own NCCP, which was established according to the FESA and CESA and the state's NCCP Act. With the implementation of SDG&E's NCCP, which is included as an ordinary construction/operating restriction in Chapter 3 – Project Description, potential impacts will be minimized, ensuring the protection and conservation of listed and covered species and their habitats.

Significance Criteria

Standards of impact significance were derived from Appendix G of the CEQA Guidelines. Under these guidelines, impacts to biological resources would be considered significant if the Proposed Project:

- Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the USFWS or CDFW

- Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the USFWS or CDFW

- Has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, or other wetland areas) through direct removal, filling, hydrological interruption, or other means

- Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites

- Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

- Conflicts with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP

Direct take of a federally or state-listed species will be considered a significant impact. Temporary and/or permanent habitat loss is not considered a significant impact to sensitive species (other than for listed or candidate species under the FESA and CESA) unless a significant percentage of total suitable habitat throughout the species' range is degraded or

somehow made unsuitable, or areas supporting a large proportion of the species' population are substantially and adversely impacted.

Potential impacts to nesting bird species will be considered significant due to their protection under the MBTA, and such impacts will need to be avoided.

Question 4.4a – Sensitive Species

Construction – Less-than-Significant Impact

Sensitive Plant Species

No sensitive plant species or suitable habitat for sensitive plant species were observed during the reconnaissance-level survey on January 2. In addition, no sensitive plant species were identified during the literature review with potential to occur within the Proposed Project footprint; therefore, no impacts to sensitive plant species are anticipated during construction of the Proposed Project.

Sensitive Invertebrate Species

No sensitive invertebrate species were identified during the literature review as having potential to occur within the Proposed Project site. In addition, no suitable habitat for sensitive invertebrate species is present in the Proposed Project footprint. As such, no impacts to sensitive invertebrate species are anticipated during construction of the Proposed Project.

Sensitive Reptile Species

No sensitive reptile species were identified during the literature review as having potential to occur within Proposed Project site and no sensitive reptile species were observed during the reconnaissance-level survey on January 2. In addition, no suitable habitat for sensitive reptile species is present in the Proposed Project footprint. As such, no impacts to sensitive reptile species are anticipated during construction of the Proposed Project.

Sensitive Avian and Other Nesting Avian Species

No sensitive avian species were identified to have a moderate or high potential to occur in the Proposed Project footprint; however, some common avian species may nest within or in the vicinity of the Proposed Project footprint. Impacts to nesting bird species may include the removal of potential nesting habitat (e.g., ornamental vegetation, including six Mexican fan palms) and the disruption of nesting behavior due to a temporary increase in noise from construction equipment and vehicles. However, the Proposed Project is located in an industrial area near numerous major roadways (including I-5 and Pacific Coast Highway), Amtrak, the North County Transit District Coaster and San Diego Metropolitan Transit System Trolley railroad tracks, and the San Diego International Airport; therefore, impacts from construction noise are not anticipated to be substantial. SDG&E will utilize NCCP protocols, as applicable and described in Attachment 4.4-C: SDG&E NCCP and Operational Protocols. These protocols include, but are not limited to, avoiding wildlife to the extent practicable and conducting pre-construction surveys. Implementation of SDG&E's NCCP will reduce the impacts to nesting avian species to a less-than-significant level.

Sensitive Mammal Species

No mammal species were identified to have a moderate or high potential to occur within the Proposed Project site. In addition, no suitable habitat for sensitive mammal species is present in the Proposed Project footprint. As such, no impacts to sensitive mammal species are anticipated during construction of the Proposed Project.

Critical Habitat

There is no USFWS-designated critical habitat located in or within one mile of the Proposed Project footprint. Consequently, all ground-disturbing activities associated with construction of the Proposed Project will occur outside of critical habitat for sensitive wildlife species; therefore, no impacts to critical habitat for sensitive wildlife species will occur.

Preserve Areas

The Proposed Project falls within the boundaries of the City of San Diego MSCP Subarea Plan; however, the Proposed Project is located outside land designated as a preserve. As such, no impacts to preserves will occur.

Common Species

Common plant and wildlife species have the potential to be impacted by construction of the Proposed Project. Direct impacts to wildlife may include mortality from vehicle collisions, vegetation removal, or possible entrapment. Disturbance to wildlife from construction noise is not anticipated to be substantial because the Proposed Project is located in an industrial area near numerous major roadways (including I-5 and Pacific Coast Highway), the North County Transit District Coaster and San Diego Metropolitan Transit System Trolley tracks, and the San Diego International Airport. The majority of the Proposed Project footprint consists of developed land, and a limited amount of vegetation removal is anticipated. Common wildlife species have the potential to fall into and become trapped within the Proposed Project power line pole excavation areas, as well as trenches. In addition, wildlife has the potential to fall into and become trapped within the oil spill containment basins at the proposed Vine Substation. SDG&E will implement existing NCCP protocols, as applicable and described in Attachment 4.4-C: SDG&E NCCP and Operational Protocols. These protocols include, but are not limited to, training, pre-construction surveys, monitoring during clearing and grading activities, requiring all trenches and excavations to be inspected for wildlife entrapment, and requiring ramping in open excavations. Therefore, impacts to common wildlife species will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Concerns regarding potential electrocution and collision impacts from power lines to wildlife species are primarily focused on avian species. Electrocution with avian species can occur from wing contact as avian species perch, land, or take off from a utility pole by contact with two conductors to complete the electrical circuit, simultaneous contact with energized phase conductors and other equipment, and simultaneous contact with energized wire and a grounded wire. Electrocution of avian species is a greater potential hazard to larger birds, such as raptors, because their body size and wing span are large enough to span the distance between the

conductor wires and, thus, complete the electrical circuit. Collision impacts typically occur to migratory bird species and are generally due to poor visibility of electrical lines.

The power line component of the Proposed Project will consist of looping in an existing 69 kV power line. The 69 kV loop-in will involve removing two existing wood poles; installing two new, self-supported tubular steel poles (TSPs); and replacing an existing wood distribution pole with a new, self-supported TSP. No additional electrocution impacts are anticipated from the power line component of Proposed Project because it will not differ substantially from the existing overhead power line in place. As described in Chapter 3 – Project Description, the power line structures will be constructed in compliance with the Avian Power Line Interaction Committee's (APLIC's) Suggested Practices for Avian Protection on Power Lines. In addition, the 12 kV distribution relocation component of the Proposed Project will utilize a combination of existing and new underground distribution conduit, which will not increase the possibility of avian electrocution within the Proposed Project site. Therefore, the potential impacts of increased wildlife electrocution and collision are anticipated to be less than significant.

Standard operation and maintenance activities—such as structure installation, replacement, and repairs—may potentially impact sensitive species if they are present in the Proposed Project site. Impacts may include the disruption of nesting behavior and direct mortality from maintenance vehicles and equipment. Operation and maintenance work for the Proposed Project will primarily occur within the Proposed Project's fence lines and existing ROW. Because there are numerous major roadways, as well as coaster and trolley tracks present in the area, there will be only a minor increase in vehicle trips and activities; therefore, it is not anticipated that operation and maintenance activities will increase the potential to impact sensitive species and/or sensitive species' habitat. In addition, SDG&E will utilize its existing NCCP during all routine operation and maintenance activities for the Proposed Project. Thus, potential operation and maintenance impacts will be less than significant.

Question 4.4b – Sensitive Natural Communities – *No Impact*

Sensitive vegetation communities include riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the USFWS and the CDFW. No sensitive natural communities—as defined by the USACE, RWQCB, CDFW, and/or the City of San Diego—exist in the Proposed Project footprint. Therefore, there will be no impact to sensitive natural communities.

Question 4.4c – Effects on Jurisdictional Waters – *No Impact*

The Proposed Project footprint does not contain any wetlands or other jurisdictional waters as defined by Section 404 of the Clean Water Act. In addition, with the implementation of the NCCP as described Chapter 3 – Project Description, the Proposed Project's Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure (SPCC) Plan—which are both required by law—as well as SDG&E's Water Quality Construction Best Management Practices (BMP) Manual, indirect impacts to jurisdictional waters resulting from the construction, operation, and maintenance of the Proposed Project will also be avoided.

Question 4.4d – Interfere with Native Wildlife Movement – *Less-than-Significant Impact*

The construction of the Proposed Project will not interfere with the movement of any native wildlife species or interfere with known migration corridors. The Proposed Project is located within a highly urbanized area and adjacent to several roadways carrying high volumes of traffic, as well as coaster and trolley tracks which are movement barriers for some wildlife species (e.g., amphibians and mammals). No known migration corridors and no waterways that contain fish are in the Proposed Project footprint. While vehicle traffic associated with Proposed Project construction or operation may result in species injury or mortality, impacts will be less than significant due to the low likelihood of these collisions occurring and the fact that the potential for this to occur already exists in the Proposed Project footprint due to the existing network of roads and high vehicle use.

The Pacific Flyway is located south of the Proposed Project within the San Diego Bay; therefore, some avian species may traverse through the Proposed Project to reach the San Diego Bay. However, no waterbodies are located within the Proposed Project footprint, which could provide high-quality rest or foraging habitat for avian species during their migration. Avian species that use the Pacific Flyway for migration are more likely to use the waterbodies located outside the Proposed Project footprint for rest and foraging habitat.

Terrestrial wildlife species tend to travel along natural drainages that provide protective cover from predators and a foraging source. There are no natural drainage features within the Proposed Project footprint. Furthermore, development occurs throughout the area; as a result, the quality of the site as a wildlife movement corridor for terrestrial species is diminished. Therefore, potential impacts to terrestrial wildlife movement will be less than significant.

Question 4.4e – Conflict with Local Policies – *No Impact*

Construction, operation, and maintenance of the Proposed Project will not conflict with any local environmental policies or ordinances promulgated to protect biological resources. The following section addresses policies detailed in the Conservation Element of the City of San Diego General Plan that may be applicable to the Proposed Project.

Urban Runoff Management

- *Goal: Protection and restoration of water bodies, including reservoirs, coastal waters, creeks, bays, and wetlands.*

- *Policy CE-E.2. Apply water quality protection measures to land development projects early in the process-during project design, permitting, construction, and operations in order to minimize the quantity of runoff generated onsite, the disruption of natural water flows and the contamination of storm water runoff.*

- *Policy CE-E.6. Continue to encourage "Pollution Control" measures to promote the proper collection and disposal of pollutants at the source, rather than allowing them to enter the storm drain system.*

The Proposed Project will not significantly alter the existing on site drainage patterns or significantly increase the amount of runoff generated from the site. The proposed Vine

Substation is within a paved parking lot and the other Proposed Project components are located within existing paved roads. Therefore, storm water flow patterns are not expected to change substantially from pre-construction conditions. All areas temporarily disturbed during grading will be restored to their original contours, and the surrounding area will be repaired, as appropriate. In addition, landscaping will be installed consistent with SDG&E's Landscape Plan, which is described further in Section 4.1 Aesthetics. The use of pesticides and herbicides will be limited to the minimum necessary to properly maintain on-site landscaping and ensure its long-term survival.

In addition, SDG&E will implement the Proposed Project's SWPPP and SPCC Plan, which are both required by law, as well as SDG&E's Water Quality Construction BMP Manual. As such, potential short-term impacts will be minimized through compliance with applicable Federal, State, and local laws, and proper implementation of SDG&E's Water Quality Construction BMP Manual. In doing so, potential impacts relative to drainage and water quality will be avoided or minimized and will remain to less than significant. For these reasons, the Proposed Project will be consistent with the previously noted goal and policies.

Biological Diversity

- *Goal: Preservation of healthy, biologically diverse, regional ecosystems and conservation of endangered, threatened, and key sensitive species and their habitats.*

No sensitive plant or wildlife species are anticipated to occur within the Proposed Project footprint. In addition, no sensitive natural communities—as defined by the USACE, RWQCB, CDFW, and/or the City of San Diego—exist in the Proposed Project footprint. As such, the Proposed Project will not impact any native vegetation communities or sensitive species and will be consistent with this goal of preserving regional ecosystems and conserving endangered, threatened, and key sensitive species and their habitats.

No other local ordinances protecting biological resources have been identified. Therefore, the Proposed Project will be consistent with local ordinances protecting biological resources and no impact will occur.

Question 4.4f – Conflict with Conservation Plan – *No Impact*

SDG&E's existing NCCP and the City of San Diego MSCP Subarea Plan are the only conservation plans that may apply to the Proposed Project site. SDG&E will operate under its existing NCCP, which was established according to the FESA and CESA and the state's NCCP Act. The NCCP addresses potential impacts to sensitive resources associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems, as well as typical expansions of those systems throughout SDG&E's existing service area. The NCCP was developed in coordination with the USFWS and the CDFW, and is designed to be consistent with local HCPs and the overall preserve planning effort, including the City of San Diego MSCP Subarea Plan. The NCCP protocols will be applied to the Proposed Project, as appropriate, to avoid and/or minimize potential impacts resulting from construction of the Proposed Project. Therefore, the Proposed Project will not conflict with any applicable conservation plan, and no impacts will occur.

4.4.4 Applicant-Proposed Measures

With implementation of SDG&E's ordinary construction/operating restrictions, potential impacts related to biological resources, will remain less than significant. As a result, no applicant-proposed measures have been proposed.

4.4.5 References

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ATTACHMENT 4.4-A: USFWS SPECIES LISTS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
CARLSBAD FISH AND WILDLIFE OFFICE
6010 HIDDEN VALLEY ROAD, SUITE 101
CARLSBAD, CA 92011
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Tracking Number: 08ECAR00-2014-SLI-0106 January 03, 2014
Project Name: Development Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Development Project

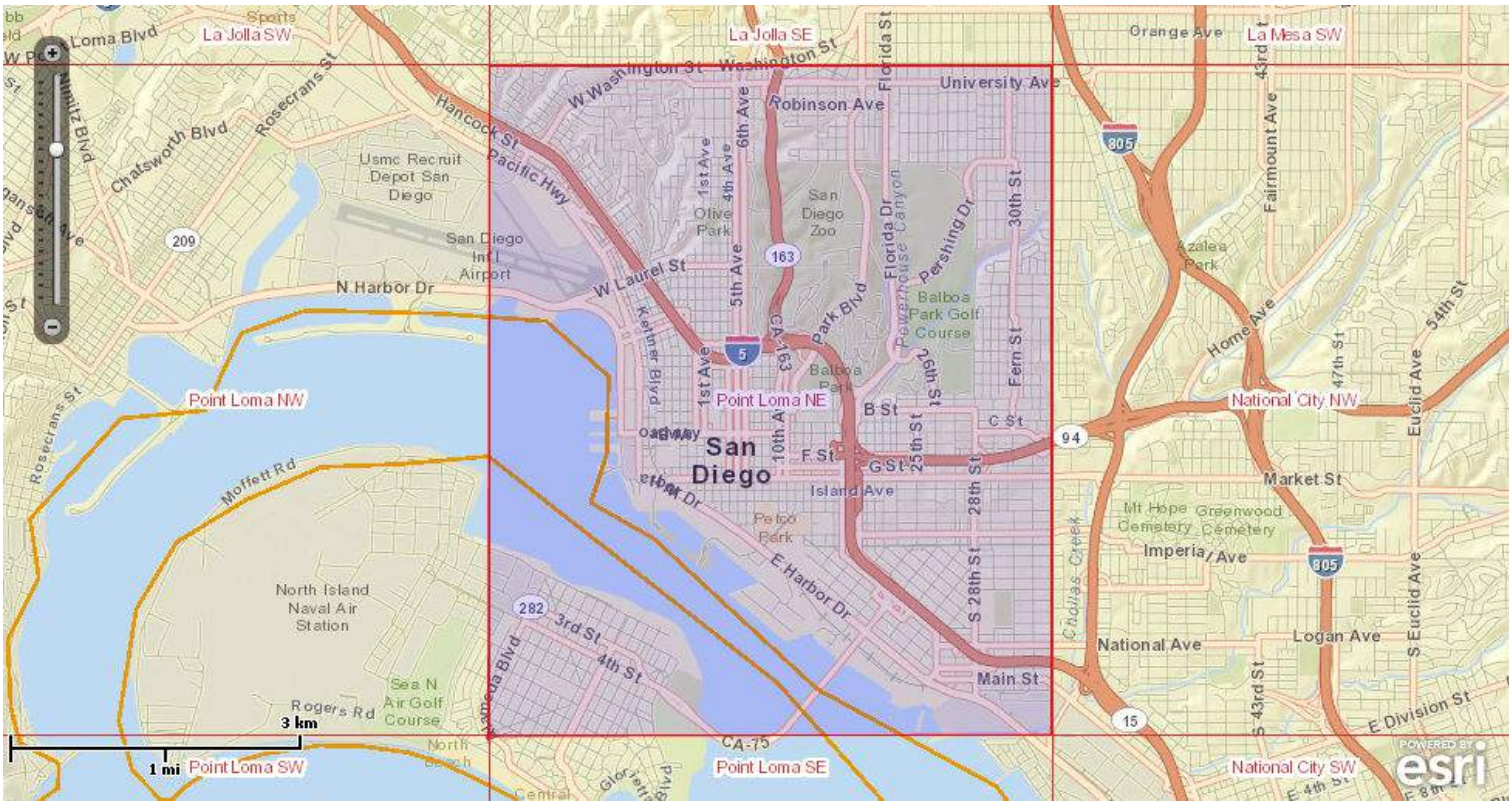
Official Species List

Provided by:

CARLSBAD FISH AND WILDLIFE OFFICE
6010 HIDDEN VALLEY ROAD, SUITE 101
CARLSBAD, CA 92011
(760) 431-9440
http://www.fws.gov/carlsbad/

Consultation Tracking Number: 08ECAR00-2014-SLI-0106
Project Type: Development
Project Description: This would be a development project in the Point Loma USGS 7.5 minute Quad.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-117.18766016 32.68742628, -117.1876614 32.6869925, -117.1878244 32.6874259, -117.18766016 32.68742628)), ((-117.18766016 32.68742628, -117.1874811 32.7499618, -117.1251766 32.7499618, -117.1251766 32.6875704, -117.18766016 32.68742628)))

Project Counties: San Diego, CA

Endangered Species Act Species List

There are a total of 14 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

California Least tern *(Sterna antillarum browni)*
Listing Status: Endangered

California Orcutt grass *(Orcuttia californica)*
Listing Status: Endangered

Coastal California gnatcatcher *(Polioptila californica californica)*
Population: Entire
Listing Status: Threatened
Has Critical Habitat: Final designated, Proposed

Least Bell's vireo *(Vireo bellii pusillus)*
Population: Entire
Listing Status: Endangered
Has Critical Habitat: Final designated

Light-Footed Clapper rail *(Rallus longirostris levipes)*
Population: U.S.A. only
Listing Status: Endangered

Mexican flannelbush *(Fremontodendron mexicanum)*
Listing Status: Endangered
Has Critical Habitat: Final designated

Orcutt's spineflower *(Chorizanthe orcuttiana)*
Listing Status: Endangered

Otay tarplant *(Deinandra (=hemizonia) conjugens)*
Listing Status: Threatened
Has Critical Habitat: Final designated

Pacific Pocket mouse *(Perognathus longimembris pacificus)*
Population: Entire
Listing Status: Endangered

Salt Marsh bird's-beak *(Cordylanthus maritimus ssp. maritimus)*
Listing Status: Endangered

San Diego ambrosia *(Ambrosia pumila)*
Listing Status: Endangered
Has Critical Habitat: Final designated

San Diego button-celery *(Eryngium aristulatum var. parishii)*
Listing Status: Endangered

San Diego fairy shrimp *(Branchinecta sandiegonensis)*
Listing Status: Endangered
Has Critical Habitat: Final designated

western snowy plover *(Charadrius nivosus ssp. nivosus)*
Population: Pacific coastal pop.
Listing Status: Threatened
Has Critical Habitat: Final designated

Critical habitats that lie within your project area

There are no critical habitats within your project area.

ATTACHMENT 4.4-B: BIOLOGICAL SURVEY MEMO

MEMO

To: Edalia Olivo-Gomez, San Diego Gas & Electric Company

From: Robert Curley, Insignia Environmental (Insignia)

Date: April 18, 2014

Re: Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) Reconnaissance-Level Survey

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Introduction: On January 2, 2014, Insignia biologist Jeffry Coward conducted a reconnaissance-level biological and hydrological survey of the Proposed Project site. The Proposed Project site is comprised of all areas that will be impacted by the Proposed Project (Proposed Project footprint), including:

- The proposed Vine Substation site
- Areas along Kettner Boulevard and Pacific Highway where new and relocated 12 kV distribution circuits and telecommunication facilities will be installed
- Areas adjacent to Kettner Boulevard where the 69 kV loop-in will be constructed

Due to limited access, the western side of the parking lot between the existing fence and the railroad tracks was visually surveyed through a locked chain-link gate. The biologist also surveyed the area surrounding the Proposed Project footprint (Proposed Project site), including the Interstate 5 overpass at Vine Street directly west of the proposed Vine Substation and the Pacific Highway overpass at Sassafras Street. Figure 1: Survey Overview Map depicts the Proposed Project components and the survey area.

Methodology: The biologist conducted a pedestrian survey and documented the dominant plant communities and potential for wildlife species habitat within the Proposed Project site. He also documented plant and animal species observed directly or detected from calls, tracks, scat, nests, or other signs. The wildlife survey was performed during the day; therefore, nocturnal animals were identified by evidence that was apparent at the time of the survey. The potential for sensitive plant and animal species, determined by the presence of diagnostic habitat elements, was documented.

A field investigation for hydrological features within the Proposed Project footprint was also conducted to identify any jurisdictional waters regulated under the federal Clean Water Act (CWA), California Porter-Cologne Water Quality Control Act, and California Fish and Game Code Sections 1600 through 1606. Prior to conducting the site visit, aerial photographs and United States (U.S.) Geological Survey topographic maps of the site were examined. The presence of any jurisdictional areas or drainage channels was noted during the visit. The area was also examined for the presence of potential waters of the U.S.

Survey Results:

Biological Resources

The entire proposed Vine Substation site is an active parking lot surrounded by a chain-link fence. The southern fence is covered with non-native English ivy (*Hedera helix*), which provides a visual barrier between the parking lot and the adjacent rental car facility. No trees were observed along the southern side of the parking lot. The eastern and northern sides of the parking lot have no plants growing near or within the chain-link fence. There are six non-native Mexican fan palm trees (*Washingtonia robusta*) located along the eastern side of the parking lot (Photograph 1). There are no trees along the northern side of the parking lot. The western side of the parking lot contains a dense collection of ornamental and non-native plant species on the outside of the fence line, including Mexican fan palm, pepper tree (*Schinus* sp.) and horseweed (*Conyza bonariensis*) (Photographs 2 and 3).

A small strip of dirt, approximately three feet wide, runs along the entire perimeter of the parking lot, adjacent to the pavement of the parking lot. This strip of dirt is sparsely vegetated with non-native species (Photograph 4). No burrows were observed within this dirt strip.

The interstate and highway overpasses were inspected for potential bird nesting or bat roosting areas. Within each overpass, pre-cast holes were observed within the concrete. The biologist could not determine the depth of these holes; however, no sign of bat or bird use (e.g., white wash, guano, feathers, etc.) was observed. The Port of San Diego building—located near the Pacific Highway overpass at Sassafras Street—was the one structure of sufficient height for potential raptor nests within the survey area (Photograph 5). As shown in Figure 1: Survey Overview Map, the Port of San Diego Building is located approximately 350 feet west of the 12 kV circuits that will be relocated within Kettner Boulevard and approximately 1,100 feet south of the proposed Vine Substation. No sign of any nests or other raptor use of the building was observed. Due to the industrial nature of the area surrounding the building and the numerous major roadways (including Interstate 5 and Pacific Coast Highway), the North County Transit District Coaster and San Diego Metropolitan Transit System Trolley tracks, and the San Diego International Airport, potential nests at this location will not be disturbed by construction. Only one wildlife species was observed during the survey—a rock dove (*Columba livia*)—was observed flying over the parking lot.

The proposed 69 kV loop-in transmission pole sites are located adjacent to a chain-link fence and the railroad tracks. Because the biologist was unable to access these sites, only a portion of the site was surveyed directly; however, the entire site was observed visually. Little to no vegetation was observed directly beneath the transmission line and between the fence and the railroad tracks.

Hydrological Features

The entire Proposed Project footprint was surveyed for the presence of jurisdictional areas, drainage channels, and potential waters of the U.S. The only feature noted was a small (approximately 12-inch-wide and 12-inch-deep) concrete storm water v-ditch located outside the western boundary of the proposed Vine Substation site (Photograph 3). This feature is designed for storm water conveyance and is located in an upland location along the edge of the ornamental vegetation between the railroad tracks and the proposed Vine Substation site. This concrete channel conveys only storm water runoff from the parking lots east of the v-ditch, and the channel flows south to north into a storm drain located on California Street. There was no vegetation or accumulated sediment observed within the channel. The channel is associated with a Municipal Separate Stormwater Sewer System and will be avoided during construction. Wetlands or jurisdictional waters—as defined by Section 404 of the CWA, or under the jurisdiction of the California Department of Fish and Wildlife or the Regional Water Quality Control Board—are not present within the Proposed Project footprint.

Photographs (see Figure 1: Survey Overview Map for the location of each photograph):

Photograph 1: View of the proposed Vine Substation site facing southwest from Vine Street.

Photograph 2: View of ornamental vegetation located adjacent to the proposed Vine Substation site looking south.

Photograph 3: Ornamental vegetation and a concrete channel located between the proposed Vine Substation site and railroad tracks looking south.

Photograph 4: Non-native annual weeds located within the dirt strip along the existing paved parking lot.

Photograph 5: View of the Port of San Diego building facing south. The Port of San Diego building is located approximately 350 feet west of the 12 kV distribution relocation and approximately 1,100 feet south of the proposed Vine Substation.

Figure 1: Survey Overview Map — **Vine 69/12 kV Substation Project**

- Proposed Vine 69/12 kV Substation
- Existing Kettner Substation
- Existing 69 kV Overhead
- Existing 69 kV Overhead to be Removed
- Proposed 69 kV Overhead
- Existing 12 kV Duct Bank
- Proposed 12 kV Duct Bank
- Proposed 12 kV and Telecommunications Duct Bank
- Proposed Telecommunications Duct Bank
- Survey Boundary
- Concrete Storm Water V-Ditch
- Photograph Location (indicating direction)

1:5,500

0 200 400 Feet

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SDGE A Sempra Energy utility

INSIGNIA ENVIRONMENTAL

Z:\Projects\SDGE_Vine\MXDs\Fig1_Survey_Overview.mxd 4/21/2014

ATTACHMENT 4.4-C: SDG&E NCCP AND OPERATIONAL PROTOCOLS

7.1 Operational Protocols

Operational protocols represent an environmentally sensitive approach to traditional utility construction, maintenance and repair Activities recognizing that slight adjustments in construction techniques can yield major benefits for the environment. The appropriate Operational Protocols for each individual project will be determined and documented by the Environmental Surveyor. The information regarding the qualifications and responsibilities of the environmental surveyor is contained in Appendix B. The following mitigation measures shall be adhered to by SDG&E.

7.1.1 General Behavior for All Field Personnel

1. Vehicles must be kept on access roads. A 15 mile-per-hour speed limit shall be observed on dirt access roads to allow reptile species to disperse. Vehicles must be turned around in established or designated areas only.

2. No wildlife, including rattlesnakes, may be harmed, except to protect life and limb.

3. Firearms shall be prohibited on the rights-of-way except for those used by security personnel.

4. Feeding of wildlife is not allowed.

5. SDG&E personnel are not allowed to bring pets on the rights-of-way in order to minimize harassment or killing of wildlife and to prevent the introduction of destructive domestic animal diseases to native wildlife populations.

6. Parking or driving underneath oak trees is not allowed in order to protect root structures except in established traffic areas.

7. Plant or wildlife species may not be collected for pets or any other reason.

8. Littering is not allowed. SDG&E shall not deposit or leave any food or waste on the rights-of-way or adjacent property.

9. Wild Fires shall be prevented or minimized by exercising care when driving and by not parking vehicles where catalytic converters can ignite dry vegetation. In times of high fire hazard, it may be necessary for trucks to carry water and shovels, or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention methods shall be used during grinding and welding to prevent or minimize the potential for fire. Care should be exhibited when smoking in natural habitats.

10. Field crews shall refer environmental issues including wildlife relocation, dead or sick wildlife, hazardous waste, or questions about avoiding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may need to be brought in by Environmental Surveyor for assistance with wildlife relocations.

7.1.2 Training

11. All SDG&E personnel working within the project area shall participate in an employee training program conducted by SDG&E, with annual updates. The program will consist of a brief discussion of endangered species biology and the legal protections afforded to Covered Species; a discussion of the biology of the Covered Species protected under this Subregional Plan; the habitat requirements of these Covered Species; their status under the Endangered Species Acts; measures being taken for the protection of Covered Species and their habitats under this Subregional Plan; and a review of the Operational Protocols. A fact sheet conveying this information will also be distributed to all employees working in the project area.

12. Designated SDG&E staff will conduct selected reviews of SDG&E operations. Any proposed modifications to Operational Protocols, procedures or conditions will be promptly provided to CDFG and USFWS for their review and input for required permit or Subregional Plan amendments.

7.1.3 Preactivity Studies

13. The Environmental Surveyor shall conduct preactivity studies for all activities occurring off of access roads in natural areas. The scope of these studies is included in Appendix A. The Environmental Surveyor will complete a preactivity study form contained in Appendix A, including recommendations for review by a biologist and construction monitoring as appropriate. Biologists should be called in when there is the potential for unavoidable impacts to Covered Species. The forms are for information only, and will not require CDFG or USFWS approval. These forms shall be faxed to CDFG and USFWS, along with phone notification, who will reply within 5 working days, indicating if they would like to review the project and/or suggest recommendations for post project monitoring. If a biologist is required, he/she will be contacted concurrent to notification to CDFG and USFWS. SDG&E's project may proceed during this time if necessary, in compliance with the recommendations of the biologist (For narrow endemic species see mitigation IV following Table 3.1). USFWS survey protocols performed by qualified biologists will be required for new projects which are defined as projects requiring CEQA review.

In those situations where the Environmental Surveyor cannot make a definitive species

identification, an on-call biologist will be brought in. When the biologist is called, he or she will be contacted concurrently with CDFG and USFWS. The biologist will make the determination of the species in question and recommend avoidance or mitigation approaches to the Environmental Surveyor and a decision will be made. In those situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required. It is expected that the typical USFWS search protocols will not be utilized in most situations due to the Plan's avoidance priority. Background information necessary to complete the annual report shall be collected on the preactivity study form and used by SDG&E to prepare the annual report.

14. In order to ensure that habitats are not inadvertently impacted, the Environmental Surveyor shall determine the extent of habitat and flag boundaries of habitats which must be avoided. When necessary, the Environmental Surveyor should also demark appropriate equipment laydown areas, vehicle turn around areas, and pads for placement of large construction equipment such as cranes, bucket trucks, augers, etc. When appropriate, the Environmental Surveyor shall make office and/or field presentations to field staff to review and become familiar with natural resources to be protected on a project specific basis.

15. SDG&E will maintain a library of rare plant locations known to SDG&E occurring within easements and fee owned properties. "Known" means a verified population, either extant or documented using record data. Information on known sites may come from a variety of record data sources including local agency Habitat Conservation Plans, pre-activity surveys, or biological surveys conducted for environmental compliance on a project site (e.g. initial study), but there is no requirement for development of original biological data. Plant inventories shall be consulted as part of pre-activity survey procedures.

7.1.4 Maintenance, Repair and Construction of Facilities

16. Maintenance, repair and construction Activities shall be designed and implemented to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs.

17. Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.

18. When the view of a gas transmission line marker becomes obscured by vegetation on a regular basis requiring repeated habitat removal, consideration shall be given to the replacement of markers with taller versions.

19. Erosion will be minimized on access roads and other locations primarily with water bars. The water bars are mounds of soil shaped to direct flow and prevent erosion.

20. Hydrologic impacts will be minimized through the use of state-of-the-art technical design and construction techniques to minimize ponding, eliminate flood hazards, and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of Best Management Practices.

21. When siting new facilities, every effort will be made to cross the wetland habitat perpendicular to the watercourse, spanning the watercourse to minimize the amount of disturbance to riparian areas (See Figure 4).

22. Gas and other facilities cross streambeds and require maintenance and repair. During such times water may be temporarily diverted as long as after disturbance natural drainage patterns are restored to minimize the impact of the disturbance and help to reestablish or enhance the native habitat. Erosion control during construction in the form of intermittent check dams and culverts should also be considered to prevent alteration to natural drainage patterns and prevent siltation.

23. Impacts to wetlands shall be minimized by avoiding pushing soil or brush into washes or ravines.

24. During work on facilities, all trucks, tools, and equipment should be kept on existing access roads or cleared areas, to the extent possible.

25. Environmental Surveyor must approve of activity prior to working in sensitive areas where disturbance to habitat may be unavoidable.

26. Insulator washing is allowed from access roads if other applicable protocols are followed.

27. Brush clearing around facilities for fire protection shall not be conducted from March through August without prior approval by the Environmental Surveyor. The Environmental Surveyor will make sure that the habitat contains no active nests, burrows, or dens prior to clearing.

28. In the event SDG&E identifies a covered species of plant within a 10' radius around power poles, which is the area required to be cleared for fire protection purposes, SDG&E shall notify USFWS (for ESA listed plants), and CDFG (for CESA listed plants), in writing, of the plant's identity and location and of the proposed Activity, which will result in a Take of such plant. Notification will occur ten (10) working days prior to such Activity, during which time USFWS or CDFG may remove such plant(s). If neither USFWS or CDFG have removed such plant(s) within the ten (10) working days following the notice, SDG&E may proceed to complete its fire clearing and cause a Take of such plant(s).

    When fire clearing is necessary in instances other than around power poles, and the potential for impacts to Covered Species exists, SDG&E will follow the preactivity study and notification procedures in Operational Protocol number 13.

29. Wire stringing is allowed year round in sensitive habitats if conductor is not allowed to drag on ground or in brush and vehicles remain on access roads.

30. Maintenance of cut and fill slopes shall consist primarily of erosion repair. In situations where revegetation would improve the success of erosion control, planting or seeding with native hydroseed mix may be done on slopes.

31. Spoils created during maintenance operations shall be disposed of only on previously disturbed areas designated by the Environmental Surveyor or used immediately to fill eroded areas. Cleared vegetation shall be hauled off the rights-of-way to a permitted disposal location.

32. Within 6 months of Plan approval, environmentally sensitive tree trimming locations will be identified in the tree trim computer data base system utilized by tree trim contractors. (This data base also tracks the date of each tree trim, type of tree, where threatening dogs reside, etc.). The Environmental Surveyor should be contacted to perform a preactivity survey when trimming is planned in environmentally sensitive areas. Whenever possible, trees in environmentally sensitive areas (determined by CDFG and SDG&E) will be scheduled for trimming in the non-sensitive times.

33. No new Facilities and Activities shall be planned which disturb vernal pools, their watersheds, or impact their natural regeneration. Continued historic maintenance of existing infrastructure utilizing existing access roads is allowed to continue in areas containing vernal pool habitat. New construction of overhead infrastructure which spans vernal pool habitats is allowed as long as the placement of facilities or the associated construction activities in no way impact the vernal pools.

34. If any previously unidentified dens, burrows, or plants are located on any project site after the preactivity survey, the Environmental Surveyor shall be contacted. Environmental Surveyor will determine how to best avoid or minimize impacting the resource by considering such methods as project or work plan redevelopment, equipment placement or construction method modification, seasonal/time of day limitations, etc...

35. The Environmental Surveyor shall conduct monitoring as recommended in the preactivity survey report. At completion of work, the Environmental Surveyor shall check to verify compliance, including observing that flagged areas have been avoided and that reclamation has been properly implemented. Also at completion of work, the Environmental Surveyor is responsible for removing all habitat flagging from the construction site.

36. The Environmental Surveyor shall conduct checks on mowing procedures, to ensure that mowing is limited to a 12-foot wide area on straight portions of the road (slightly wider on radius turns), and that the mowing height is no less than 4 inches.

37. Supplies or equipment where wildlife could hide (e.g., pipes, culverts, pole holes) shall be inspected prior to moving or working on them to reduce the potential for injury to wildlife. Supplies or equipment that cannot be inspected or from which animals could not be removed shall be capped or otherwise covered at the end of each work day. Old piping or other supplies that have been left open, shall not be capped until inspected and any species found in it allowed to escape. Ramping shall be provided in open trenches when necessary. If an animal is found entrapped in supplies or equipment, such as a pipe section, the supplies or equipment shall be avoided and the animal(s) left to leave on its own accord, except as otherwise authorized by CDFG.

38. All steep-walled trenches or excavations used during construction shall be inspected twice daily (early morning and evening) to protect against wildlife entrapment. If wildlife are located in the trench or excavation, the Environmental Surveyor shall be called immediately to remove them if they cannot escape unimpeded.

39. Large amounts of fugitive dust could interfere with photosynthesis. Fugitive dust created during clearing, grading, earth-moving, excavation or other construction activities will be controlled by regular watering. At all times, fugitive dust emissions will be controlled by limiting on-site vehicle speed to 15 miles per hour.

40. Before using pesticides in areas where burrowing owls may be found, a pre-activity survey will be conducted.

7.1.5 Maintenance of access roads shall consist of:

41. Repair of erosion by grading, addition of fill, and compacting. In each case of repair, the total area of disturbance shall be minimized by careful access and use of appropriately sized equipment. Repairs shall be done after preactivity surveys conducted by the Environmental Surveyor aod in accordance with the recommendations regarding construction monitoring and relevant protocols. Consideration should be given to source of erosion problem, when source is within control of SDG&E.

42. Vegetation control through grading should be used only where the vegetation obscures the inspection of facilities, access may be entirely lost, or the threat of Facility failure or fire hazard exists. The graded access road area should not exceed 12'-wide on straight portions (radius turns may be slightly wider) (See Figure 23).

43. Mowing habitat can be an effective method for protecting the vegetative understory while at the same time creating access to a work area. Mowing should be used when permanent access is not required since, with time, total revegetation is expected. If mowing is in response to a permanent access need, but the alternative of grading is undesirable because of downstream siltation potential, it should be recognized that periodic mowing will be necessary to maintain permanent access.

44. Maintenance work on access roads should not expand the existing road bed (See Figure 23).

45. Material for filling in road ruts should never be obtained from the sides of the road which contain habitat without approval from Environmental Surveyor..

7.1.6 Construction of new access roads shall comply with the following:

46. SDG&E access roads will be designed and constructed according to the SDG&E *Guide for Encroachment on Transmission Rights-of-Way (4/91).*

47. Access roads will be made available to managers of the regional preserve system subject to coordination with SDG&E.

48. New access roads shall be designed to be placed in previously disturbed areas and areas which require the least amount of grading in sensitive areas during construction whenever possible (See Figure 5). Preference shall be given to the use of stub roads rather than linking facilities tangentially.

49. SDG&E will consider providing access control on access roads leading into the regional preserve system where such control provides benefit to sensitive resources.

50. New access road construction is allowed year round. Every effort shall be made to avoid constructing roads during the nesting season. During the nesting season, the presence or absence of nesting species shall be determined by a biologist and appropriate avoidance and minimization recommendations followed.

7.1.7 Construction and Maintenance of Access Roads Through Streambeds

51. Construction of new access roads through streambeds requires a Streambed Alteration Agreement from CDFG and/or consultation with the Army Corps of Engineers.

52. Maintenance or construction vehicle access through shallow creeks or streams is allowed. However, no filling for access purposes in waterways is allowed without the installation of appropriately sized culverts. The use of geotextile matting should be considered when it would protect wetland species.

53. Staging/storage areas for equipment and materials shall be located outside of riparian areas. (See Figure 23).

7.1.8 Survey Work

54. Brush clearing for foot paths or line-of-sight cutting is not allowed from March through August in sensitive habitats without prior approval from the Environmental Surveyor, who will ensure that activity does not adversely affect a sensitive species.

55. SDG&E survey personnel must keep vehicles on existing access roads. No clearing of brush for panel point placement is allowed from March through August without prior approval from the Environmental Surveyor.

56. Hiking off roads or paths for survey data collection is allowed year round so long as other protocols are met.

7.1.9 Emergency Repairs

57. During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.

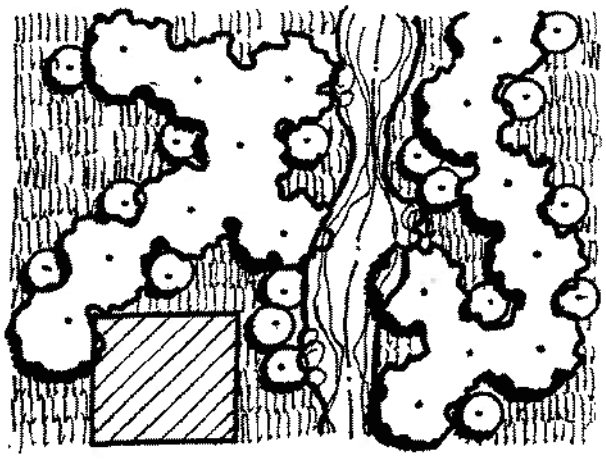
58. Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continued to be followed to fullest extent possible.

59. Once the emergency has stabilized, any unavoidable environmental damage will be reported to the Environmental Surveyor by the foreman. The Environmental Surveyor will develop a mitigation plan and ensure its implementation is consistent with this Subregional Plan.

7.1.10 Activities of Underlying Fee Owners

60. Most SDG&E rights-of-way are held in easement only. The activities of underlying fee owners cannot be controlled by SDG&E and are not covered by this Subregional Plan.

61. When sensitive habitat exists on either side of a utility right-of-way, SDG&E will not oppose underlying fee owners dedicating said property to conservation purposes. Underlying fee owners are expected to comply with applicable federal, state, and local regulations.



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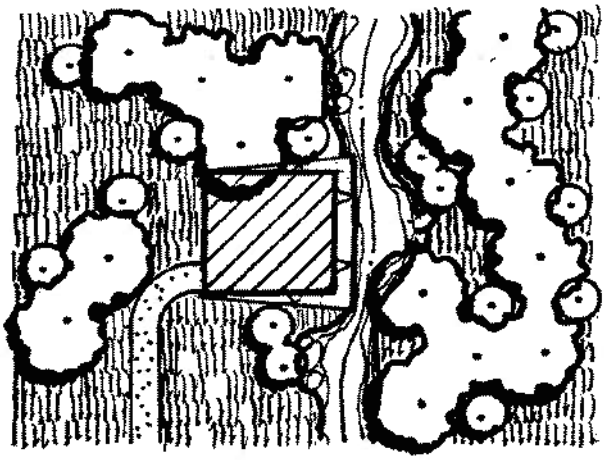

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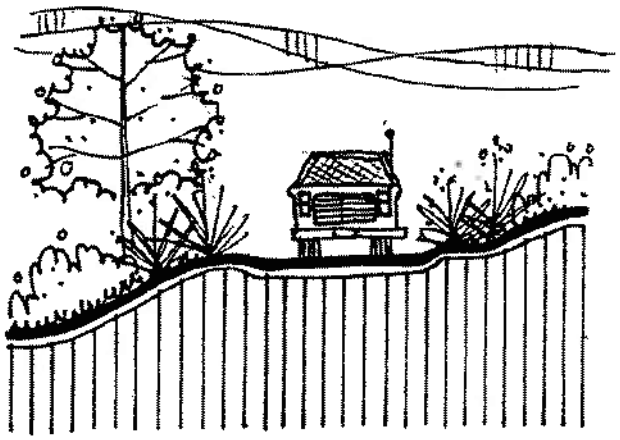

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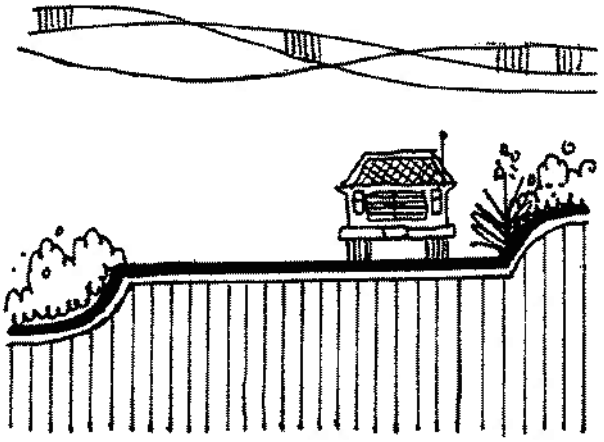

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ACCESS ROAD MAINTENANCE SHOULD NOT EXPAND THE EXISTING ROAD BED

FIGURE 23

Operational Protocol Diagrams

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4.5 CULTURAL RESOURCES

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			✓	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			✓	
d) Disturb any human remains, including those interred outside of formal cemeteries?			✓	

4.5.0 Introduction

This section describes the archaeological, historical, and paleontological resources identified within the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) and identifies potential impacts that could result from construction, operation, and maintenance of the Proposed Project. The analysis in this section is based on the Cultural Resource Review for the Proposed Project that was prepared by ASM Affiliates, Inc. (ASM) in February 2014 (ASM 2014), as well as a Paleontological Record Search that was completed by the San Diego Natural History Museum's (SDNHM's) Department of PaleoServices in May 2013 (SDNHM 2013).

Cultural resources, as defined under the California Environmental Quality Act (CEQA), include archaeological sites, sacred sites, traditional cultural properties, rock art, rock piles or cairns, historic buildings, and other features of the historic built environment. Cultural resources identified within the Proposed Project site are limited to prehistoric and historic archaeological sites. With the implementation of applicant-proposed measures (APMs), potential impacts to cultural resources that may result from the Proposed Project will be reduced to a less-than-significant level.

There is a moderate to high sensitivity for paleontological resources in the Bay Point geologic formation within the Proposed Project area and in the Lindavista and San Diego geologic formations that are located within 500 feet of the Proposed Project area. These formations will most likely be impacted if the Proposed Project's excavation activities extend below the more recent Bay Point Formation. With the implementation of APMs, potential impacts to paleontological resources that may result from the Proposed Project will be reduced to a less-than-significant level.

4.5.1 Methodology

Cultural Resources

Records Search

Site record and archival searches were completed at the South Coastal Information Center (SCIC) of the California Historic Resources Information System. The records search study area encompassed a one-mile radius around the Proposed Project. Extant historic maps, historic registers, landmark lists, and other documents were consulted. Previously identified cultural resources within the study area were identified in the records search. A Cultural Resource Review was prepared (ASM 2014) for the Proposed Project.

Native American Contacts

The Native American Heritage Commission (NAHC) was contacted for a Sacred Lands Record Search to obtain additional information regarding potential cultural resources within or near the Proposed Project area. The response from the NAHC indicated that no Native American traditional cultural places had been submitted for the Proposed Project area. The NAHC also provided a list of local Native American contacts that may be knowledgeable about cultural resources within or near the Proposed Project area. Letters were sent to these representatives by ASM, and copies of the letters are included in Attachment 4.5-A: NAHC Correspondence. No replies have been received to date.

Cultural Resources Field Survey

As the Proposed Project area is located within previously developed area, a cultural resources field survey was not conducted. A cultural resources summary report was prepared (ASM 2014) for the Proposed Project.

Paleontological Resources

A thorough literature review and records search was conducted of relevant published geologic reports, unpublished paleontological reports, and museum paleontological records of known localities to identify the potential for paleontological resources to exist in the vicinity of the Proposed Project. This approach was utilized due to the direct relationship between paleontological resources and the geologic formations within which they occur. A paleontological resource assessment summary letter was prepared for the Proposed Project (SDNHM 2013).

4.5.2 Existing Conditions

Regulatory Background

The following sections describe federal and state regulations regarding cultural and paleontological resources that apply to the Proposed Project.

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA), enacted in 1969, requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties are cultural resources (i.e., archaeological sites, historic built environment features, or Native American sites) that are listed on or determined to be eligible for listing on the National Register of Historic Places (NRHP). The governing regulation, Section 106 of the NHPA—which is codified in Title 36 of the Code of Federal Regulations (CFR) Part 800—requires the project's lead federal agency to consult with the State Historic Preservation Officer regarding potential impacts to historic properties. The goal of the Section 106 process is to offer a measure of protection for cultural resources that are determined eligible or potential eligible for listing on the NRHP. The criteria for determining eligibility can be found in 36 CFR Part 60.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act establishes a federal policy of respect for, and protection of, Native American religious practices. It also contains provisions that allow limited access to Native American religious sites.

Paleontological Resources Preservation Act

On March 30, 2009, the Paleontological Resources Preservation Act (PRPA), 16 USC 470aaa, became law. This law requires the United States (U.S.) Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal lands using scientific principles and expertise. New policies from the agencies regarding paleontological resources are now in progress.

State

California Environmental Quality Act

CEQA requires that impacts to cultural resources be identified and, if impacts will be significant, that mitigation measures be implemented to reduce those impacts to the extent feasible. In the protection and management of the cultural environment, both the statute and its CEQA Guidelines provide definitions and standards for cultural resources management. Pursuant to Guideline 15064.5(a), the term "historical resource" includes:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR).

- A resource included in a local register of historical resources…or identified as significant in a historical resource survey…shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or

cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR, including the following:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in our past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- It has yielded, or may be likely to yield, information important in prehistory or history.

- The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources, or identified in a historical resources survey, does not preclude a lead agency from determining that the resource may be a historical resource.

As defined in Section 21083.2(g) of CEQA, a "unique archaeological resource" is:

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
  - It contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
  - It has a special and particular quality such as being the oldest of its type or the best available example of its type.
  - It is directly associated with a scientifically recognized important prehistoric or historical event or person.

Section 15064.5(b)(1) of the CEQA Guidelines explains that effects on cultural properties that qualify as historical resources or unique archaeological resources would be considered adverse if they involve physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired.

The statutes and guidelines cited above specify how cultural resources are to be analyzed for projects subject to CEQA. Archival and field surveys must be conducted, and identified cultural resources must be inventoried and evaluated in prescribed ways.

California Register of Historical Resources

The CRHR is a public listing of specific properties to be "protected from substantial adverse change" that was established by the California Office of Historic Preservation. Any resource eligible for listing in the CRHR must also be considered under the CEQA, described under California Public Resources Code (PRC) Section 21000 et seq., and California Code of Regulations, Title 14, Section 15000 et seq.

A historical resource may be listed in the CRHR if it meets one or more of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the U.S.
- It is associated with the lives of persons important to local, California, or national history.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic value.
- It has yielded or has the potential to yield information that is important in the prehistory or history of the local area, California, or the nation.

Automatic listings include properties listed in the NRHP—which are determined to be eligible either by the Keeper of the National Register or through a consensus determination on a project review—or State Historical Landmarks from number 770 onward. In addition, Points of Historical Interest nominated since January 1998 are to be jointly listed as Points of Historical Interest and in the CRHR. Landmarks prior to number 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

Resources listed in a local historic register or deemed significant in a historical resources survey, as provided under PRC Section 5024.1(g), are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates that they are not. A resource that is not listed on or determined to be ineligible for listing in the CRHR, not included in a local register of historical resources, or not deemed significant in a historical resources survey may, nonetheless, be historically significant (PRC Section 21084.1).

California Native American Graves Protection and Repatriation Act of 2001, California Health and Safety Code

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010 through 8030), including the California Native American Graves Protection and Repatriation Act (Cal NAGPRA). Cal NAGPRA established a state policy to ensure that California Native American human remains and cultural items are treated with respect and dignity. The Cal NAGPRA also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the Cal NAGPRA outlines the process that California Native American tribes who are not recognized by the federal government may follow to file claims for human remains and cultural items held in agencies or museums.

California Public Resources Code

Several provisions of the PRC govern archaeological finds in terms of human remains, or any other related object of archaeological or historical interest or value. Procedures are detailed under PRC Section 5097.9 through 5097.996 for actions to be taken whenever Native American remains are discovered. Under these provisions, if a county coroner determines that human remains found during excavation or disturbance of land are Native American, the coroner must contact the NAHC within 48 hours, and the NAHC must determine and notify the Most Likely Descendant (MLD) who may make recommendations for removal and nondestructive analysis of the remains and for the removal of items associated with Native American burials or cremations. Furthermore, Section 7050.5 of the California Health and Safety Code states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in PRC Section 5097.99. Any person removing any human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment.

CEQA – Paleontological Resources

Paleontological resources are limited, non-renewable resources of scientific, cultural, and educational value that are protected under CEQA (PRC Section 21000 et seq.). CEQA and PRC Section 5097 et seq. govern the preservation and protection of these resources.

City of San Diego

The City of San Diego regulations and policies pertaining to cultural resources and paleontological resources can be found in Chapters 11, 12, and 14 of the Municipal Code, which establish the Historical Resources Board authority, appointment and terms, meeting conduct, and powers and duties; the designation process including the nomination process, noticing and report requirements, appeals, recordation, amendments or recision, and nomination of historical resources to state and national registers; and development regulations for historical resources. The purpose of these regulations is to protect, preserve, and, where damaged, restore the historical resources of San Diego. The historical resources regulations require that designated historical resources, important archeological sites, and traditional cultural properties be preserved unless deviation findings can be made by the decision-maker as part of a discretionary permit. Minor alterations consistent with the U.S. Secretary of the Interior's Standards are exempt from the requirement to obtain a separate permit, but must comply with the regulations and associated historical resources guidelines. Limited development may encroach into important archaeological sites if adequate mitigation measures are provided as a condition of approval.

The Historical Resources Guidelines, located in the City of San Diego's Land Development Manual, provide property owners, the development community, consultants, and the general public explicit guidance for the management of historical resources located within the City of San Diego's jurisdiction. These guidelines are designed to implement the historical resources regulations and guide the development review process. The guidelines also address the need for a survey and how impacts are to be assessed, available mitigation strategies, and report

requirements. They also include appropriate methodologies for treating historical resources located in the City of San Diego.

Cultural Setting

Prehistoric Background

The earliest well-documented sites in the San Diego area belong to the San Dieguito complex, thought to be over 9,000 years old. Related materials were found in the Mojave Desert and in the Great Basin, sometimes called the Lake Mojave complex. Diagnostic artifact types and categories associated with the San Dieguito complex include scraper planes; choppers; scraping tools; crescentics; elongated bifacial knives; and Silver Lake, Lake Mojave, and leaf-shaped projectile points. In areas adjacent to the coast, many Paleoamerican period sites were probably covered by rising sea levels since the end of the Pleistocene. In more inland regions, alluvial sedimentation in valley areas may cover these materials. Stable mesa landforms in the region, an abundance of appropriate lithic material, and soil column exposures along areas such as the San Diego River make the foothills an important area for Paleoamerican research.

The Archaic period (7,000 to 1,500 years before present [B.P.]) brings an apparent shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. Local cultural manifestations of the Archaic period are called the La Jollan complex along the coast and the Pauma complex inland. Pauma complex sites lack the shell that dominates many La Jollan complex site assemblages. The La Jollan tool assemblage is dominated by rough, cobble-based choppers and scrapers, as well as slab and basin metates. Recently, there has been considerable debate about whether San Dieguito and La Jollan patterns might represent the same people using different environments and subsistence techniques or whether they are separate cultural patterns.

The Late Prehistoric period (1500 B.P. to 200 B.P.) is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period, with continued elaboration of trade networks, use of shell-bead currency, and appearance of more labor-intensive but effective technological innovations.

Subsistence is thought to have focused on acorns and grass seeds, with small game serving as a primary protein resource and big game as a secondary resource. Fish and shellfish were also secondary resources except for areas immediately adjacent to the coast where they assumed primary importance. The settlement system is characterized by seasonal villages where people utilized a central-based collecting subsistence strategy. Artifactual material is characterized by the presence of arrow shaft straighteners, pendants, comales (heating stones), Tizon Brownware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic “Yuman bow pipes,” ceramic rattles, miniature pottery, various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, and mortars and pestles. The arrow point assemblage is dominated by the Desert Side-notched series, but the Cottonwood series and the Dos Cabazas Serrated type also occur.

Ethnographic Setting

The Proposed Project area is in the traditional territory of the Kumeyaay. Also known as Kamia, Ipai, Tipai, and Diegueño, the Kumeyaay occupied the southern two-thirds of San Diego County. The Kumeyaay spoke a language belonging to the Hokan language family, which includes the lower Colorado River tribes and Arizona groups to whom they are closely related. The Kumeyaay lived in semi-sedentary, politically autonomous villages or rancherias. Most rancherias were the seat of a clan, although it is thought that aboriginally some clans had more than one rancheria and some rancherias contained more than one clan.

Historic Setting

Cultural activities within San Diego County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American occupation and land use. The Spanish period (1769 to 1821) represents a time of European exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the San Diego Mission. The mission system used Native American labor to build the infrastructure needed for European settlement. By about 1821, the traditional lifeways were disrupted, and Native American populations were tied economically to the missions. In addition to providing new construction methods and architectural styles, the mission system introduced horses, cattle, and other agricultural goods and implements to the area. The cultural systems and institutions established by the Spanish continued to influence the region beyond 1821, when California came under Mexican rule.

The Mexican period (1821 to 1848) retained many of the Spanish institutions and laws; however, in 1834 the mission system was secularized. This allowed for increased Mexican settlement, but it also meant that many Native Americans were dispossessed. After secularization, large tracts of land were granted to individuals and families, and a rancho system was established. Land was used primarily for grazing cattle. Cattle ranching dominated the agricultural activities, and development of hide and tallow trade with the U.S. increased during the early part of this period. Pueblo of San Diego was established at this time and Native American influence greatly declined. The Mexican period ended when Mexico ceded California to the U.S. after the Mexican-American War (1846 to 1848).

Proposed Project Area Historic Background

The first attempt to establish a city on the San Diego Bay occurred in 1850 when William Heath Davis and Andrew B. Gray purchased 160 acres of bayfront property bounded by present-day Broadway, Market Street, First Street, and Pacific Highway. However, due to financial and other constraints, this initial enterprise was unsuccessful. It was not until almost 20 years later that southern California's first true boom resulted in the establishment of the City of San Diego.

San Diego's first boom was due to the energy of Alonzo E. Horton, a San Francisco merchant and former land speculator who came to California to seek his fortune in the gold rush. He established a mercantile business in San Francisco and, in 1867, purchased a tract of approximately 1,000 acres on San Diego Bay surrounding Davis' earlier subdivision. Horton's Addition included present-day downtown San Diego and Hillcrest. He had the parcel surveyed and laid out a park, streets, blocks, and lots on the scrub-covered hills and plains, and initially

gave lots free to anyone that would build a permanent structure. In 1869, people began pouring into San Diego to buy lots from Horton, and it is likely that the Proposed Project area saw much of its initial development in this period. By March 24, 1869, 124 dwellings had been erected. Framed Italianate-style buildings, typical of most urban areas of the west, dominated architecture for the next 15 years. By 1870, San Diego was a community of 2,300 inhabitants. On April 3, 1871, the county courts moved from Old San Diego to Horton's Addition, signifying that San Diego was no longer to be identified as a small pueblo of adobe houses but as a city on the bay.

The Proposed Project area is located outside of the main area of development in the City of San Diego and is not shown in the 1876 bird's eye view maps or available Sanborn fire insurance maps from that time. In 1928, houses existed on the northeast and south sides of the proposed Vine Substation site. This site was an asphalt-paved parking lot since at least 1953 until 1964 when the property was graded for commercial buildings that were constructed by 1972. By 1980, the buildings had been demolished and the property was returned to its prior use as an asphalt-paved parking lot.

Cultural Resources in the Proposed Project Area

The results of the record search indicate that six previously recorded archaeological resources and 17 historic built resources were recorded within 0.25 mile of the Proposed Project area, as provided in Table 4.5-1: Previously Recorded Cultural Resources within a 0.25-Mile Radius of the Proposed Area of Potential Effect and Table 4.5-2: Previously Recorded Sites Built Resources within a 0.25-Mile Radius of the Proposed Area of Potential Effect. A number of the historical structures, as well as the district itself, were recommended eligible for listing in the CRHR; however, they were subsequently demolished to provide additional parking and staging for the San Diego International Airport. No sites were identified in the APE for the Proposed Project.

Table 4.5-1: Previously Recorded Cultural Resources within a 0.25-Mile Radius of the Proposed Area of Potential Effect

Site Number	Description	Eligibility Status
CA-SDI-00053	Prehistoric Habitation	Not evaluated
CA-SDI-00054	Prehistoric Scatter	Not evaluated
CA-SDI-13761	Historic Barth Foundry Dump	Not evaluated
CA-SDI-16926	Historic Refuse Deposit	Not evaluated
CA-SDI-16927	Historic Refuse Deposit	Not evaluated
P-37-024258	Historic Refuse Deposit	Not evaluated

Table 4.5-2: Previously Recorded Sites Built Resources within a 0.25-Mile Radius of the Proposed Area of Potential Effect

Site Number	Description	Eligibility Status
P-37-015531	Industrial Building	Part of CRHR District
P-37-015532	Industrial Building	Part of CRHR District
P-37-015533	Industrial Building	Recommended eligible
P-37-015534	Industrial Building	Recommended eligible
P-37-015535	Industrial Building	Recommended eligible
P-37-015536	Industrial Building	Recommended eligible
P-37-015537	Engineering Structure	Recommended eligible
P-37-015538	Industrial Building	Recommended eligible
P-37-015539	Industrial Building	Recommended eligible
P-37-015540	Industrial Building	Recommended eligible
P-37-015542	Industrial Building	Not eligible
P-37-015543	Industrial Building	Not eligible
P-37-015547	Industrial Building	Not eligible
P-37-015548	Industrial Building	Not evaluated
P-37-015549	Industrial Building	Not eligible
P-37-015550	Industrial Building	Not evaluated
P-37-015554	Engineering Building	Not eligible

Paleontological Resources in the Proposed Project Area

The Proposed Project site is directly underlain by sedimentary rock that has been mapped by Kennedy (1975) as the Pleistocene-age Bay Point Formation (approximately 220,000 years old). The Pleistocene-age Lindavista Formation (0.5 to 1.5 million years old) and the Pliocene-age San Diego Formation (approximately two to four million years old) are mapped within less than 500 feet of the Proposed Project site, and will most likely be impacted if excavations extend below the Bay Point Formation. The Bay Point and San Diego formations have a high paleontological sensitivity, and the Lindavista Formation has a moderate paleontological sensitivity.

The records search and literature conducted by the SDNHM Department of PaleoServices has identified 85 fossil localities within a one-mile radius of the Proposed Project. All of these localities occur within deposits of the San Diego Formation. These localities produced impressions of plants (e.g., kelp), trace remains of marine invertebrates (e.g., bryozoans, foraminifera, barnacles, branchiopods, shrimp, crabs, urchins, snails, clams, mussels, oysters, scallops, and tusk shells), mineralized bone remains of marine vertebrates (e.g., rays, sharks, fish, seals, walruses, sea cows, dolphins, porpoises, and toothed and baleen whales), and mineralized bone remains of terrestrial vertebrates (e.g., snakes, rabbits, and birds).

4.5.3 Impacts

Significance Criteria

Cultural Resources

Under CEQA, Proposed Project construction, operation, and maintenance effects to unique or important resources must be considered. A resource is unique or important if it meets any of the following criteria:

- It is associated with an event or person of recognized importance in California or American history or scientific importance in prehistory.
- It is associated with the lives of persons important to our past.
- It has or can provide useful information of demonstrable public interest and is useful in addressing scientifically consequential and reasonable archaeological research questions.
- It has a special or particular quality, such as oldest, best example, largest, or last surviving example of its kind.

Construction-related subsurface and surface disturbances could result in a loss of integrity of cultural deposits, a loss of scientific information, and the alteration of an archaeological site setting. Potential indirect impacts—primarily vandalism—can result from increased access and use of the general area during construction and long-term operation and maintenance activities. The potential also exists for the inadvertent discovery of buried or masked archaeological materials during construction activities.

Impacts to cultural resources would be considered significant if the Proposed Project:

- Causes a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5 of the CEQA Guidelines

- Causes a substantial adverse change in the significance of an archaeological resource, pursuant to Section 15064.5 of the CEQA Guidelines
- Disturbs any human remains, including those interred outside of formal cemeteries

"Substantial adverse change" means demolition, destruction, relocation, or alteration such that the significance of a historical resource will be impaired. Section 21084.1 of the CEQA Guidelines stipulates that any resource listed on, or eligible for listing on, the CRHR is presumed to be historically or culturally significant. Section 21084.1 requires treatment of any substantial adverse change in the significance of a historical resource listed on, or eligible to be listed on, the CRHR as a significant effect on the environment.

Paleontological Resources

Impacts to paleontological resources will be considered significant if the Proposed Project directly or indirectly destroys a unique paleontological resource or site or unique geologic feature. Because fossils are the remains of prehistoric animal and plant life, they are considered to be non-renewable. Impacts to paleontological resources are identified from high to zero depending on the resource sensitivity of impacted formations. The specific criteria applied for each sensitivity category are summarized as follows:

- High significance: Impacts to high-sensitivity formations (Bay Point and San Diego formations).
- Moderate significance: Impacts to moderate-sensitivity formations (Lindavista Formation).
- Low significance: Impacts to low-sensitivity formations (none expected within the Proposed Project boundaries).
- Zero significance: Impacts to zero-sensitivity formations (none expected within the Proposed Project boundaries).

Question 4.5a – Historical Resource Change

Construction – Less-than-Significant Impact

Based on archival information, no historical resources are located within the Proposed Project area. Therefore, the Proposed Project will not have an adverse effect on historical resources, and no impacts are anticipated.

Construction of the Proposed Project will involve grading, trenching, and excavation activities, which have the potential to uncover and potentially damage or destroy unknown resources. While the potential to discover buried historical resources is unlikely due to the previous disturbance to the Proposed Project area, SDG&E will implement APM-CUL-01, as described in Section 4.5.4 Applicant-Proposed Measures to minimize potential impacts to unknown historical resources. This APM requires the presence of an archaeological monitor during ground-disturbing activities and allows for the halting of construction activities and contacting SDG&E's Cultural Resource Specialist if a cultural resource is discovered. In addition, SDG&E will implement a Safety and Environmental Awareness Program as part of their ordinary construction restrictions. This program will include training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental

laws and regulations, including the potential for exposing subsurface cultural resources. Impacts to unknown resources will therefore be reduced to a less-than-significant level.

Operation and Maintenance – No Impact

Typically, operation and maintenance activities associated with the Proposed Project will not require ground disturbance; however, if ground disturbance is required for the repair of Proposed Project components, it will be conducted in areas that were previously disturbed during construction of the Proposed Project. Therefore operation and maintenance activities will not have an adverse effect on historical resources, and no impact will occur.

Question 4.5b – Archaeological Resource Change

Construction – Less-than-Significant Impact

No archaeological resources are located within the Proposed Project area based on archival information. However, ground-disturbing construction activities—including pole installation, the grading and excavation necessary to develop the proposed Vine Substation site, and trenching activities necessary to install the underground facilities—have the potential to inadvertently impact unknown buried archaeological resources within the Proposed Project area. These activities disturb subsurface soils and can potentially disturb or destroy unknown buried deposits (i.e., archaeological sites). As described previously, the Proposed Project areas have been previously disturbed for the construction of a parking lot and roadways; therefore, the potential to discover unknown archaeological resources is unlikely. SDG&E will implement APM-CUL-01, as described in Section 4.5.4 Applicant-Proposed Measures, to minimize potential impacts to unknown archaeological resources. This APM allows for the halting of work and contacting SDG&E's Cultural Resource Specialist if a cultural resource is discovered. SDG&E will also implement a Safety and Environmental Awareness Program as part of their ordinary construction restrictions. This program will include training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including the potential for exposing subsurface cultural resources. Impacts to unknown resources will therefore be reduced to a less-than-significant level.

Operation and Maintenance – No Impact

Typically, operation and maintenance activities associated with the Proposed Project will not require ground disturbance; however, if ground disturbance is required for the repair of Proposed Project components, it will be conducted in areas that were previously disturbed during construction of the Proposed Project. As no archaeological resources have been identified in the Proposed Project area, impacts to archaeological resources are not anticipated during operation and maintenance of the Proposed Project.

Question 4.5c – Paleontological Resource Destruction

Construction – Less-than-Significant Impact

Direct impacts to paleontological resources occur when earthwork activities—such as mass grading, excavation, and trenching operations—cut into the geological deposits (i.e., formations) within which fossils are buried. These direct impacts occur in the form of physical destruction of

the fossil locality and the contained fossil remains. The top of the Bay Point Formation within the immediate vicinity of the proposed Vine Substation site varies from 3.5 to 11.5 feet below the ground surface (bgs), and the San Diego and Lindavista formations lie below the Bay Point Formation. As shown in Table 4.5-3: Proposed Excavation Depths, the Proposed Project will involve excavations up to 45 feet bgs. Therefore, excavation activities associated with the construction of the Proposed Project have the potential to impact paleontological resources because the potential for discovery of a sensitive paleontological resource is High within the Bay Point and San Diego formations and Moderate within the Lindavista Formation.

Table 4.5-3: Proposed Excavation Depths

Proposed Excavation Activity	Approximate Excavation Depth (feet)
Substation Containment Basins	3 to 4
Substation Equipment Footings	3 to 20
12 kV Distribution Duct Bank Trenches	5.5
12 kV Underground Vaults	7.5
Telecommunication System Duct Bank Trenches	5
Telecommunication System Handholes	3
Tubular Steel Pole Foundation Holes	20 to 45

SDG&E will implement APM-CUL-02, as described in Section 4.5.4 Applicant-Proposed Measures. This APM allows for the halting of work and contacting SDG&E's Cultural Resource Specialist if a paleontological resource is discovered. SDG&E will also implement a Safety and Environmental Awareness Program as part of their ordinary construction restrictions. This program will include training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including the potential for exposing subsurface cultural resources. With implementation of the APM and SDG&E's ordinary construction restrictions, any Proposed Project impacts to paleontological resources will be reduced to a less-than-significant level.

Operation and Maintenance – No Impact

Typically, operation and maintenance activities associated with the Proposed Project will not require ground disturbance; however, if ground disturbance is required for the repair of Proposed Project components, it will be conducted in areas that were previously disturbed during construction of the Proposed Project. As a result, it is not anticipated that paleontological resources will be encountered during such activities, and there will be no impact.

Question 4.5d – Human Remains Disturbance

Construction – Less-than-Significant Impact

No known cemeteries exist and no recorded Native American or other human remains have been previously identified within or adjacent to the Proposed Project area. As such, the potential for

the unintended discovery of Native American or other human remains during subsurface construction activities required for the Proposed Project is considered to be low. If human remains are encountered during the course of construction, work will be halted in the vicinity of the find, and SDG&E will implement the appropriate notification processes as required by law. As a result, any potential impacts will be less than significant.

Operation and Maintenance – No Impact

As previously described, the presence of human remains is considered unlikely in the Proposed Project area. Typically, operation and maintenance activities associated with the Proposed Project will not require ground disturbance; however, if ground disturbance is required for the repair of Proposed Project components, it will be conducted in areas that were previously disturbed during construction of the Proposed Project. As a result, it is not anticipated that human remains will be encountered during such activities, and there will be no impact.

4.5.4 Applicant-Proposed Measures

The following APMs will be implemented as part of the Proposed Project to reduce any potential impacts to cultural or paleontological resources to a less-than-significant level:

- APM-CUL-01: An archaeological monitor will be present during ground-disturbing activities. In the event that cultural resources are discovered, the archaeological monitor will have the authority to divert or temporarily halt ground disturbance to allow evaluation of the potentially significant cultural resources. The archaeological monitor will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeological monitor, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities in the vicinity of the discovery are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts. All collected cultural remains will be cleaned, cataloged, and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified to the species level. A monitoring results report—which includes appropriate graphics and describes the results, analyses, and conclusions of the monitoring program—will be prepared and submitted to SDG&E's Cultural Resource Specialist and Environmental Project Manager following completion of the program. Any cultural sites or features encountered will be recorded on appropriate Department of Parks and Recreation forms. All forms and reports will be submitted to the SCIC at San Diego State University.

- APM-CUL-02: A paleontological monitor will be on site to observe excavation operations that involve the original cutting of deposits with high paleontological resource sensitivity (i.e., Bay Point Formation) to depths greater than 3.5 feet. In the event that fossils are encountered, the paleontological monitor will have the authority to divert or temporarily halt construction activities in the area of discovery to allow the recovery of fossil remains. The paleontological monitor will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The

paleontologist, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. When fossils are discovered, a paleontologist (or the paleontological monitor) will recover them, along with pertinent stratigraphic data. Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. A final summary report will be completed that outlines the results of the mitigation program. The report will discuss the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

4.5.5 References

ASM. 2014. Cultural Resource Review for the SDG&E proposed Vine 69/12 kV Substation Project, San Diego County, California (SDG&E ETS# 25059, ASM Project#). City of Pasadena, Los Angeles County, California. Prepared for SDG&E.

SDNHM Department of PaleoServices. 2013. Paleontological Record Search for the SDG&E Vine 69/12kV Substation (eTS No. 25059). City of Chula Vista, San Diego County, California. Prepared for SG&E.

ATTACHMENT 4.5-A: NAHC CORRESPONDENCE

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
Ds_nahc@pacbell.net

December 19, 2013

Ms. Angela N. Pham, M.A., RPA, Associate Archaeologist
ASM Affiliates, Inc.
2034 Corte del Nogal
Carlsbad, CA 92011

Sent by FAX to: 760-804-5755
No. of Pages: 5

RE: Sacred Lands File Search and Native American Contacts list for the **"San Diego Gas & Electric Vine Street Substation Project;"** located in the Downtown San Diego area; San Diego County, California

Dear Ms. Pham:

A record search of the NAHC Sacred Lands File **failed to indicate** the presence of Native American traditional cultural places in the project site(s) submitted as defined by the USGS coordinates configuring the 'Area of Potential Effect' or APE. Also, please note that the absence of archaeological or cultural resources does not preclude their existence at the subsurface level. Other data sources for Native American sacred places/sites should also be contacted. A Native American tribe or individual may be the only sources of information about traditional cultural places or sites.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the project area (APE). As part of the consultation process the NAHC recommends that local government and project developers contact the tribal governments and individuals in order to determine the proposed action on any cultural places/sacred sites. If a response from those listed is not received in two weeks of notification, the NAHC requests that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Section 65040.12(e) defines "environmental justice" to provide "fair treatment of People...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies" and Executive Order B-10-11 requires consultation with Native American tribes their elected officials and other representatives of tribal governments to provide meaningful input into

the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,

Dave Singleton
Program Analyst

Attachments

Happy Holidays!

Native American Contacts
San Diego County California
December 19, 2013

Barona Group of the Capitan Grande
Clifford LaChappa, Chairperson
1095 Barona Road Diegueno
Lakeside , CA 92040
sue@barona-nsn.gov
(619) 443-6612
619-443-0681

Sycuan Band of the Kumeyaay Nation
Daniel Tucker, Chairperson
5459 Sycuan Road Diegueno/Kumeyaay
El Cajon , CA 92019
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619 445-2613
619 445-1927 Fax

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
PO Box 1120 Diegueno/Kumeyaay
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gparada@lapostacasino.
(619) 478-2113
619-478-2125

Viejas Band of Kumeyaay Indians
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(619) 445-3810
(619) 445-5337 Fax

Manzanita Band of Kumeyaay Nation
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(619) 766-4930
(619) 766-4957 Fax

Kumeyaay Cultural Historic Committee
Ron Christman
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(619) 445-0385

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
PO Box 365 Diegueno
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(760) 749-3876 Fax

Campo Band of Mission Indians
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36190 Church Road, Suite 1 Diegueno/Kumeyaay
Campo , CA 91906
chairgoff@aol.com
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(619) 478-5818 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list s only applicable for contacting local Native Americans with regard to cultural resources for the proposed San Diego Gas & Electric Vine Street Substation Project; located in the Downtown San Diego area; San Diego County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
San Diego County California
December 19, 2013

Jamul Indian Village
Raymond Hunter, Chairperson
P.O. Box 612 Diegueno/Kumeyaay
Jamul , CA 91935
jamulrez@sctdv.net
(619) 669-4785
(619) 669-48178 - Fax

Viejas Band of Kumeyaay Indians
ATTN: Julie Hagen, cultural Resources
P.O. Box 908 Diegueno/Kumeyaay
Alpine , CA 91903
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(619) 445-3810
(619) 445-5337

Mesa Grande Band of Mission Indians
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P.O Box 270 Diegueno
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mesagrandeband@msn.com
(760) 782-3818
(760) 782-9092 Fax

Ewiiaapaayp Tribal Office
Will Micklin, Executive Director
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
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(619) 445-9126 - fax

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
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(619) 709-4207

Ipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
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Santa Ysabel, CA 92070
cjlinton73@aol.com
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cjlinton73@aol.com

Inaja Band of Mission Indians
Rebecca Osuna, Chairman
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Kumeyaay Diegueno Land Conservancy
Mr. Kim Bactad, Executive Director
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kimbactad@gmail.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list s only applicable for contacting local Native Americans with regard to cultural resources for the proposed San Diego Gas & Electric Vine Street Substation Project; located in the Downtown San Diego area; San Diego County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
San Diego County California
December 19, 2013

Inter-Tribal Cultural Resource Protection Council
Frank Brown, Coordinator; Viejas THPO
240 Brown Road Diegueno/Kumeyaay
Alpine , CA 91901
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Kumeyaay Cultural Repatriation Committee
Bernice Paipa, Vice Spokesperson
1095 Barona Road Diegueno/Kumeyaay
Lakeside , CA 92040
(619) 478-2113
(KCRC is a Coalituon of 12 Kumeyaay Governments)
bp@lapostatribe.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

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4.6 GEOLOGY AND SOILS

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			✓	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?[1]			✓	
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			✓	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓

[1] Refers to Divisions of Mines and Geology Special Publication #42.

4.6.0 Introduction

This section describes the existing geologic and pedogenic soil conditions related to the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project). The potential geologic and seismic impacts of the Proposed Project are analyzed and include the potential for exposure of people and structures to substantial adverse effects involving strong seismic ground shaking, fault rupture, liquefaction, unstable soils, landslides, expansive soil, substantial soil erosion, or the loss of topsoil. The evaluation concludes that with adherence to SDG&E's project design methods, and by considering the results and recommendations provided in the Proposed Project-specific geotechnical investigations in the final design, that construction of the proposed Vine Substation, installation and relocation of the distribution circuits, and looping in the existing 69 kV power line will result in less-than-significant impacts to geology and soils.

4.6.1 Methodology

The existing conditions and potential impacts associated with geologic hazards were primarily obtained from the Preliminary Geotechnical and Geological Hazards Investigation prepared by Geosyntec Consultants (Geosyntec) for the Proposed Project site, which is included as Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation. The research and analysis conducted by Geosyntec included a review of regional information and previous geotechnical investigations, as well as pre-investigation activities conducted in support of the soil borings and cone penetration test (CPT) soundings that were taken for the proposed Vine Substation site.[2] Geotechnical laboratory analyses and seismic shear wave velocity measurements were conducted from the borings and CPT soundings to obtain empirical results regarding the subsurface soil characteristics. In addition to the research and analysis provided in Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation, a thorough review of available geologic resource literature relevant to the Proposed Project area was conducted independent of the analyses performed by Geosyntec. The materials reviewed include publications and/or data from the United States Geological Survey (USGS), the California Geological Survey (CGS), California Building Code, and other technical reports and resources. A reconnaissance-level field investigation was also performed on December 10, 2013.

4.6.2 Existing Conditions

Geologic Setting

The Proposed Project area is situated in the western portion of the Peninsular Ranges geomorphic province of Southern California. This geomorphic province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California, and varies in width from approximately 30 to 100 miles. The province is characterized by mountainous terrain on the east, composed mostly of Mesozoic igneous and metamorphic rocks; and relatively low-lying coastal terraces to the west, underlain by Upper-Cretaceous, Tertiary-, and Quaternary-age sedimentary rocks. Most of the coastal region of San Diego County, including the general Proposed Project area, occurs within this coastal region and is underlain by sedimentary rock. Specifically, the Proposed Project site

[2] A geotechnical investigation for the 69 kV tubular steel pole installation sites will also be conducted prior to construction of the Proposed Project.

in this portion of the province is underlain by Late Cretaceous, Eocene, and Oligocene period sediments.

Faults, Seismicity, and Related Hazards

Faults

In comparison to other areas of Southern California, the immediate San Diego area has a relatively quiet seismic history. The historical pattern of seismic activity in coastal San Diego has generally been characterized as a broad scattering of small- to moderate-magnitude earthquakes, whereas the surrounding regions of Southern California—such as the Imperial Valley, northern Baja California, and the nearby offshore regions—are characterized by a higher rate of seismicity. The geologic structure of Southern California is dominated by right-lateral strike-slip faults with a general northwest-by-southwest trend. Regional faults include the Elsinore and San Jacinto faults to the east, the Coronado Bank and San Diego Trough faults offshore to the west, the San Miguel-Vallecitos and Aqua Blanca faults to the south, and the Rose Canyon fault zone (RCFZ), which extends through the general vicinity of the Proposed Project site. The RCFZ is the southern extension of the Newport-Inglewood-Rose Canyon fault zone and is associated with the San Andreas fault system, which forms the tectonic boundary between the North American and Pacific plates.

Fault Rupture

The on-shore portion of the RCFZ extends along the northeast flank of Mount Soledad in La Jolla and continues southward along the eastern margins of Mission Bay. Between Mission Bay and San Diego Bay, the zone widens and diverges. The Alquist-Priolo Earthquake Fault Zoning Act of 1972, formerly known as the Special Studies Zoning Act, regulates construction and development of buildings intended for human occupancy to avoid rupture hazards from surface faults. This act does not specifically regulate overhead power lines, but it does aid in defining areas where fault rupture is most likely to occur. The Proposed Project site is located within a mapped Alquist-Priolo fault zone—the Point Loma quadrangle—in which active portions of the RCFZ have been identified. However, the nearest active portion does not cross the Proposed Project and is located approximately one mile southwest of the Proposed Project site.

Strands of the RCFZ have been mapped within relatively close proximity to the Proposed Project. The smaller, but potentially active La Nacion fault zone lies approximately two miles to the east. As previously mentioned, the RCFZ extends through the general vicinity of the Proposed Project site. In addition, the Proposed Project is located approximately 12 miles east of the Coronado Bank fault zone, and approximately 40 to 45 miles west of the Elsinore fault zone.

Strong Ground Motion

Ground shaking is the seismic effect that results in the vast majority of damage. Several factors control how the ground motion interacts with structures, making the impact hazard of ground shaking difficult to predict. Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the seismic epicenter, and the path and material through which the waves are propagating.

Strong ground motion or intensity of seismic shaking during an earthquake is dependent on the distance from the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the area. The Proposed Project site is located in a seismically active region of Southern California that is subject to significant hazards from moderate to large earthquakes. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the structure. Based on data from the USGS and from information provided in Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation that was prepared for the proposed Vine Substation site, the predominant fault for this area is the Rose Canyon fault—which is located at approximately 0.2 mile southwest from the Proposed Project site—or one of the previously described regional faults in the Proposed Project vicinity, such as the Elsinore fault.

Active faults are classified as Type A, Type B, or Type C. Type A faults are capable of producing large-magnitude events ($M \geq 7.0$) and have a high rate of seismic activity. Type C faults are not capable of producing large magnitude events and have a relatively low rate of seismic activity. Type B faults are all other faults that are not classified as Type A or Type C. Segments of the San Jacinto and Elsinore fault zones are Type A. Type B faults are the majority of the rest of the seismic faults in the San Diego area and include the RCFZ. The RCFZ is more dominant than the nearest Type A fault zone due to its proximity to the Proposed Project site.

Table 4.6-1: Active Faults in the Vicinity of the Proposed Project lists active earthquake events and estimated site accelerations for the faults considered most likely to subject the Proposed Project area to ground shaking.

The intensity of ground motions induced by earthquakes can be described using peak site accelerations, represented as a fraction of the acceleration of gravity (g). CGS Probabilistic Seismic Hazard Assessment (PSHA) maps were used to estimate peak ground accelerations within the vicinity of the Proposed Project area. Considering the uncertainties regarding the size and location of potential earthquakes and resulting ground motions that can affect a particular site, PSHA maps indicate that there is approximately 10-percent probability of exceeding a peak site acceleration of 0.257g in a 50-year period (Upper Bound Earthquake as defined in Chapter 16 of the 2001 California Building Code) at the proposed Vine Substation site using a magnitude weighting factor based on a 7.5 magnitude earthquake, which equals an annual probability of one in 475 of being exceeded each year.

The Modified Mercalli Scale is another common measure of earthquake intensity, which is a subjective measure of earthquake strength at a particular place as determined by its effects on people, structures, and earth materials. Table 4.6-2: Earthquake Intensity Scale presents the Modified Mercalli Scale for Earthquake Intensity, including a range of approximate average peak accelerations associated with each intensity value. Based on the previously described approximate peak accelerations provided for the Proposed Project site, this area is estimated to fall within Intensity Range VII.

Liquefaction

Liquefaction is the process in which the soil below the water table becomes converted to a fluid state and loses its strength when sufficiently shaken or vibrated during a seismic event.

Table 4.6-1: Active Faults in the Vicinity of the Proposed Project

Fault	Approximate Distance to Proposed Project (miles)	Approximate Fault Length (miles)	Maximum Estimated Earthquake Magnitude
Rose Canyon (San Diego section)	0.2 mile southwest 0.7 mile west	19	7.2
Coronado Bank	11.7 miles west	56	7.6
San Diego Trough	22.1 miles east	93	7.7
San Miguel-Vallecitos	35.0 miles southeast	99	7.8
Agua Blanca	40.0 miles southeast	80	7.0
Elsinore (Julian section)	41.2 miles northeast	112	7.1
Elsinore (Temecula section)	42.4 miles east	26	6.8

Sources: USGS, 2005; Journal of Geophysical Research, 2002; Geological Society of America, 1960; Bulletin of the Seismological Society of America, 1996; California Geological Survey, 2002.

The soil types considered most susceptible to liquefaction are granular, low-plasticity fine-grained soils, which are saturated and have a density that ranges loose to medium. Adverse effects of liquefaction include loss of bearing strength, lateral spreading, sand boils, ground oscillation, and settlement when liquefied ground reconsolidates following the seismic event.

The proposed Vine Substation site is currently occupied by an asphalt-paved commercial parking lot. Soils underlying the paved area and along the underground alignment consist of undocumented fill that typically overlies colluvial deposits and old paralic deposits (previously referred to as the Bay Point Formation) across the site area. Additional detail on soil characteristics are provided in the Soils subsection.

Slope Instability

Strong ground motion can result in rockfall hazards and/or slope instability. The slopes most susceptible to earthquake-induced failure include those with highly weathered and unconsolidated materials on moderately steep slopes, especially in areas of previously existing landslides.

Landslides occur when masses of rock, earth, or debris move down a slope, including rock falls, deep failure of slopes, and shallow debris flows. The actuators of landslides can be both natural events—such as earthquakes, rainfall, and erosion—and human activities. Those induced by man are most commonly related to large grading activities that can potentially cause new slides or reactivate old ones when compacted fill is placed on potentially unstable slopes.

Table 4.6-2: Earthquake Intensity Scale

Intensity Value	Intensity Description	Average Peak Acceleration Range
I	Not felt except by very few people under especially favorable circumstances.	<0.0017g
II	Felt only by a few people at rest, especially on upper floors of buildings. Delicately suspended objects may swing.	0.0017–0.014g
III	Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly, vibration similar to a passing truck.	
IV	During the day, felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, and doors disturbed; walls make cracking sound. Sensation is like a heavy truck striking a building. Standing motor cars rock noticeably.	0.014–0.039g
V	Felt by nearly everyone, and many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles may be noticed. Pendulum clocks may stop.	0.039–0.092g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moves and plaster falls or chimneys are damaged. Damage slight.	0.092–0.18g
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built, ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by people driving motor cars.	0.18–0.34g
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Chimneys, factory stacks, columns, monuments, and walls fall. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. People driving motor cars disturbed.	0.34–0.65g
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	0.65–1.24g
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	>1.24g

Intensity Value	Intensity Description	Average Peak Acceleration Range
XI	Few, if any, masonry structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	>1.24g
XII	Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	

Sources: GeoSyntec, 2013

Excavation operations can also contribute to landslides when lateral support is removed near the base of unstable hillside areas. Conditions to be considered in regard to slope instability include slope inclination, characteristics of the soil materials, the presence of groundwater, and degree of soil saturation. The proposed Vine Substation site has been previously graded and is relatively flat with a terrain that slopes gently to the southwest.

Differential Settlement

If the soil beneath a structure settles non-uniformly, the structure can be damaged. The reasons for differential settlement are usually traced to differences in the bearing characteristics of the soils. Alternatively, a portion of the soil beneath a structure may lose strength during an earthquake due to liquefaction. If liquefaction occurs non-uniformly, differential compaction will occur. Unconsolidated or weakened geologic units in the Proposed Project area may be subject to differential settlement; however, the reconnaissance-level survey and geotechnical investigation did not reveal any evidence of differential settling.

Subsidence

Subsidence occurs most often when fluids are withdrawn from the ground, removing partial support for previously saturated soils. More rarely, subsidence occurs due to tectonic down-warping during earthquakes. Neither source of subsidence appears to be present in the Proposed Project area.

Soils

The soils directly underlying the Proposed Project area consist of undocumented fill, colluvium, and old paralic deposits and alluvium. Soil horizons near the surface (from approximately five feet below [existing] ground surface to the surface) are composed of undocumented fill that consists primarily of silty fine sand to fine sandy silt that may contain localized gravels and metal and concrete debris in some areas. The fill layer is underlain by colluvium at depths of 3.5 to 11.5 feet below the ground surface that accumulated at the foot of the slope located east of the proposed Vine Substation site. The colluvium in this area consists of silty fine sand to silt and silty clay that is slightly porous to very porous in nature. Pleistocene-age old paralic deposits (formerly referred to as the Bay Point Formation) also underlie the Proposed Project area and primarily consist of poorly sorted, moderately permeable, reddish-brown, interfingered strandline, beach, estuarine and colluvial deposits composed of siltstone, sandstone, and conflomerate. There is currently no erosion potential at the site because it is covered with asphalt. In the absence of asphalt, exposed soil is anticipated to have a low to moderate erosion potential when considering the slope, slope length, and soil type.

Expansive or Collapsible Soils

Expansive soils are characterized by the ability to undergo significant volume change (i.e., shrink and swell) as a result of variation in soil moisture content. Soil moisture content can change due to many factors, including perched groundwater, landscape irrigation, rainfall, and utility leakage. Expansive soils typically have high clay content and are associated with many of the geologic units throughout the San Diego region. Soils with some expansion potential are present near the surface of the Proposed Project site. The results of two expansion index tests performed as part of the analysis described in Attachment 4.6-A: Preliminary Geotechnical and Geologic

Hazards Investigation determined that the soils near the surface are considered to have a low to medium potential for expansion, with expansion index values ranging between 31 and 51.

4.6.3 Impacts

Significance Criteria

Standards of significance were derived from Appendix G of the California Environmental Quality Act Guidelines. Impacts to geology and soils would be considered significant if the Proposed Project:

- Exposes people or structures to potential substantial adverse effects involving strong seismic ground shaking, fault rupture, liquefaction, or landslides
- Results in substantial soil erosion or the loss of topsoil
- Is located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Proposed Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- Is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
- Is located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Question 4.6a – Human Safety and Structural Integrity

i. Earthquake Fault Rupture – Less-than-Significant Impact

During earthquakes, the potential for the ground to rupture can occur either at or below the earth's surface, causing large vertical and/or horizontal displacement of the ground along the fault. Any structures built across or in very close proximity to a fault could experience significant damage in the event of surface fault rupture.

The Rose Canyon fault is the closest mapped active fault and extends nearly onto the Proposed Project site, as it is located approximately 0.2 mile from the Proposed Project site. Review of published geologic maps did not identify the presence of any active or potentially active faults crossing the Proposed Project site. Further, the site is not located within a delineated earthquake fault rupture hazard zone, as defined by the CGS. In addition, the site is not situated in the "Downtown Special Fault Zone," designated by the City of San Diego Seismic Safety Study, and is instead delineated as Geologic Hazard Category 53 (i.e., level or sloping terrain, unfavorable geologic structure, low to moderate risk). Further, as described in Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation, desktop-level and field vaulting evaluations of the proposed Vine Substation site were conducted, and indicated the absence of mapped active or potentially active faulting projecting through the site, and the evaluation of the site subsurface stratigraphy. As described in Section 4.1.3 of Attachment 4.6-A: Preliminary

Geotechnical and Geologic Hazards Investigation, the potential for fault-related surface rupture at the site is low.

Nonetheless, to minimize the potential for damage to occur from rupture of an earthquake fault, the results and recommendations from the geotechnical report will be considered in the final design of the proposed Vine Substation and SDG&E's project design features will also be implemented. The design and construction of the Proposed Project will adhere to all appropriate and applicable codes and seismic standards in order to withstand the maximum predicted ground motion. As described in Section 4.6.0 Introduction, SDG&E's project design features will be adhered to and consideration of the site-specific results and recommendations provided in the geotechnical reports in the final design will reduce impacts related to earthquake fault rupture. As such, the potential for damage caused by fault rupture lurching, or cracking of the ground surface as a result of nearby or distant events, is considered unlikely. Therefore, potential impacts are considered less than significant.

ii. Strong Seismic Shaking – Less-than-Significant Impact

The Proposed Project, including the substation structures and foundations, will be designed to withstand strong seismic accelerations in accordance with SDG&E's project design features to reduce the potential for damage to occur to the proposed facilities in the event of a major seismic event. The design and construction of the Proposed Project will conform to the specific mandated structural design and performance requirements to protect against the effects of strong seismic shaking. In addition, the results and recommendations provided in the Proposed Project-specific geotechnical investigations will be considered in the final design to ensure that Proposed Project components are constructed to withstand strong seismic shaking. With consideration of the existing soil conditions in the final design, the recommendations from the geotechnical reports, and adherence to SDG&E's project design features which comply with all appropriate and applicable codes and seismic standards, the potential for damage caused by strong seismic shaking is considered less than significant.

iii. Ground Failure – Less-than-Significant Impact

As described in Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation, the results of the geotechnical laboratory analyses that were performed on the samples obtained from the geotechnical borings, as well as the CPT soundings that were conducted for the proposed Vine Substation site, indicated that undocumented fill typically overlies colluvial deposits and old paralic deposits (previously referred to as the Bay Point Formation) across the site area. The results of the liquefaction analyses indicate that relatively thin and non-continuous lenses of the old paralic deposits have the potential for liquefaction and that liquefaction may impact the site after development. Liquefaction would most likely be manifested at this site as local ground subsidence, settlement, and localized reduction in shear strength at depth.

The laboratory analyses conducted from the geotechnical borings and CPT soundings revealed that the potential for lateral spreading at the site is considered to be low based on the location of liquefiable soil lenses and the fact that the site and its surroundings are relatively level. As provided in Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation, the magnitude of liquefaction-induced settlement at the proposed Vine Substation site is

anticipated to be relatively small; however, it should be recognized that total and differential settlements may cause damage to surface improvements and subsurface utilities under seismic conditions. As described in Chapter 3 – Project Description, imported fill will be used to replace existing unstable soils at the Proposed Project site. The imported fill will meet SDG&E's standards and the geotechnical engineer's requirements for compaction and stability. In addition, to ensure the Proposed Project is designed to minimize the risk from geological hazards related to ground failure as a result of liquefaction, the SDG&E will also consider the results and recommendations provided in the Proposed Project-specific geotechnical investigations. As a result, impacts related to ground failure, including liquefaction, are anticipated to be less than significant.

iv. Landslides – No Impact

Hazards related to slope instability and landslides are generally associated with foothill areas and mountain terrain, as well as steep riverbanks and levees. The Proposed Project site is relatively flat and does not contain landslide hazards. In addition, the Proposed Project will not result in any new landslide hazards. Therefore, there will be no impact.

Question 4.6b – Soil Erosion or Topsoil Loss

Construction – Less-than-Significant Impact

The proposed Vine Substation will occupy approximately 1.3 acres on a parcel that is currently paved for use as long-term airport parking. The existing pavement will be removed and the lot will be graded during construction of the proposed Vine Substation. Grading will create the potential for soil erosion by removing the existing paved surface and exposing soil during the construction phase of the Proposed Project. Rain and wind have the ability to detach soil particles and transport them off site. However, SDG&E will implement a Storm Water Pollution Prevention Plan (SWPPP) and adhere to its Water Quality Construction Best Management Practices (BMP) Manual, which will minimize soil erosion and reduce impacts to a less-than-significant level. The SWPPP and the SDG&E Water Quality Construction BMP Manual are described in more detail in Section 4.9 Hydrology and Water Quality. In addition, as previously discussed, the Proposed Project site is disturbed and does not contain any valuable topsoil. As a result, impacts will be less than significant.

Construction of the other Proposed Project components will occur within previously disturbed areas and along existing roads where no topsoil is present. Because impacts related to soil erosion will be temporary and controlled through the use of BMPs and because no topsoil will be disturbed, impacts associated with the other Proposed Project components will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Within a developed substation, the potential for erosion is considered low due to the site drainage and surfacing improvements that will be in place. Operation and maintenance of the Proposed Project components will not typically involve ground-disturbing activities or grading. If grading is required, SDG&E will implement the BMPs outlined in its Water Quality Construction BMP Manual. In addition, maintenance vehicles will utilize existing roads to access Proposed Project

areas for routine operation and maintenance activities. Therefore, impacts to soil erosion and topsoil will be less than significant.

Question 4.6c – Geologic Unit Instability – *Less-than-Significant Impact*

As previously described, Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation provides that the proposed Vine Substation site is relatively flat, and new slopes—if proposed at the site—will be engineered slopes designed at stable inclinations. Thus, slope instability is not considered a hazard. The soils located at the proposed Vine Substation site do have the potential for liquefaction. However, the results and recommendations from the Proposed Project-specific geotechnical investigations will be considered and implemented, as needed, to reduce the potential for adverse effects, such as differential settlement, lateral spreading, subsidence, or collapse in the rare occasion that liquefaction does occur. Thus, impacts from geologic instability will be less than significant.

The Proposed Project area is subject to relatively strong seismic shaking due to earthquakes. However, as described previously, the Proposed Project components will be constructed to withstand strong ground movement and moderate ground deformation in accordance with SDG&E's project design features and by considering the results and recommendations from the geotechnical investigations. As a result, impacts from strong ground movements are anticipated to be less than significant.

Question 4.6d – Expansive Soils – *Less-than-Significant Impact*

Soils with expansion characteristics are present near the surface of the Proposed Project site. Based on the plasticity characteristics of the soils encountered (typically indicating silty sand, sandy lean clay, and sandy low plasticity silt) and the results of two expansion index tests performed as part of the current investigation (expansion index values of 31 and 51), the soils near the surface are considered to have a low to medium potential for expansion. As described in Chapter 3 – Project Description, on-site material will be reused to the extent possible, as recommended by a Geotechnical Engineer. Unsuitable (i.e., loose, porous, soft, or expansive) soils will be removed and replaced with imported fill that meets the requirements of SDG&E and the geotechnical engineer's recommendations. In addition, the results and recommendations from the Proposed Project-specific geotechnical investigations will be considered in the final engineering design to reduce risks associated with expansive soils. Thus, impacts related to expansive soils will be less than significant.

Question 4.6e – Septic Suitability – *No Impact*

Soil permeability is a consideration for projects that require septic system installation. Because the Proposed Project will not involve the installation of a septic tank or alternative wastewater disposal system, no impacts will occur.

4.6.4 Applicant-Proposed Measures

The Proposed Project will not result in any significant impacts related to geology and soils; therefore, no applicant-proposed measures are proposed.

4.6.5 References

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4.7 GREENHOUSE GAS EMISSIONS

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				✓

4.7.0 Introduction

This section of the Proponent's Environmental Assessment describes the existing conditions in the area of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) and potential impacts relating to greenhouse gases (GHG) associated with the construction and operation of the Proposed Project. Construction may result in emissions of GHGs due to combustion of fossil fuels in construction equipment and vehicles. However, the Proposed Project will not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

4.7.1 Methodology

Federal, state, and regional/local regulations and policies were consulted to determine the Proposed Project's level of compliance with, as well as potential impacts to, applicable climate action plans and/or GHG standards. Information for this section was obtained from Internet searches of federal, state, and regional/local websites. The simulated GHG emissions presented in this section were developed using the South Coast Air Quality Management District's (SCAQMD's) California Emissions Estimator Model (CalEEMod). The analysis of GHG emissions evaluates the Proposed Project's potential to generate GHG emissions for the construction and operational phases of the Proposed Project. GHG emissions were calculated with the intent of identifying the biggest contributors of GHGs.

4.7.2 Existing Conditions

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), which are known as GHGs. These gases allow solar radiation (i.e., sunlight) into Earth's atmosphere, but prevent radiative heat from escaping, thus warming Earth's atmosphere.

Gases that trap heat in the atmosphere are often called GHGs, analogous to a greenhouse. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates Earth's temperature. Emissions from human activities, such as burning fossil fuels for electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

The proposed Vine Substation site is currently used as a long-term airport parking lot and is not currently a source of GHG emissions. The relocated and new distribution circuits, 69 kV loop-in, and telecommunication system extension will be constructed in existing power line corridors or in City of San Diego streets that are not existing sources of GHG emissions.

Different GHGs have varying global warming potentials. Global warming potential is the effectiveness of a gas or aerosol to trap heat in the atmosphere. According to the United States (U.S.) Environmental Protection Agency (EPA), global warming potential is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for global warming potential is CO_2; therefore, CO_2 has a global warming potential of 1. The other main GHGs that have been attributed to human activity are CH_4, which has a global warming potential of 21; and N_2O, which has a global warming potential of 310. Table 4.7-1: Global Warming Potentials and Atmospheric Lifetimes of GHGs presents the global warming potential and atmospheric lifetimes of common GHGs.

Table 4.7-1: Global Warming Potentials and Atmospheric Lifetimes of GHGs

GHG	Formula	100-Year Global Warming Potential	Atmospheric Lifetime (years)
Carbon Dioxide	CO_2	1	Variable
Methane	CH_4	21	12 ± 3
Nitrous Oxide	N_2O	310	120
Sulfur Hexafluoride	SF_6	23,900	3,200

In the California Greenhouse Gas Emission Inventory, the California Air Resources Board (CARB) compiled statewide anthropogenic GHG emissions and sinks, which include processes that uptake GHG emissions. The inventory includes estimates for CO_2, CH_4, N_2O, sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). The current inventory covers 1990 through 2008, and is summarized in Table 4.7-2: State of California Greenhouse Gas Emissions by Sector. Data sources used to calculate this GHG inventory include California and federal agencies, international organizations, and industry associations. Calculation methodologies applied are consistent with guidance from the Intergovernmental Panel on Climate Change. The 1990 emissions level is the sum total of sources and sinks from all sectors and categories in the inventory. CARB's original inventory was divided into seven broad sectors and categories: agriculture, commercial, electricity generation, forestry, industrial, residential, and transportation. The latest inventory includes GHG emissions from recycling and waste management, high global warming potential gas emissions, and reductions in GHG emissions related to forestry (i.e., forestry sinks).

Table 4.7-2: State of California Greenhouse Gas Emissions by Sector

Sector	Total 1990 Emissions ($MMTCO_2e$)[1]	Percent of Total 1990 Emissions	Total 2008 Emissions ($MMTCO_2e$)	Percent of Total 2008 Emissions
Agriculture	23.4	5	28.1	6
Commercial	14.4	3	14.7	3
Electricity Generation	110.6	26	116.4	25
Forestry (excluding sinks)	0.2	< 1	0.2	< 1
Industrial	103.0	24	92.66	20
Residential	29.7	7	28.5	6
Transportation	150.7	35	175.0	37
Recycling and Waste Management	--	--	6.7	1
High Global Warming Potential Gas Emissions	--	--	15.65	3
Forestry Sinks	(6.7)	--	(3.98)	--

Source: CARB 2007a

Regulatory Background

Federal

Endangerment Finding

On April 17, 2009, the EPA issued its proposed endangerment finding for GHG emissions. On December 7, 2009, the EPA Administrator signed the following two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Endangerment Finding: The EPA found that the current and projected concentrations of the six key well-mixed GHGs—CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs—in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The EPA found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to GHG pollution, which threatens public health and welfare.

The endangerment findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the EPA and the U.S.

[1] $MMTCO_2e$ refers to million metric tons of CO_2 equivalent emissions.

Department of Transportation's National Highway Safety Administration on September 15, 2009.

Mandatory Reporting of Greenhouse Gases, Title 40, Part 98 of the Code of Federal Regulations

The EPA's rule titled Mandatory Reporting of Greenhouse Gases (Title 40, Part 98 of the Code of Federal Regulations) requires mandatory reporting of GHGs for certain facilities. Subpart DD of the rule, titled Electrical Transmission and Distribution Equipment Use, applies to SF_6 reporting from gas-insulated substations. The proposed Vine Substation will be an air-insulated substation, rather than a gas-insulated substation.

Under the final Mandatory Reporting Rule for Additional Sources of Fluorinated GHGs, owners and operators of electric power system facilities with a total nameplate capacity that exceeds 17,820 pounds (7,838 kilograms) of SF_6 and/or PFCs must report emissions of SF_6 and/or PFCs from the use of electrical transmission and distribution equipment. Owners or operators must collect emissions data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

The rule requires each electric power system facility operator to report total SF_6 and PFC emissions (including emissions from equipment leaks, installation, servicing, decommissioning, and disposal, and from storage cylinders) from the following types of equipment:

- gas-insulated substations;
- circuit breakers;
- switchgears, including closed-pressure and hermetically sealed pressure switchgears;
- gas-insulated lines containing SF_6 or PFCs;
- gas containers, such as pressurized cylinders;
- gas carts;
- electric power transformers; and
- other containers of SF_6 or PFCs.

Because the proposed Vine Substation will be an air-insulated substation, only the Proposed Project's 69 kV circuit breakers will contain SF_6. Facilities subject to Subpart DD began monitoring GHG emissions on January 1, 2011, in accordance with the methods specified in Subpart DD. The deadline for reporting is March 31 of each year, unless that date falls on a weekend, in which case the report is due the next business day.

State

The most common GHGs that result from human activity, as defined by California Health and Safety Code Section 38505(g), are any of the following compounds: CO_2, CH_4, N_2O, SF_6, HFCs, or PFCs.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, then-Governor Arnold Schwarzenegger signed California Assembly Bill (AB) 32, the Global Warming Solutions Act, into law. Pursuant to AB 32, CARB adopted a comprehensive AB 32 Scoping Plan in December 2008, which outlined programs designed to

achieve the 2020 GHG reduction goal of 174 $MMTCO_2e$ through regulations, market mechanisms, and other actions.

For the electricity sector, the scoping plan adopted the California Public Utilities Commission's (CPUC's) recommendations for investor-owned and publicly owned utilities to continue and increase implementation of programs designed to reduce emissions. These recommendations included energy efficiency programs, increasing the use of electricity supplies obtained from renewable generation sources to 33 percent by 2020, and the adoption of a cap and trade system to ensure an overall reduction of emissions from electric generation.

The AB 32 Scoping Plan Measure H-6 led to CARB's Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (Title 17, Sections 95350 to 95359 of the California Code of Regulations). The proposed Vine Substation will be an air-insulated substation, rather than a gas-insulated substation.

Therefore, the 69 kV circuit breakers will be the only equipment containing SF_6. CARB's SF_6 regulation sets the maximum emissions rate for SF_6-containing equipment at 10 percent by 2011. The maximum allowable emissions rate decreases by 1 percent each year. In 2020, the threshold will remain at 1 percent.

State Standards Addressing Vehicular Emissions

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. CARB adopted the regulations on September 24, 2009, to reduce GHG emissions in new passenger vehicles from 2009 through 2016. CARB has estimated that the regulations will reduce emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.

Senate Bills 1078 and 107 and Executive Order S-14-08

Senate Bill (SB) 1078 requires retail sellers of electricity to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 changed the target date to 2010. In November 2008, then-Governor Arnold Schwarzenegger signed Executive Order S-14-08, which expands the Renewables Energy Standard to 33 percent by 2020. In April 2011, the California Legislature enacted SB 2, which mandates the Renewables Portfolio Standard of 33 percent by 2020 for investor-owned and publicly owned utilities.

Executive Order S-21-09

Executive Order S-21-09 directs CARB to work with the CPUC and the California Energy Commission (CEC) to implement the Renewables Portfolio Standard of 33 percent by 2020. On May 5, 2011, the CPUC adopted Order Instituting Rulemaking 11-05-005 to open a new proceeding for the Renewables Portfolio Standard.

CARB is also working with the California Independent System Operator and other load balancing authorities to address reliability, renewable integration requirements, and interactions with wholesale power markets. CARB established a "loading order" in its Energy Action Plan for resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health.

SDG&E Programs

SDG&E has been engaged for many years in activities to reduce GHG emissions. These activities include programs to increase energy efficiency and efforts to meet the Renewables Portfolio Standard of 33 percent of its supply from renewable sources by 2020. In 2011, 20.8 percent of SDG&E's retail sales were from renewable energy sources.

SDG&E submits a mandatory Long-Term Procurement Plan (LTPP) to the CPUC that describes its strategy for meeting the forecasted load during the next 10 years. The LTPP must be consistent with the "loading order" prescribed in the Energy Action Plan to meet growth first with conservation, then with renewable sources of electricity, and finally with new fossil fuel sources to the extent necessary. New generation sources must be consistent with the LTPP. The CPUC approved SDG&E's most recent LTPP in September 2008.

The LTPP includes the following programs to reduce GHG emissions:

- energy efficiency, which will reduce needed capacity by 487 megawatts (MW) by 2016;
- demand response, which will reduce needed capacity by 249 MW by 2016;
- renewables, which will provide 318 MW in 2010 and 727 MW in 2016; and
- new peaker plants to back up intermittent renewables and support retirement of older plants.

Forecasted reductions from these programs are greater than 1.5 $MMTCO_2e$ per year. These efforts will reduce carbon intensity by one-third while accommodating continued population growth, and will ensure consistency with the applicable plans, policies, and regulations adopted by California to reduce GHG emissions.

4.7.3 Impacts

Significance Criteria

Standards for determining impact significance were derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Under these guidelines, impacts to GHGs would be considered significant if the Proposed Project:

- Generates GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG

The San Diego County Air Pollution Control District (SDAPCD) has not established GHG thresholds under CEQA. The SCAQMD has adopted and the County of San Diego Planning & Development Services has issued a significance threshold of 10,000 metric tons (MT) of CO_2e emissions annually for industrial sources, below which levels an industrial project would not generate GHG emissions that would have a significant impact on the environment. The SCAQMD and the County of San Diego recommend amortizing construction emissions over a 30-year period to account for their contribution to GHG emissions over the lifetime of the Proposed Project.

Question 4.7a – Greenhouse Gas Emissions

Construction – Less-than-Significant Impact

The main source of GHG emissions associated with the Proposed Project will be fossil fuel combustion during construction. GHG emissions for construction were calculated using the same approach as criteria pollutant emissions for overall construction emissions. Estimated GHG emissions are summarized in Table 4.7-3: Greenhouse Gas Construction Emissions.

Table 4.7-3: Greenhouse Gas Construction Emissions

Category	GHG Emissions (metric tons)		
	CO_2	CH_4	N_2O
Total Construction Emissions	1,921.13	0.46	0.00
Global Warming Potential	1	21	310
CO_2 Equivalent	1,921.13	9.66	0.00
Total CO_2 Equivalent	1,930.79		
Amortized Construction Emissions (Amortized over 30 Years)	64.36		

The SCAQMD has adopted and the County of San Diego Planning & Development Services has issued a significance threshold of 10,000 MT of CO_2e emissions annually for industrial sources. The Proposed Project's total annualized construction CO_2e emissions of 64.36 MT, will be below the significance threshold of 10,000 MT of CO_2e emissions annually. This level of GHG emissions will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operation and maintenance activities will include regular inspection of the substation, distribution circuits, and power line and periodic maintenance activities. These activities will generate a minor amount of GHG emissions from vehicles and/or equipment used to inspect and maintain the facilities. GHG emissions associated with operation and maintenance will be well below the applicable significance thresholds.

Equipment that contains SF_6 has the potential to contribute to GHG emissions during operation and maintenance of the Proposed Project. The proposed Vine Substation will be an air-insulated substation, rather than a gas-insulated substation. Therefore, the Proposed Project's 69 kV circuit breakers will be the only piece of equipment containing SF_6. Under the ultimate arrangement, the proposed Vine Substation will have nine 69 kV circuit breakers containing SF_6. Each circuit breaker is estimated to hold 33 pounds of SF_6. The Proposed Project will accordingly use a total of 297 pounds of SF_6.

New SF_6 equipment, including the Proposed Project's 69 kV circuit breakers, has a low leak rate of approximately 0.1 percent annually per industry standards. The Proposed Project will include design and operational features to maintain the SF_6 emissions rate at approximately 0.1 percent,

which is well below the maximum allowable SF_6 emissions rate of one percent that CARB has established for 2020. With a leak rate of 0.1 percent annually, the Proposed Project will emit approximately 0.297 pound of SF_6. Because SF_6 has a global warming potential of 23,900, the Proposed Project's 69 kV circuit breakers will have an annual emission of approximately 7,098.30 pounds (3.22 MT) of CO_2e for operations and maintenance. As shown in Table 4.7-4: Greenhouse Gas Operation and Maintenance Emissions, when added to the amortized construction emissions and simulated emissions from the use of construction equipment and vehicles during operation and maintenance activities, the total annual emissions are anticipated to be approximately 68.04 MT of CO_2e. This level falls below the SCAQMD's and the County of San Diego's significance threshold of 10,000 MT of CO_2e emissions annually for industrial sources. Accordingly, impacts will be less than significant.

Table 4.7-4: Greenhouse Gas Operation and Maintenance Emissions

Source	GHG Emissions (metric tons of CO_2e per year)
Off-Road Equipment and On-Road Vehicle Use	0.46
Fugitive Circuit Breaker Emissions	3.22
Amortized Construction Emissions	64.36
Total	**68.04**

Question 4.7b – Applicable Greenhouse Gas Plan Conflicts

Construction – No Impact

The Proposed Project's GHG emissions from construction will be below the significance threshold when amortized over a 30-year period, as recommended by the SCAQMD and the County of San Diego. Equipment and vehicles supporting construction of the Proposed Project will comply with the requirements implemented by CARB to reduce GHG emissions and will be consistent with AB 32's goals. Accordingly, there will be no impact associated with construction.

Operation and Maintenance – No Impact

The proposed Vine Substation will be air insulated; therefore, the substation's circuit breakers will be the only equipment containing SF_6. SDG&E has ongoing standard internal programs and practices that ensure compliance with the applicable SF_6 regulations and air quality plan, and those programs and practices will not change as a result of the Proposed Project. By virtue of its compliance with applicable rules and regulations and its similarity to existing operation and maintenance requirements, the Proposed Project will be consistent with AB 32's goals. Emissions will not differ from emission levels for operations and maintenance under existing rules and regulations. Accordingly, no impact will occur.

By complying with applicable rules and regulations and following SDG&E's design and operational features to decrease GHG emissions, the Proposed Project will not conflict with any

applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Accordingly, there will be no impact.

4.7.4 Applicant-Proposed Measures

With implementation of SDG&E's ordinary construction/operating restrictions, potential impacts related to GHG, including SF_6, will remain less than significant. As a result, no applicant-proposed measures have been proposed.

4.7.5 References

California Air Pollution Control Officers Association. CalEEMod. Online. http://caleemod.com/. Site visited April 2, 2014.

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CPUC. RPS Program Overview. Online. http://www.cpuc.ca.gov/PUC/energy/Renewables/overview.htm. Site visited April 2, 2014.

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U.S. EPA. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Online. http://www.epa.gov/climatechange/endangerment/. Site visited April 2, 2014.

U.S. EPA. Greenhouse Gas Reporting Program. Online. http://www.epa.gov/ghgreporting/. Site visited April 2, 2014.

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4.8 HAZARDS AND HAZARDOUS MATERIALS

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?			✓	
e) If located within an airport land use plan or within two miles of a public airport or public use airport for which such a plan has not been adopted, result in a safety hazard for people residing or working in the project area?			✓	
f) If located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fire, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

4.8.0 Introduction

The purpose of this section is to document existing hazardous conditions in the area of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) and to assess potential impacts that may occur as a result of implementation of the Proposed Project. Potential impacts include exposure to hazardous materials in or around the areas affected by the Proposed Project or exposure to hazards generated by the Proposed Project during the short-term construction phase and/or long-term operation. In addition, this section evaluates the hazards related to wildfire and exposure to potentially contaminated groundwater.

4.8.1 Methodology

A Phase I Environmental Site Assessment (ESA), included as Attachment 4.8-A: Phase I Environmental Site Assessment, was prepared by Geosyntec Consultants for the Proposed Project site in April 2014. The Phase I assessment and hazards assessment included a review of the following:

- federal and state databases to identify properties that may be listed in the referenced agency records and located within recommended American Society of Testing and Materials (ASTM) distances;
- available physiographic information including topographic, geologic, and hydrogeologic information;
- select historic aerial photographs to assess past usage of the site and surrounding areas;
- historic fire insurance maps;
- the Preliminary Geotechnical and Geologic Hazards Investigation for the proposed Vine Substation (Geosyntec Consultants, December 2013) included as Attachment 4.6-A: Preliminary Geotechnical and Geologic Hazards Investigation;
- site reconnaissance surveys; and

- reports summarizing previous hazardous materials investigations to understand existing site conditions.

Searches for known hazardous materials sites in the vicinity of the Proposed Project area were conducted via the Internet across federal, state, and local hazardous materials databases and as part of the Phase I ESA. In addition, emergency evacuation and response plans employed by the City of San Diego (City) and emergency measures implemented by the County of San Diego's Office of Emergency Services (OES) were researched. The City General Plan was also reviewed for relevant policies, plans, and programs pertaining to hazards and hazardous materials.

Records Review

A database search report was obtained from Environmental Data Resources, Inc. (EDR), which is included in Attachment 4.8-A: Phase I Environmental Site Assessment. The report documents findings of various federal, state, and local regulatory database searches regarding properties with known or suspected releases of hazardous materials or petroleum hydrocarbons. The following federal, state, and local records were reviewed, among others, to determine areas where contamination might be encountered during construction:

- Annual Workplan Sites
- California Hazardous Material Incident Report System
- Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS)
- CERCLIS No Further Response Actions Planned
- Department of Toxic Substances Control (DTSC) Cortese List
- Emergency Response Notification System
- Federal Emergency Response Notification System
- Federal Institutional Controls/Engineering Controls
- Federal Underground Storage Tank listings
- Local Landfill/Solid Waste Disposal sites
- Local Brownfield sites
- National Priorities List (NPL) (included delisted and proposed sites)
- Needing Further Evaluation sites
- Notify 65
- Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) Treatment, Storage, Disposal Facilities (TSD) facilities
- RCRA non-CORRACTS TSD facilities
- RCRA generators
- School Property Evaluation Program
- State and Tribal Equivalent NPL/CERCLIS sites
- State and Tribal Registered Underground Storage Tanks
- State and Tribal Landfills and Solid Waste Disposal sites
- State and Tribal Leaking Underground Storage Tanks
- State and Tribal Voluntary Cleanup sites
- State Response sites

- Statewide Spills, Leaks, Investigations, and Cleanups
- Toxic Alert for California Superfund sites

A review of the databases identified properties located within the recommended ASTM distances from the Proposed Project. This review identified hazardous materials and the use, generation, storage, treatment, or disposal of chemicals, as well as any release incidents of such materials that may be encountered by the Proposed Project.

Historical Use

Aerial photographs, city directories, and topographic maps were reviewed, where available, to assess historical site and adjacent property uses, and the potential for encountering hazardous materials in the Proposed Project area as a result of historical use.

A Preliminary Geotechnical and Geologic Hazards Investigation was conducted by Geosyntec Consultants (Geosyntec) in December 2013 and included a review of published regional geologic information, review of previous site geotechnical information, site reconnaissance, geotechnical borings, cone penetration test soundings, and geotechnical laboratory testing. The investigation results reported that the northeastern portion of the site was previously occupied by a gas station, and the fuel reservoir had been removed. The Phase I ESA confirmed the previous use of a portion of the proposed Vine Substation site as a gas station and automotive repair service in the years 1969 and 1970 through research of historic aerial, Sanborn, and topographic maps. Historic city directories indicate the site included a service station as early as 1927; but historic maps do not confirm the existence of a service station at the site during that time period. There are no records to indicate environmental closure of the gas station, tank removal, or soil conditions. Geosyntec screened soil samples in the field for potential indications of contamination using geotechnical borings and a Photoionization Detector, and no volatile organic compounds or other soil vapors from the site soil samples were observed. Therefore, Geosyntec determined the potential for previous release of petroleum products to be insignificant.

Site Reconnaissance

In addition to the survey conducted for the Prelimary Geotechnical and Geologic Hazards Investigation and Phase 1 ESA site reconnaissance, a reconnaissance-level survey of the proposed Vine Substation site was conducted by Insignia Environmental on December 10, 2013. The reconnaissance survey consisted of walking the accessible areas of the property and conducting a visual examination for evidence of potential environmental concerns, which included the following:

- soil and groundwater contamination, as indicated by soil or pavement staining/discoloration;
- stressed vegetation;
- indications of waste-dumping or burial;
- pits;
- ponds or lagoons;
- containers of hazardous substances or petroleum products;

- electrical and hydraulic equipment, such as electrical transformers and hydraulic hoists, that may contain polychlorinated biphenyls (PCBs); and
- underground and aboveground storage tanks.

Insignia also observed adjoining property conditions from the site boundaries and public roadways for potential impacts that could affect the Proposed Project site.

4.8.2 Existing Conditions

The following discussion addresses the potential types and amounts of hazardous materials that are anticipated to be located within approximately one mile of the areas affected by the Proposed Project. Schools located within 0.25 mile of the Proposed Project have been identified according to California Environmental Quality Act (CEQA) requirements to assess potential impacts with regard to hazardous conditions. As the Proposed Project site is located within a highly urbanized area of the City of San Diego with established commercial and light industrial uses, the potential for hazardous materials contamination due to present or historic land uses does exist.

Regulatory Background

The following sections describe federal, state, local regulations regarding hazards and hazardous materials that apply to the Proposed Project.

Federal

United States Environmental Protection Agency

The United States (U.S.) Environmental Protection Agency (EPA) maintains a list of materials considered to be hazardous to the environment or to human health. These materials are identified in the following three categories:

- F-List: Wastes from the F-list are published under Title 40 of the Code of Federal Regulations (CFR) Section 261.31. These wastes include non-specific source wastes common in manufacturing and industrial processes.

- K-List: K-list wastes are published under 40 CFR § 261.32. These wastes include source-specific wastes from specific industries, including pesticide manufacturing and petroleum refining.

- P-List and U-List: Wastes from the P- and U-lists are published under 40 CFR § 261.33. These wastes include discarded commercial chemical products in an unused form.

Waste that has not been previously listed may still be considered hazardous if it exhibits one or more of the following characteristics: ignitibility, corrosivity, reactivity, or toxicity (40 CFR 261 Subpart C).

Uniform Building Code and Uniform Fire Code

The Uniform Building Code (UBC) and the Uniform Fire Code (UFC) provide codes for fire protection at the federal level. To minimize potential fire risk and damage to structures, the UBC provides requirements to which building construction, materials, and other elements or

construction practices must adhere. In addition, the UFC provides design measures for installation of fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards and safety measures, hazardous material storage and use, and other general and specialized requirements pertaining to fire safety and prevention.

Resource Conservation and Recovery Act

RCRA regulates potential health and environmental problems associated with hazardous and non-hazardous waste. This law is implemented by the U.S. EPA through Subtitle C, Title 42 of the U.S. Code (U.S.C.) Section 6921 et. seq., and its implementing regulations (40 CFR § 260 et seq.). The generation, transportation, treatment, storage, and disposal of hazardous waste is regulated through Subtitle C of the RCRA, which addresses a "cradle-to-grave" approach to hazardous waste management. All states are subject to Subtitle C with regard to hazardous waste generation. RCRA also provides the specific quantities of wastes that are regulated under the Act.

Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act

CERCLA and SARA, together with their implementing regulations, govern the use, planning, reporting, clean up, and notification with regard to hazardous materials and hazardous material releases into the environment. These statutes are codified in 40 CFR § 239 through 282 and the regulations are defined in 40 CFR § 302 through 355.

Annual reporting requirements associated with hazardous materials released into the environment are provided in 42 U.S.C. § 11023 and 40 CFR § 372.30. Reporting of both routine discharges and spill releases is required. In addition, Title III of SARA (identified as the Emergency Planning and Community Right-To-Know Act of 1986) requires that all states develop and implement local chemical emergency preparedness programs and make available information pertaining to hazardous materials that are used at facilities within local communities.

Clean Water Act/Clean Air Act

The Clean Water Act (CWA) provides measures governing the accidental release of hazardous materials to surface waters. Similarly, the Clean Air Act (CAA) provides measures aimed at preventing the accidental release of hazardous materials into the atmosphere.

Regulations implementing the CAA and governing hazardous materials emissions are provided in 40 CFR Part 68. Implementation of these regulations is intended to prevent the accidental release of hazardous materials into the environment.

State

Division of Occupational Safety and Health

The California Occupational Safety and Health Act (Cal-OSHA) of 1970 provides measures to address the safety of construction and industrial workers. Title 8 of the California Code of Regulation (CCR) implements the majority of these measures. Cal-OSHA is responsible for enforcing the occupational and public safety laws adopted by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA). OSHA is responsible for the

regulation of workplace hazards and hazardous materials at the federal level, while Cal-OSHA regulates hazards and hazardous materials at the state level.

Department of Toxic Substances Control/California Environmental Protection Agency

DTSC regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California, while the California EPA is charged with developing, implementing, and enforcing the state's environmental protection laws.

Regional Water Quality Control Board

The San Diego Regional Water Quality Control Board (RWQCB) is responsible for protecting the beneficial uses of surface water and groundwater resources in the San Diego area. The RWQCB adopted a Water Quality Control Plan (Basin Plan) in September 1994 and amended the plan in April 2011. The Basin Plan sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act. The Basin Plan establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Project discharges to surface waters in the region are subject to the regulatory standards set forth in the Basin Plan, which prevents the discharge of hazardous materials into waters of the U.S. Although groundwater is not used as a municipal or domestic water supply, the RWQCB enforces the provisions of the state statutes that protect groundwater.

California Hazardous Materials and Waste Codes

Within the State of California, the storage, handling, use, and/or disposal of hazardous materials is regulated through various sections of the California Health and Safety Code (H&SC). In addition, H&SC § 33437 requires lessees or purchasers of property in a redevelopment project to comply with all covenants, conditions, and restrictions imposed by the agency for the reasonable protection of lenders. Individual states are required by the RCRA to develop their own programs for the regulation of hazardous waste discharges; however, such plans are required to meet or exceed RCRA requirements.

The California Hazardous Waste Control Law (HWCL) addresses the control of hazardous wastes for the state. The HWCL regulates generators of universal waste (e.g., batteries, mercury control devices, dental amalgams, aerosol cans, and lamps/cathode ray tubes) under Section 25100 et seq. of the H&SC, as well as hydrocarbon waste (e.g., oils, lubricants, and greases) that is not classified as hazardous waste under the federal RCRA regulations. DTSC is responsible for the administration and enforcement of the HWCL.

The Hazardous Materials Release Response Plans and Inventory Act (H&SC, Section 25500 et seq.) and regulations provided in 19 CCR § 2620 et seq. require that local governments be responsible for the regulation of facilities that store, handle, or use hazardous materials above threshold quantities (TQs). The TQs for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure. Facilities storing such hazardous materials in excess of their TQs are required to prepare a Hazardous Materials Business Plan (HMBP) to identify the facility's internal response requirements to accidental spills. The HMBP may identify emergency contacts, hazardous material inventory and quantities, control methods, emergency response

measures, and employee training methods. The HMBP is required to be submitted to the local administering agency, which is typically the local fire department or public health agency. In the event of a spill from such a facility, both the local administrative agency and the California Governor's OES must be notified.

H&SC Section 25249.5 et seq. of the Safe Drinking Water and Toxics Enforcement Act (i.e., Proposition 65) is administered through the California Office of Environmental Health Hazard Assessment. The Act regulates cancer-causing and reproduction-impairing chemicals. Under Proposition 65, users of such regulated chemicals are required to issue a public warning before potential exposure to chemicals above a threshold amount occurs (H&SC § 25249.6). In addition, the act is aimed at preventing discharges or releases of specified hazardous materials into a "source of drinking water." The Act provides a list of chemicals of concern (*Id.* § 25249.5), which is periodically updated.

Section 25404 et seq. of the California H&SC includes the California Unified Hazardous Waste and Hazardous Material Management Regulatory Program Act, which establishes specific requirements for handling hazardous waste locally by establishing the Certified Unified Program Agency (CUPA). The responsibility for management of local hazardous wastes is delegated by the California EPA to the local agency through a Memorandum of Understanding. The primary CUPA relative to the Proposed Project site is the County of San Diego's Department of Environmental Health Hazardous Materials Management Division (HMMD).

California Building Code

The California Building Code (CBC) provides design and construction measures for structures and other facilities with regard to fire protection and prevention. The CBC supplements the UBC by providing measures that are specific to potential conditions in the State of California. Measures provided in the CBC are integrated and enforced through city and county review of development projects, the Office of the State Fire Marshal, and by local city or county fire chiefs or marshals.

California Public Resources Code

The California Public Resources Code (PRC) provides regulations to enhance safety with regard to the operation and management of electrical transmission lines. These include, but are not limited to, the following:

- PRC Section 4292: This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. An approximately 10-foot radius around such structures must remain clear of vegetation for the entirety of the fire season.

- PRC Section 4293: This section requires specific clearance between conductors and vegetation. As the line voltage increases, the radius of clearance also increases. It is also required that some trees must be removed if they pose the potential to fall on an electrical transmission line and cause damage.

Local

San Diego County

Within San Diego County, the HMMD is responsible for the implementation of the CUPA. Hazardous materials are addressed through various county codes and regulations. The HMMD's hazardous material requirements include hazardous waste determination, storage and transportation of hazardous waste, treatment and disposal requirements, biennial reporting, emergency preparedness and prevention, emergency procedures, business plans, personnel training, and standards for violations. Regulations for the storage and use of explosives are provided in San Diego County General Regulation, Section 6904.

City of San Diego General Plan and Municipal Code

The Public Facilities, Services, and Safety Element of the City of San Diego General Plan addresses public facilities and services, such as fire and rescue, police, storm water protection, and disaster preparedness. The General Plan identifies goals and policies intended to allow for the efficient and adequate provision of public services and facilities, as well as to reduce the potential for hazardous or emergency situations to occur.

In addition, the Proposed Project site lies within the City's Airport Environs Overlay Zone, as designated in the City's Municipal Code. The Overlay Zone provides supplemental regulations for property surrounding the San Diego International Airport (SDIA), which is located approximately 0.75 mile to the southwest of the Proposed Project site. The Overlay Zone provides measures pertaining to land use compatibility, noise impacts, and safety hazards, among other issues.

San Diego County Regional Airport Authority Airport Land Use Compatibility Plan

The Proposed Project site is located approximately 0.75 mile northeast of the SDIA. The Airport Land Use Commission (ALUC) is required by federal and state law to create or update Airport Land Use Compatibility Plans (ALUCPs) for San Diego County's 16 public-use and military airports. The San Diego County Regional Airport Authority (SDCRAA) is in the process of updating the ALUCP for SDIA, which was originally adopted in 1992 and amended in 1994 and 2004. The July 2013 Draft ALUCP addresses airport compatibility issues related to noise, safety, airspace protection, and aircraft overflight. Local agencies are required to submit proposed actions to the ALUC for compatibility review until their General Plans are found to be consistent with the applicable ALUCP.

Contaminated Sites

To determine those sites that may potentially represent the greatest risk, the following were considered:

- Density of Listed Sites: The greater the number of listed sites in the vicinity of the Proposed Project, the greater the potential for encountering contamination.

- Type of Release and Medium Affected: Contaminants are typically transported at a faster rate in groundwater than in soil. The volume of contaminant released, release date, and

medium impacted all affect how contaminants may have migrated and, therefore, affects their potential to result in an impact.

Existing Hazardous Sites

Proposed Vine Substation and Transmission Line Corridor

A number of properties were identified with releases of hazardous substances or petroleum products within 0.50 mile of the Proposed Project, including the proposed Vine Substation and 12 kV distribution relocation sites. Five properties within one mile of the Proposed Project site were identified in RCRA CORRACTS or CERCLIS databases. Two of these properties are discussed in detail in the paragraphs that follow; a complete listing of sites identified in the Phase I ESA database search can be found in Attachment 4.8-A: Phase I Environmental Site Assessment.

The most notable of the sites identified, Honeywell International Inc. (Honeywell) (formerly Baron-Blakesee Inc.), is located at 3596 California Street, approximately 250 feet to the northwest of the proposed Vine Substation. The site is a former solvent recycling facility that accepted chlorinated and fluorinated solvents and processed the solvents by distillation to reclaim them as a usable product. Following cease of operations in 1993, several investigations identified significant concentrations of chlorinated hydrocarbons in soil, groundwater, and soil vapor at that property. In October 2008, the facility conducted a Soil Vapor Extraction pilot test to evaluate whether this technology will be effective at reducing the VOC concentrations in soil. The site's status is currently classified as active and undergoing closure. Based on reported soil vapor concentrations, a land use covenant was established to restrict the Honewell property from use as a residence, hospital, school, or other sensitive land uses.

The second site carried forward for discussion in the ESA is the Northside San Diego International Airport Redevelopment (formerly General Dynamics Facility), which is located approximately 950 feet from the Proposed Project site at 3302 Pacific Highway. Between 1935 and 1995, General Dynamics and its predecessors performed aircraft and aerospace manufacturing activities at the facility; facility decommissioning began in 1995 and ended in 1997. Chemicals of concern (COCs) used at the site included fuels, oils, solvents, acids, metals, and paints. In addition, PCB-bearing building materials were used. Prior to the facility decommissioning, COCs were found in the soil and groundwater, and several phases of investigations and remediation took place. During the facility decommissioning, additional remedial actions were taken, and recent soil and groundwater investigations also encountered COCs. As of November 2010, the SDCRAA has planned on redeveloping the site for airport-related businesses and is conducting additional investigations to assess the potential risk relative to the new site use. The site's status is classified as open and undergoing assessment. However, the site is located down gradient with ground water flow generally south to southwest, away from the Proposed Project site.

The following sections describe the types and amounts of hazardous materials likely to be present in the vicinity of the Proposed Project. All Proposed Project components are located in industrial areas, where historical land use may contribute to hazardous material contamination.

Contaminated Soil and Ground Water

No visual or olfactory indications of soil or groundwater contamination have been identified at the proposed Vine Substation site or the 12 kV distribution relocation and telecommunication system extension corridors. Groundwater is expected to be encountered at depths of between 24 and 25 feet below ground surface, as described further in Section 4.9 Hydrology and Water Quality.

Based on the Proposed Project site's designation with non-beneficial groundwater uses, many cases listed nearby the site have been closed with residual impacts in place. Three closed leaking UST facilities are located upgradient of the Proposed Project within 0.25 mile.

Fire Hazards

Based on the Wildland Fire Hazards Map depicted in the City of San Diego General Plan and California Department of Forestry and Fire Protection data, the Proposed Project is not located in a wildland fire hazard area. As of the date of the Phase I ESA, Geosyntec had not received responses from the Fire Department with regards to potential hazards.

Schools

One school is located within 0.25 mile of the Proposed Project—the Montessori School of San Diego—and it is approximately 0.25 mile southeast of the Proposed Project.

Airports

The Proposed Project site is located approximately 0.75 mile from the SDIA and, therefore, is required by state and local law to be consistent with the SDIA ALUCP. The July 2013 Draft SDIA ALUCP describes the noise, safety, airspace protection, and overflight policies and standards adopted to promote compatibility between the SDIA and surrounding future land uses. The July 2013 Draft SDIA ALUCP, once adopted, will supersede the previous ALUCP that was adopted in 1992 and amended in 1994 and 2004.

Emergency Response and Evacuation Plans

The County of San Diego's Office of Disaster Preparedness implements the San Diego County Operational Area Emergency Plan. The San Diego County Operational Area consists of the county, 18 cities (including the City of San Diego), and all special districts, including school districts. A formal Joint Powers relationship exists between the county and the 18 incorporated municipalities in the county. The Operational Area staff coordinates among all of the public agencies within the county's boundaries and the California Governor's OES. The Operational Area is staffed by the County of San Diego's OES. During a disaster response, the County of San Diego's OES is responsible for activating the county's Emergency Operations Center and coordinating resources at the Operational Area level, as well as collecting status reports and other information from organizations and facilities that may have sustained damage.

The San Diego County Operational Area Evacuation Annex (Annex) was designed to be used as a template for preparation of other jurisdictional evacuation plans and to supplement or support the evacuation plans developed and implemented by local jurisdictions. Strategies, protocols, organizational frameworks, and recommendations that may be used to implement a coordinated

evacuation effort within the San Diego County Operational Area are included in the Annex. It identifies estimates on the resident population within each jurisdiction that may be potentially impacted by certain hazards and would require evacuation, the number of residents that may need assistance securing shelter or transportation, and the estimated number of household pets that may need to be accommodated in the event of an evacuation effort. In addition, the Annex provides hazard-specific considerations, transportation routes, and capacities for general evacuation, shelter capacities throughout the county, locally available resources, resources available through mutual aid, and other special needs considerations.

The Annex includes hazard-specific evacuation routes for dam failure, earthquakes, tsunamis, floods, and wildfires. Primary evacuation routes consist of the major interstates, highways, and prime arterials within San Diego County.

In addition, the City of San Diego's Fire-Rescue Department Community Emergency Response Teams (CERTs) help local communities build a base of emergency preparedness to rely on when needed. The CERT program brings together neighbors, team members, and co-workers within their own community, in coordination with the San Diego Fire-Rescue Department. Other agencies—such as the City of San Diego's Office of Homeland Security, the City's Police Department, the San Diego County Sheriff's Department, and the County of San Diego's OES—also offer coordinated services in the event of an emergency or evacuation.

4.8.3 Impacts

Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to hazards and hazardous materials would be considered significant if the Proposed Project:

- Creates a hazard to public health or the environment by the routine transport, use, or disposal of hazardous materials
- Creates a hazard to the public or the environment by reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emits hazardous emissions or handle hazardous materials within 0.25 mile of a school
- Is located at a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, creates a hazard to the public or the environment
- Is located within two miles of a public or private airport and results in a safety hazard for people residing or working in the Proposed Project area
- Impairs implementation of, or physically interferes with, an adopted emergency response or evacuation plan
- Exposes people or structures to a risk of loss, injury, or death related to wildland fires

Question 4.8a – Hazardous Material Transport, Use, or Disposal

Construction – Less-than-Significant Impact

It is possible that impacts could occur from the transport or use of hazardous materials during the construction phase as the result of incidental spills or other unauthorized releases during foundation excavation and construction; trenching; conductor pulling, splicing, and tensioning during the installation of the 69 kV loop-in and distribution circuits and during the upgrade of the telecommunication system; and transformer transporting and/or oil filling. Other potential impacts relative to the use of hazardous materials could occur during construction at temporary storage sites, from transportation of materials or workers to worksites, or during the refueling or servicing of equipment. Vehicles and equipment used for construction may contain or require temporary, short-term use of potentially hazardous substances, such as fuel, lubricating oils, or hydraulic fluid.

In addition, material that is excavated, transported, stored, or disposed of during construction of the Proposed Project has the potential to contain hazardous materials and could present a hazard to construction workers, the public, or the environment if improperly managed. Vehicles and equipment used for construction may contain or require temporary, short-term use of potentially hazardous substances, such as fuel, lubricating oils, or hydraulic fluid. Groundwater is not anticipated to be encountered during excavation because the excavation will occur above the water table. Should groundwater be encountered, the procedures described in Section 3.6.3 Methods in Chapter 3 – Project Description regarding groundwater discharge will be followed. In addition, a Health and Safety Plan will be prepared to provide guidance for site workers in the case of contamination discovery at the proposed Vine Substation site.

A general listing of types of chemicals used during construction is provided in Table 4.8-1: Hazardous Materials Typically Used for Construction and/or Operation and Maintenance. In the case of an incidental spill or other unauthorized release, hazardous materials could have the potential to adversely affect the health or safety of construction workers, nearby building occupants or residents, or others within the vicinity of the Proposed Project.

As presented in Section 4.8.2 Existing Conditions, several laws, rules, and regulations apply to the routine use of hazardous materials during construction, which include proper handling and disposal of hazardous materials. SDG&E will comply with all such laws, rules, and regulations. Because construction will require only small amounts of hazardous materials; transport of these materials will only occur during the approximately 19-month construction period; and all spills will be immediately cleaned up and disposed of properly in accordance with SDG&E's Water Quality Construction Best Management Practices Manual (BMP Manual) (included as Attachment 4.8-B: Water Quality Construction Best Management Practices Manual) and with federal, state, and local regulations. In addition, a Hazardous Materials and Waste Management Plan, as described in APM-HAZ-01, will be implemented. This plan will include procedures for the use, storage, and transportation of hazardous materials; protocols for the implementation of secondary containment and countermeasures for hazardous materials; a list of and the locations of spill response materilas, and a description of wast management and disposal procedures. As part of SDG&E's ordinary construction restrictions, a Safety and Environmental Awareness Program (SEAP) will be developed which will include training on hazardous material protocols and best management practices (BMPs). With the adherence to applicable laws and regulations,

implementation of SDG&E's BMP Manual, SEAP training, and implementation of APM-HAZ-01, impacts will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Similar to activities occurring during the construction phase, the use of hazardous materials during ongoing operation and maintenance of the proposed Vine Substation could pose health and safety hazards to SDG&E maintenance staff, area residents, and the surrounding environment as the result of an incidental spill of hazardous substances during routine or emergency maintenance, as well as during daily operation of the facilities. The majority of chemicals used for ongoing operation or maintenance activities will be similar to those used during the construction phase; however, daily use of such chemicals will generally be considerably less during operation and maintenance than during construction. A typical list of the types of hazardous materials used during operations and maintenance is provided in Table 4.8-1: Hazardous Materials Typically Used for Construction and/or Operation and Maintenance. Hazardous chemicals used for operations and maintenance activities, with the exception of the oil contained in the substation transformers, will be transported to and removed from the Proposed Project site by maintenance personnel, rather than stored on site, to reduce the overall potential for accidental release of such substances.

At its ultimate configuration, the proposed Vine Substation will support four standard profile transformers. The four transformers will contain a total of approximately 30,000 gallons of oil. As the transformers age, the potential increases for leaks to occur. Other major natural events (e.g., seismic events) or collisions from maintenance equipment will also have the potential to result in a release into the environment. Storage and use of hazardous materials, including mineral oil, in amounts exceeding 1,320 gallons is regulated under the CWA. Because total materials in excess of this threshold are expected at the proposed Vine Substation site, SDG&E will prepare a site-specific Hazardous Materials Business Plan (HMBP) and Spill Prevention, Control, and Countermeasures (SPCC) Plan, which will contain the proper procedures for storage, handling, spill response, and disposal of hazardous materials, including fueling, maintenance, spill containment, leak inspection, and cleanup procedures, in accordance with the CWA. In addition, the proposed Vine Substation will include oil-retention basins for each transformer to ensure any future leak or spill is fully contained. The basins will be designed to have a capacity that exceeds the transformer capacity by 10 percent. With the installation of the oil-retention basins, which are part of the Proposed Project's design, compliance with California law, which requires the implementation of a HMBP, and adherence to the CWA, which requires a SPCC Plan, the potential impact will be less than significant.

Question 4.8b – Reasonably Foreseeable Upset and Accident Conditions

Construction – Less-than-Significant Impact

The site reconnaissance survey and accompanying database search confirmed that no existing contamination has been identified on the Proposed Project site. As the site is presently a paved surface used for long-term parking and does not contain buildings or structures, with the exception of a small kiosk used to collect payment from customers. The release of hazardous materials (e.g., asbestos) during demolition activities are not anticipated.

Table 4.8-1: Hazardous Materials Typically Used for Construction and/or Operation and Maintenance

Hazardous Materials	
ABC fire extinguisher	Hydraulic fluid
Acetylene gas	Insulating oil (inhibited, non-PCB)
Air tool oil	Lubricating grease
Ammonium hydroxide	Mastic coating
Battery acid (in vehicles and in the meter house of the substations)	Methyl alcohol
Bottled oxygen	Mineral oil
Brake fluid	Motor oils
Canned spray paint	Paint thinner
Chain lubricant (contains methylene chloride)	Propane
Connector grease (penotox)	Puncture seal tire inflator
Contact cleaner 2000	Safety fuses
Diesel fuel	Starter fluid
Diesel fuel additive	Sulfur hexafluoride (within the circuit breakers in the substations)
Eye glass cleaner (contains methylene chloride)	Two-cycle oil (contains distillates and hydro-treated heavy paraffinic)
Gasoline	WD-40
Gasoline treatment	ZEP (safety solvent)
Hot stick cleaner (cloth treated with polydimethylsiloxane)	ZIP (1,1,1-trichloroethane)

As discussed in response to Question 4.8a, hazardous materials used in construction vehicles and equipment could inadvertently be released through spills or leaks. In addition, because the northeastern area of the proposed Vine Substation site was previously used as a gas station, there is potential for contamination to be encountered during excavation of the site. As discussed in the response to Question 4.8a, a Health and Safety Plan will be prepared to provide guidance for site workers to identify potential contamination and to appropriately respond in the case of contamination discovery at the proposed Vine Substation site. In addition, construction of the Proposed Project will be subject to the laws and regulations governing the handling and disposal of hazardous materials. All relevant local, state and federal regulations will be adhered to. As a result and with preparation of a project-specific Hazardous Materials and Waste Management Plan proposed by APM-HAZ-01, the potential impact will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Hazardous material impacts could occur as a result of incidental spills during normal operation or routine or emergency maintenance at the proposed Vine Substation. SDG&E and its contractors will be subject to and will follow all relevant local, state, and federal regulations regarding the transport, storage, use, handling, and spill response for hazardous materials. Vehicles and equipment that will be used to maintain Proposed Project facilities may contain materials that could constitute a hazardous substance if released into the environment; however, the use of such chemicals will typically be considerably less than those used during Proposed Project construction activities. To reduce the potential for adverse effects to occur, SDG&E will maintain spill kits in maintenance vehicles to effectively respond to incidental spills as part of their ordinary operation restrictions. In addition, as discussed in the response to Question 4.8a, SDG&E will implement a HMBP and SPCC Plan, as required by law, to prevent or address any accidental release of hazardous materials. As such, potential impacts from operation and maintenance of the proposed Vine Substation will be less than significant.

Question 4.8c – Hazardous Substances in Close Proximity to Schools

Construction – Less-than-Significant Impact

Schools within 0.25 mile of the Proposed Project are considered to be sensitive receptors. One school, the Montessori School of San Diego, is located approximately 0.25 mile southeast of the Proposed Project. The next nearest school is located approximately 0.7 mile to the north of the Proposed Project. As discussed in the response to Question 4.8a, impacts associated with hazardous material transport, use, or disposal during construction are considered to be less than significant. In addition, as discussed in the response to Question 4.8b, impacts associated with reasonably foreseeable upset and accident conditions are considered to be less than significant due to the implementation of an SPCC and the maintenance of spill kits by substation personnel. In addition, as discussed in the response to Question 4.8b, a Health and Safety Plan will be prepared to guide construction workers on how to properly manage any contamination discovery and a project-specific Hazardous Materials and Waste Management Plan, as described in APM-HAZ-01, will be implemented. Therefore, construction of the Proposed Project is not expected to cause a significant health or environmental hazard, and potential impacts from the use of hazardous substances within proximity to schools will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

As discussed in the response to Question 4.8a, the use of hazardous materials during operation and maintenance will generally be considerably less than during construction. Hazardous chemicals used will be transported to and removed from the Proposed Project site by maintenance personnel, rather than stored onsite, and therefore will not cause significant health or environmental hazards. In addition, the installation of the oil-retention basins and implementation of a SPCC Plan, as required by law, will ensure that any hazardous materials leak or spill at the proposed Vine Substation will be fully contained and appropriately controlled during operation. Therefore, potential impacts from the use of hazardous substances within proximity to schools during operation and maintenance will be considered less than significant.

Question 4.8d – Existing Hazardous Materials Sites Listed in Government Code Section 65962.5

Construction – No Impact

Construction of the Proposed Project will not result in any impacts related to known hazardous materials sites listed in Government Code § 65962.5, as no known hazardous sites have been identified on the Proposed Project site or on adjacent lands. Although two open sites with past or current hazardous materials cases were identified within 0.25 mile of the Proposed Project, they do not pose significant risk to the Proposed Project due to their localized nature, present regulatory status, and lack of violations reported. Furthermore, the sites are located down gradient or cross gradient with ground water flow, generally in a south to southwest direction away from Proposed Project site. No hazardous materials have been identified on the Proposed Project site; however, there is potential for contamination due to the site's previous use as a gas station. As discussed in the responses to Questions 4.8b and 4.8c, a Health and Safety Plan will be prepared and implemented in the case of contamination discovery. In addition, the groundwater table is at a sufficient depth such that encountering groundwater during excavation activities is not anticipated. A SPCC Plan, BMPs, and APM-HAZ-01 will also be implemented during construction. As a result, impacts will be less than significant.

Operation and Maintenance – No Impact

Long-term operation and maintenance activities will not result in significant impacts, as no known existing hazardous materials or contamination sites listed in Government Code § 65962.5 are located on site. As previously mentioned, two open sites with past or current hazardous materials cases exist within 0.25 mile of the Proposed Project, but do not pose significant risk to the Proposed Project. Future maintenance activities for the proposed Vine Substation will primarily occur on above-grade structures, thereby minimizing the potential for the uncovering of existing, unknown hazardous materials sites during such activities. Therefore, no impacts will occur.

Although the distribution and telecommunication system components will be installed underground, once construction is complete, operation and maintenance activities will not further disturb underlying surfaces or require activities with the potential to encounter unknown hazardous materials sites. As such, no impacts will occur.

Question 4.8e – Public Airport Hazards – *Less-than-Significant Impact*

The Proposed Project site is located approximately 0.75 mile from the SDIA. The Proposed Project will be designed and constructed in accordance with the noise, safety, airspace protection, and overflight policies and standards described in the SDIA ALUCP, which were designed to prevent new structures from becoming hazards to air navigation. Per the SDIA ALUCP, structures that are 200 feet above ground level will require coordination with the Federal Aviation Administration (FAA).

Per the SDIA ALUCP requirements, coordination with the FAA is required prior to construction of the Proposed Project due to its proximity to SDIA. Because the 69 kV steel poles—which will reach approximately 100 feet high and are located within one mile from the airport—will exceed the one-to-100 ratio required by 14 CFR § 77.9 for airspace and navigation, SDG&E will consult with the FAA. The FAA will conduct an obstruction evaluation, for which the resulting requirements will be implemented by SDG&E. Because the SDG&E will comply with FAA requirements should an airport obstruction be identified, impacts to public airports will be less than significant.

Question 4.8f – Private Airstrip Hazards – *No Impact*

No components of the Proposed Project are located within two miles of a private airstrip and, therefore, will not affect or disrupt existing operations or worker safety at such a facility. As a result, no impact will occur.

Question 4.8g – Emergency Evacuation and Response Plan Interference – *Less-than-Significant Impact*

Construction – Less-than-Significant Impact

No conflicts with public safety or emergency response and evacuation plans have been identified for construction or operation of the proposed Vine Substation. The majority of construction equipment, vehicles, personnel, and material staging areas will be accommodated within the property lines of the proposed Vine Substation site. Equipment staging will also occur at other existing SDG&E facilities. Temporary parking of limited construction-related vehicles along Vine Street may be required depending on actual construction activities occurring at the proposed Vine Substation site. Emergency access will not be affected during construction, as all streets will remain open to emergency vehicles at all times.

The 12 kV distribution relocation, 69 kV loop-in, and telecommunication system extension will be constructed within public roadways. As part of the 12 kV distribution relocation, underground duct banks will be constructed within Kettner Boulevard between West Laurel Street and the proposed Vine Substation. Three existing duct banks will also be utilized: within Pacific Highway between West Hawthorn Street and West Laurel Street; West Laurel Street between Pacific Highway and Kettner Boulevard; and Kettner Boulevard between West Hawthorn Street and West Laurel Street. The telecommunication system extension will use the same right-of-way (ROW) as the distribution conduits.

As described in detail in Section 4.16 Transportation and Traffic, temporary land and/or road closures will be necessary during some construction activities to provide safety to the public and

workers within public areas and roadways. In addition, some roads may be temporarily limited to one-way traffic at times, in which case one-way traffic controls will be implemented as required. Road closures and encroachment into public roadways could increase hazards if the appropriate safety measures are not in place, such as proper signage, orange cones, and flaggers. However, SDG&E will obtain the required encroachment permits from the City of San Diego and implement traffic control measures accordingly. In addition, construction within the road may be limited to nighttime hours to avoid traffic impacts during peak hours, and emergency vehicles will be provided access during the temporary road and/or lane closures. Therefore, emergency access will not be directly impacted during construction. In addition, in the event of an emergency requiring evacuation, SDG&E will ensure that all potential routes are open and accessible for public use by limiting trenching activities to approximately 500 linear feet per day within a single lane of traffic. As a result, any potential impacts during construction will be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance of the proposed Vine Substation will not require any road or lane closures and, therefore, will not interfere with any emergency vehicle or evacuation routes. Maintenance of the 12 kV distribution relocation and telecommunication system extension may require temporary lane closures, but are expected to be short in duration and will not deviate from the maintenance of existing distribution and telecommunication system alignments in the area. In addition, all required traffic control measures will be implemented accordingly, and emergency vehicles will be provided access during potential road and lane closures caused by maintenance activities. Therefore, no impact will occur during operation and maintenance.

Question 4.8h – Wildland Fires – *No Impact*

The Proposed Project site will be located in an urban area with little to no vegetation on site. As previously discussed, the Proposed Project site is not located in a wildland fire hazard area. In addition, the mechanical and structural design and construction of the new 69 kV power lines must meet the requirements of the California Public Utilities Commission (CPUC) General Order No. 95 (GO 95), Rules for Overhead Electric Line Construction. Although energized conductors can create potential for a fire hazard, SDG&E takes into account normal and unusual structural loading in its designs under GO 95 to prevent these fire hazards. Therefore, no impact will occur.

4.8.4 Applicant-Proposed Measures

The following measure is provided to ensure that impacts remain at a less-than-significant level:

- APM-HAZ-01: Prior to approval of the final construction plans for the Proposed Project, a project-specific Hazardous Materials and Waste Management Plan will be prepared for the construction phase of the Proposed Project to ensure compliance with all applicable federal, state, and local regulations. The Hazardous Materials and Waste Management Plan will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. The plan will include the following information related to hazardous materials and waste, as applicable:

  - A list of the hazardous materials that will be present on site during construction, including information regarding their storage, use, and transportation;

  - Procedures for the identification of and avoidance of contaminated materials;

  - Any secondary containment and countermeasures that will be required for onsite hazardous materials, as well as the required responses for different quantities of potential spills;

  - A list of spill response materials and the locations of such materials at the Proposed Project site during construction;

  - A list of the adequate safety and fire suppression devices for construction activities involving toxic, flammable, or exposure materials;

  - A description of the waste-specific management and disposal procedures that will be conducted for any hazardous materials that will be used or are discovered during construction of the Proposed Project; and

  - A description of the waste minimization procedures to be implemented during construction of the Proposed Project.

4.8.5 References

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4.9 HYDROLOGY AND WATER QUALITY

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			✓	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			✓	
f) Otherwise substantially degrade water quality?			✓	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				✓
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j) Cause inundation by seiche, tsunami, or mudflow?			✓	

4.9.0 Introduction

This section describes the existing surface and groundwater hydrology, use, and quality, as well as the potential for erosion and flooding in the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) area. It also describes the potential impacts from construction, operation, and maintenance of the Proposed Project to these resources. The Proposed Project will implement a Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure (SPCC) Plan, which are both required by law. The Proposed Project will also follow SDG&E's Water Quality Construction Best Management Practices (BMP) Manual. As a result, the Proposed Project will result in a less-than-significant impact to hydrology and water quality.

4.9.1 Methodology

Hydrology and water quality in the Proposed Project area were evaluated through a reconnaissance-level survey and review of the following:

- water quality studies and Environmental Impact Reports from other projects in the area,
- city and county general plans,
- United States (U.S.) Geological Survey 7.5-minute series quadrangle maps,
- online geographic information system sources, and
- aerial photographs of the Proposed Project area.

The San Diego Regional Water Quality Control Board's (RWQCB) Water Quality Control Plan for the San Diego Basin (Basin Plan) was reviewed to ensure compliance with state and local regulations. Federal Emergency Management Agency (FEMA) maps were referenced to determine the location and extent of flood zones.

4.9.2 Existing Conditions

The regulatory requirements and overall existing hydrologic conditions of the Proposed Project are described in the following subsections.

Regulatory Background

Federal

Clean Water Act

The Clean Water Act (CWA) (Title 33 of the U.S. Code [U.S.C.] Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water.

Clean Water Act Section 402

The National Pollutant Discharge Elimination System (NPDES) program was established in 1972 to control discharges of pollutants from defined point sources (33 U.S.C. § 1342). The program originally focused on industrial-process wastewater and publically owned treatment works. In 1987, Section 402 of the CWA was amended to include requirements for five separate categories of storm water discharges, known as Phase I facilities. Phase I facilities include the following:

- facilities already covered by an NPDES permit for storm water,
- facilities that engage in industrial activities,
- large municipal separate storm drain systems that serve more than 250,000 people,
- medium municipal separate storm drain systems that serve between 100,000 and 250,000 people, and
- facilities that are considered significant contributors of pollutants to waters of the U.S.

The U.S. Environmental Protection Agency (EPA) issued a final rule for Phase II discharges in August 1995. Phase II storm water discharges include light industrial facilities, small construction sites (i.e., less than five acres), and small municipalities (i.e., populations of less than 100,000 people).

In California, NPDES permitting authority is delegated to, and administered by, the nine RWQCBs. On August 19, 1999, the State Water Resources Control Board (SWRCB) reissued General Permit for Stormwater Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and, later that year, amended the permit to apply to sites as small as one acre.

On September 2, 2009, the SWRCB adopted Order No. 2009-0009-DWQ (Construction General Permit), which reissued Water Quality Order 99-08-DWQ for projects disturbing one or more acres of land, or that are part of a common plan of development or sale that disturbs more than one acre of land where the rainfall erosivity waiver does not apply. The new permit became

effective July 1, 2010, whereby all existing dischargers and new dischargers are required to obtain coverage under the new permit by submitting Permit Registration Documents.

The Construction General Permit requires the implementation of a SWPPP, which must be prepared before construction begins and kept on site throughout the construction process. In accordance with the Order No. 2009-0009-DWQ, the SWPPP must include:

- identification of pollutant sources and non-storm water discharges associated with construction activity;
- specifications for BMPs that will be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and other temporary work areas;
- calculations and design details, as well as BMP controls for site run-on;
- BMPs used to eliminate or reduce pollutants after construction is complete; and
- certification from a Qualified SWPPP Developer.

While the SWPPP lays out the groundwork for compliance with the Construction General Permit, it is also a repository for completed Rain Event Action Plans (REAPs). During construction, the REAP is a site-specific plan that is geared to address rain events for each specific phase of construction. The REAP was not previously required under Water Quality Order 99-08-DWQ.

Clean Water Act Section 404

Section 404 of the CWA authorizes the U.S. Army Corps of Engineers (USACE) to regulate the discharge of dredged or fill material to waters of the U.S., including wetlands (33 U.S.C. § 1344). The USACE issues individual site-specific permits or general permits (i.e., Nationwide Permits or Regional General Permits) for such discharges.

Clean Water Act Section 401

Under Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters must provide the licensing or permitting agency with a Water Quality Certification that the discharge will comply with the applicable CWA provisions or a waiver (33 U.S.C. § 1341). If a federal permit is required, such as a USACE permit for dredge and fill discharges, the project proponent must also obtain a Water Quality Certification from the RWQCB.

Clean Water Act Sections 303 and 304

Section 303 of the CWA requires states to adopt water quality standards for all surface Waters of the U.S. (33 U.S.C. § 1313). Section 304(a) requires the U.S. EPA to publish water quality criteria that accurately reflect the latest scientific knowledge on the kind of effects and extent of effects that pollutants in water may have on health and welfare (33 U.S.C. § 1314(a)). Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality

standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed when numerical standards cannot be established or when they are needed to supplement numerical standards.

Section 303(c)(2)(b) of the CWA requires states to adopt numerical water quality standards for toxic pollutants for which the U.S. EPA has published water quality criteria and which could reasonably be expected to interfere with designated uses in a waterbody.

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop a list of waterbodies where beneficial uses are impaired. The waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water segments on the lists and develop action plans, called Total Maximum Daily Loads, to improve water quality.

Rivers and Harbors Appropriation Act Section 10

Section 10 of the Rivers and Harbors Appropriation Act of 1899 (33 U.S.C. § 401 et seq.) makes it unlawful to obstruct or alter a navigable river or other navigable water of the U.S. Construction, excavation, or deposition of materials in, over, or under such waters, or any work that will affect the course, location, condition, or capacity of those waters, requires a Section 10 permit and approval from the USACE.

National Flood Insurance Program

FEMA is responsible for determining flood elevations and floodplain boundaries based on USACE studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including the 100-year floodplain. FEMA allows non-residential development in floodplains; however, construction activities are restricted within flood hazard areas, depending on the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations, enabling FEMA to require municipalities that participate in the NFIP to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

State and Local

California Fish and Game Code

Sections 1601 through 1606 of the California Fish and Game Code require a Lake or Streambed Alteration Agreement (LSAA) between the California Department of Fish and Wildlife and an entity proposing to substantially divert or obstruct the natural flow or affect changes to the bed, channel, or bank of any river, stream, or lake. The LSAA is designed to protect the fish and wildlife resources of a river, lake, or stream.

State Water Resources Control Board Order 2001-11-DWQ

The SWRCB adopted the Statewide General NPDES Permit for Discharges from Utility Vaults & Underground Structures to Surface Waters (General Permit CAG990002) in 2001. This

permit authorizes permittees to discharge uncontaminated water from vaults and substructures to surface waters during the operational phase of projects.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1967, California Water Code Section 13000 et seq., requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect waters of the State. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the Proposed Project area are contained in the San Diego RWQCB's Basin Plan.

San Diego Regional Water Quality Control Board Basin Plan

The San Diego RWQCB (Region 9) is responsible for protecting the beneficial uses of surface water and groundwater resources in the San Diego area. The RWQCB adopted the Basin Plan in September 1994. The plan sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act and establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Discharges to surface waters within the approximately 3,900 square miles of the San Diego Basin are subject to the regulatory standards set forth in the Basin Plan, which prevents the unauthorized discharge of pollutants into waters of the U.S. and State. NPDES permits, waste discharge requirements, and waivers are mechanisms used by the RWQCB to control discharges and protect water quality.

San Diego Regional Water Quality Control Board Municipal Storm Water Permit

The San Diego RWQCB issued the San Diego Municipal Permit Order No. R9-2013-0001 (NPDES No. CAS0109266) to the County of San Diego, the San Diego Unified Port District, San Diego Regional Airport Authority, and 18 cities in San Diego County (Co-permittees) with the primary goal of preventing polluted discharges from entering the storm water conveyance system and local receiving and coastal waters. Pursuant to the permit, the Co-permittees are required to develop and implement measures that will address and prevent pollution from development projects. Priority development projects are also required to include BMPs in the permanent design to reduce pollutant discharges from project sites.

County of San Diego Standard Urban Stormwater Mitigation Plan

In order to comply with the San Diego RWQCB's San Diego Municipal Permit (NPDES No. CAS0109266), a Standard Urban Stormwater Mitigation Plan (SUSMP) was developed for San Diego County. A Storm Water Management Plan that complies with the criteria provided in the SUSMP must be developed for applicable priority development projects in San Diego County.

General Setting

The Proposed Project is situated in the San Diego Basin, within the Pueblo Hydrologic Unit (908.00) and the Lindbergh Hydrologic Subarea (908.21). Based on topography, surface water in the Proposed Project area appears to flow south and southwest.

San Diego is considered to have a Mediterranean climate, with sunny days 70 percent of the year. Most of San Diego County's annual rainfall occurs during the winter months, with 50

percent of the rainfall occurring from December to February. Only two percent of the annual rainfall occurs during the summer months. Annual average precipitation for the Proposed Project area is approximately 10 inches per year, with the majority of precipitation falling between December and April. Rainfall between June and October averages less than 0.5 inch per month. The Proposed Project area is relatively flat and sits at approximately 30 to 70 feet above mean sea level.

Surface Waters

As described in Attachment 4.4-B: Biological Survey Memo, a small concrete-lined drainage designed for storm water conveyance is located on the west side of the proposed Vine Substation site. The channel is an approximately 12-inch wide concrete v-ditch that was designed for storm water conveyance. There was no vegetation or accumulated sediment observed within the channel. No surface waters are located in the Proposed Project footprint or in other areas surrounding the Proposed Project. No surface waters will be crossed by the Proposed Project.

Groundwater

Groundwater basins can be found along major drainages in San Diego County. Groundwater recharge occurs from dam releases and underflow past existing dams. Other sources of recharge may include precipitation, stream flow, and discharges from municipal wastewater treatment plants.

Groundwater was encountered in the Proposed Project area at a depth of approximately 25 feet below the existing ground surface at the time when exploratory borings were conducted. Groundwater levels may fluctuate due to seasonal variations in weather. The exploratory borings for the Proposed Project were performed during a season characterized with relatively little rainfall. As a result, the relatively dry year could have resulted in lower-than-normal groundwater levels.

Surface Water Quality

The Basin Plan designates beneficial uses for surface and groundwaters in the basin, and it also sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy. Beneficial uses of inland surface waters near the Proposed Project area include recreation, wildlife habitat, and warm freshwater habitat.

The Proposed Project lies within the Pueblo San Diego Watershed. Pollutants of concern in this watershed include trace metals, coliform bacteria, pesticides, and nutrients. Sewer overflows, storm water runoff, and habitat degradation are all factors that may be impairing surface water quality in this watershed. No known or impaired waterbodies will be crossed by the Proposed Project.

Floodplains

According to FEMA's Flood Insurance Rate Maps, the site is in FEMA Zone X. The Proposed Project does not cross or lie within a 100-year or 500-year flood zone.

Dam Failure Inundation Areas

The Office of Emergency Services is responsible for the identification of inundation areas for dam failures in California. The Proposed Project is not located within an inundation area for dam failure.

4.9.3 Impacts

Significance Criteria

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, impacts to hydrology and water quality would be considered significant if the Proposed Project:

- Violates any water quality standards or waste discharge requirements
- Substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level
- Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site
- Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner that would result in flooding on site or off site
- Creates or contributes to runoff water that would exceed the capacity of existing or planned storm water drainage systems, or provides substantial additional sources of polluted runoff
- Otherwise substantially degrades water quality
- Places housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map
- Places structures that would impede or redirect flood flows within a 100-year flood hazard area
- Exposes people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam
- Causes inundation by seiche, tsunami, or mudflow

Question 4.9a – Water Quality Standards and Waste Discharge Violations

Construction – Less-than-Significant Impact

Construction of the Proposed Project will result in ground-disturbing activities that will expose soil to erosion and subsequent sedimentation. Sediment transport from construction work areas

to adjacent water resources could contribute to water quality degradation and violate RWQCB standards. Sedimentation from work areas will primarily occur from vehicle tracking and soil transport onto adjacent paved surfaces. Sediment transport from work areas, including at the proposed Vine Substation, could also occur from surface water run-on and runoff, heavy precipitation, or overwatering during dust-abatement activities. The proposed Vine Substation site has been previously graded and slopes gently to the southwest. The erosion potential at most of the work areas is low, primarily because of flat to gentle terrain. However, the erosion potential will increase during construction when the soils become disturbed, and when vehicles and equipment enter and exit work areas.

Equipment and construction materials stored within the substation, right-of-way, and staging areas could come in contact with rainwater or storm water runoff that could potentially transport deleterious substances overland to the nearby water resources. Hazardous materials used during construction (e.g., diesel fuel, hydraulic fluid, oils, grease, and concrete) can be transported by storm water runoff and threaten aquatic life. A list of hazardous materials that are anticipated to be used during construction is included in Table 4.8-1: Hazardous Materials Typically Used for Construction and/or Operation and Maintenance in Section 4.8 Hazards and Hazardous Materials. In addition, storm water contact with litter and/or construction materials could pose a threat to nearby water quality. The Proposed Project area is located approximately 0.75 mile northeast of the San Diego Bay, and no known or impaired waterbodies will be crossed by the Proposed Project.

Wastewater will be generated by construction workers over the approximately 19-month construction duration of the Proposed Project. However, the amount of wastewater generated during the short construction period will be minimal and will be contained within portable restrooms before being treated and disposed of by a licensed contractor. No wastewater will be discharged from the site.

Potential impacts to water quality will be minimized through implementation of the SWPPP, SPCC Plan, and the BMPs in SDG&E's Water Quality Construction BMP Manual. As a result, the Proposed Project will result in a less-than-significant impact to water quality and waste discharge requirements.

Operation and Maintenance – Less-than-Significant Impact

BMPS will provide permanent stabilization for all areas that are disturbed during construction of the Proposed Project. For the proposed Vine Substation, this will include installation of road base or gravel and landscaping. Daily operation and maintenance of the Proposed Project will not impact water quality or result in discharges to waters because existing roads will be used to access Proposed Project components.

Operation and maintenance activities will include routine inspection, maintenance, and repair activities. The 69 kV loop-in insulators may require washing up to three times a year to prevent flashovers, equipment damage, and outages. Water used for insulator washing will be allowed to naturally percolate on site; therefore, the operation phase of the Proposed Project is not anticipated to generate any wastewater. SDG&E operation and maintenance personnel may use oils, paint, or solvents in the course of routine maintenance of the substation equipment. These

materials will not be stored or disposed of at the substation site and their use will conform to applicable laws and regulations governing the use, management, and disposal of hazardous materials.

The proposed Vine Substation, at ultimate build-out, will include four oil-filled transformers with a total maximum capacity of approximately 30,000 gallons of oil. These transformers will have the potential to leak hazardous oil. In order to minimize impacts, oil spill containment basins will be installed around the transformers to capture any oil that accidentally leaks from these components. The basins will be designed to have a capacity that exceeds the transformer capacity by 10 percent. In addition, a copy of the substation's SPCC Plan will be maintained at SDG&E's Kearny Operating & Maintenance Center and will contain specific procedures for managing hazardous materials during the operation phase of the Proposed Project. Therefore, an accidental spill is not anticipated to result in a water quality violation and impacts will be less than significant.

Question 4.9b – Groundwater Depletion or Recharge

Construction – Less-than-Significant Impact

Groundwater is not anticipated to be encountered during construction of the proposed Vine Substation, 12 kV distribution relocation, or the telecommunication system extension because the required excavation depths are less than the depth to groundwater in the Proposed Project area. However, groundwater may be encountered during the foundation excavation for steel pole installation for the 69 kV loop-in. Groundwater was encountered in the Proposed Project area at a depth of approximately 25 feet at the time when exploratory borings were conducted. The foundation excavation for steel pole installation will range from 20 to 45 feet in depth. In the event that groundwater is encountered, dewatering systems may be used to dispose of groundwater, as outlined in SDG&E's Water Quality Construction BMP Manual. Typically, groundwater will be pumped into a desiltation tank (i.e., baker tank) and will be discharged to land in accordance with RWQCB regulations, transported to a nearby sewer inlet with approval from the local wastewater treatment facility owner, or disposed of at an approved SDG&E disposal site. In any of these cases, the amount of groundwater withdrawal is expected to be negligible and not have any effect on existing groundwater supplies. Water required for dust control will be obtained from a municipal source and will not affect local groundwater supplies. Any groundwater encountered during construction will not be used for dust control. Further, construction is not expected to interfere with storm water infiltration and/or groundwater recharge because the site will be approximately 100-percent pervious during the construction phase. Therefore, impacts to groundwater supplies and recharge will be less than significant.

Operation and Maintenance – No Impact

A limited amount of water will be required to allow for long-term operation and maintenance of the proposed Vine Substation. Water use will be limited to irrigation of any on-site landscaping associated with the facilities (i.e., revegetative groundcover or landscape screening). Water will be obtained from permitted municipal sources that can provide an adequate water supply to the site.

The amount of impervious surfaces resulting from construction of the Proposed Project will be similar to the existing conditions within the Proposed Project limits. The proposed location of the proposed Vine Substation is within a paved parking lot and the other Proposed Project components are located within existing paved roads. Rainwater and storm water runoff will continue to infiltrate the ground surface, similar to pre-construction conditions. As such, no net change is anticipated in the amount of storm water released from the Proposed Project area. With or without the Proposed Project, the same amount of water will recharge the groundwater table. Therefore, no impact will occur as a result of operation and maintenance activities.

Question 4.9c – Drainage Patterns – Erosion/Siltation

Construction – Less-than-Significant Impact

The Proposed Project area is relatively flat and will be graded with minimal slope, similar to the existing slope found on site. Construction-related activities will result in minor deviations to the existing drainage patterns on site, due to grading and construction of the Proposed Project components. Such changes will not substantially increase the existing velocity or volume of storm water flows either on-site or in off-site areas. All areas disturbed during grading will be restored to their original contours, and the surrounding area will be repaired, as appropriate. Therefore, the drainage patterns in the Proposed Project area will return to near pre-construction conditions and the Proposed Project will not significantly alter the existing on-site drainage patterns or significantly increase the amount of runoff generated from the site. No net change will occur in the amount of storm water released from the project area, which will preclude any off-site soil erosion that may otherwise result.

The Proposed Project will not alter the course of any waterways because no streams or rivers are located within the Proposed Project area. Impacts to drainage patterns, as well as subsequent erosion and off-site siltation resulting from construction of the Proposed Project, will be less than significant.

Operation and Maintenance – No Impact

On-site drainage patterns established during construction will generally remain unchanged with long-term operation and maintenance of the proposed Vine Substation. The proposed grading improvements are not anticipated to result in impacts from increased on- or off-site erosion or siltation. As such, no impacts resulting from on-site or off-site drainage patterns are anticipated with operation and maintenance of the facilities.

Question 4.9d – Drainage Patterns – Runoff/Flooding

Construction – Less-than-Significant Impact

As discussed in the response to Question 4.9c, construction-related activities will result in minor deviations to the existing drainage patterns on site, due to grading and construction of the Proposed Project components. Such changes will not substantially increase the existing velocity or volume of storm water flows on site or in off-site areas. As such, flow rates and volumes will not be substantially altered and potential impacts from runoffs or flooding will be less than significant.

Operation and Maintenance – No Impact

Once construction of the Proposed Project facilities and associated improvements has been completed, no additional changes to on-site or off-site drainages are anticipated. The Proposed Project will not result in the potential for increased runoff volumes, and storm water facilities in the surrounding area will not be further affected. Therefore, no impact resulting from storm water runoff or flooding is anticipated with operation and maintenance of the Proposed Project.

Question 4.9e – Storm Water Runoff

Construction – Less-than-Significant Impact

The enclosed area of the proposed Vine Substation will occupy approximately 1.3 acres. The proposed Vine Substation will be located within a paved parking lot and development of the site will commence with the removal of the paved surface. Once cleared, remedial grading will take place based on the recommendations of the geotechnical investigation, which will determine the appropriate on-site pad elevation and foundation support that also maintain adequate site drainage. Runoff from the site is not expected to change substantially from pre-construction conditions. Consequently, there will be a less-than-significant impact to existing storm water conveyance systems.

The volume of storm water during construction of other Proposed Project components is expected to be the same as it was prior to construction because limited grading is required to install power line poles and trenching is required to construct the duct banks. Pre-construction contours and elevations will be re-established following the completion of construction; therefore, storm water runoff is anticipated to remain unchanged when compared to pre-construction conditions. Construction will introduce new sources of pollutants that could enter storm water and be transported off site. Sources of pollutants are discussed in detail in response to Question 4.9a. Such pollutants include hazardous materials (e.g., diesel fuel, hydraulic fluid, oil, and grease), as well as typical construction materials, sediment, and trash. With implementation of the SWPPP and BMPs in the SDG&E's Water Quality Construction BMP Manual, impacts associated with introducing pollutants to storm water runoff will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Surface runoff following the completion of construction is expected to be similar to the existing conditions due to a minimal amount of new, impermeable surfaces compounded with the greater amount of existing impermeable surfaces to be removed. Minimal impacts will occur to existing storm water conveyance systems and minor alterations of existing culverts, catch basins, or drains may be required to accommodate the Proposed Project during the operation and maintenance phase. Steel poles, conductor, and substation equipment will be exposed to storm water; however, these materials are not readily soluble or considered to contribute to water quality degradation.

Maintenance activities—such as routine inspections, pole replacements, and conductor work—can introduce pollutants that are similar to those that are typical during construction. Any material or equipment needed to make a repair will be brought to the site and then returned to an SDG&E maintenance yard upon completion. In addition, SDG&E will implement standard

protocols in accordance with state and federal regulations to control, contain, clean up, and dispose of any pollutants that may occur during maintenance activities.

Fertilizers and soil amendments may be used to facilitate plant growth around the perimeter of the substation site in accordance with the landscaping plans. Fertilizers or other soil amendments will be used according to the manufacturer's specifications and in quantities that minimize the potential to reach nearby waterways. As a result, impacts from storm water runoff will be less than significant.

Question 4.9f – Water Quality Degradation – *Less-than-Significant Impact*

Potential sources of pollutants and activities that can contribute water quality degradation are discussed in detail in response to Question 4.9a. No other foreseeable sources of pollution are anticipated to be associated with construction or operation of the Proposed Project. As a result, impacts will be less than significant.

Question 4.9g – Housing in Flood Hazard Areas – *No Impact*

No housing will be constructed as part of the Proposed Project. Therefore, no housing will be placed within a 100-year flood hazard area, and no impact will occur.

Question 4.9h – Structures in Flood Hazard Areas – *No Impact*

According to the FEMA Flood Plain Map, the Proposed Project is not located within the 100-year flood hazard boundary. No new structures will be constructed that will impede or redirect flood flow within a 100-year flood hazard area. As a result, the Proposed Project will not result in any impacts associated with flood zones.

Question 4.9i – Flood Exposure – *No Impact*

Proposed Project construction will not expose people or structures to a significant risk of loss, injury, or death due to flooding, as no on-site or off-site flood impacts are expected, as described in the response to Question 4.9h. No permanent buildings will be placed in a known 100-year flood hazard area. Thus, no impacts will occur.

Question 4.9j – Flooding, Seiche, Tsunami, and Mudflow – *Less-than-Significant Impact*

The Proposed Project area is located approximately 0.75 mile from the San Diego Bay, which is a large body of water with access to the Pacific Ocean and is susceptible to tsunamis. Given the distance from the Pacific Ocean, it is unlikely that a tsunami will cause catastrophic damage to the Proposed Project area. Because the Proposed Project does not involve housing, impacts that will result from a tsunami are expected to be less than significant.

Seiches are typically associated with impounded waterbodies. The Proposed Project will not be located near any lakes or other impounded waterbodies; therefore, no impact from seiches will occur.

A mudflow is a flow of soil and debris that occurs after intense rainfall, earthquakes, or severe wildfires. The potential for a mudflow to occur depends on the slope steepness, soil type, and

soil moisture content. Given that the Proposed Project area is nearly flat and most of the area is paved, a mudflow will not occur. Therefore, no impact is anticipated.

4.9.4 Applicant-Proposed Measures

The Proposed Project will result in a less-than-significant impact to hydrology and water quality with implementation of the Proposed Project's SWPPP and SPCC Plan, which are both required by law, and with implementation of the BMPs in SDG&E's Water Quality Construction BMP Manual as described in Chapter 3 – Project Description. Therefore, no applicant-proposed measures are proposed.

4.9.5 References

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4.10 LAND USE AND PLANNING

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

4.10.0 Introduction

This section describes the existing and designated land uses in the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) and analyzes potential land use impacts that may result from construction and operation of the Proposed Project. Construction of the Proposed Project will not result in significant impacts to existing or proposed land uses, nor will it physically divide an established community. In addition, the Proposed Project will be compatible with relevant land use and environmental plans and policies adopted by local governments.

4.10.1 Methodology

The land use analysis involved a review of various land use plans, policies, and regulations for the City of San Diego, including the City of San Diego General Plan and Municipal Code, as well as the Midway/Pacific Highway Corridor Community Plan. The San Diego County Regional Airport Authority Airport Land Use Compatibility Plan (ALUCP) for San Diego International Airport (SDIA) was also reviewed. The land use analysis also involved a study of Google Earth aerial imagery of the Proposed Project area. In addition, SDG&E's Subregional Natural Community Conservation Plan (NCCP) and the City of San Diego's Multiple Species Conservation Program (MSCP) were reviewed.

4.10.2 Existing Conditions

Regulatory Background

Pursuant to Article XII, Section 8 of the California Constitution and the California Public Utilities Code, the California Public Utilities Commission (CPUC) maintains jurisdiction at the

local level to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. However, the CPUC encourages—and SDG&E participates in—discussions with local governments to address their concerns where feasible. In addition, SDG&E is required to obtain ministerial permits from local agencies when applicable. The following subsections consider relevant land use plans, policies, and guidelines, and analyze potential impacts resulting from the Proposed Project with regard to land use and planning.

City of San Diego

The Proposed Project is located within the City of San Diego and is subject to the City of San Diego General Plan, which provides a framework of policies, objectives, and land use designations to guide long-term development. The City of San Diego Municipal Code supports the General Plan and provides specific development regulations for lands within the individual zoning designations. The Proposed Project area is also subject to the Midway/Pacific Highway Corridor Community Plan, which identifies goals, objectives, and recommendations for the area and establishes a vision for the future form of the community. The Proposed Project area is located east of the SDIA within the Approach Overlay Zone, and is subject to the regulations, policies, and requirements contained within the SDIA ALUCP. These plans, along with the existing uses, are described in relation to the Proposed Project in the following sections.

Existing Land Uses

Proposed Vine Substation and 69 kV Loop-In

The proposed Vine Substation will be located on an approximately 1.5-acre parcel purchased by SDG&E for use as a substation. The new poles associated with the 69 kV loop-in will be located to the west of the proposed substation site on land that is within the existing public road right-of-way (ROW) franchise. The substation parcel is currently used as an approximately 240-space long-term airport parking lot. The site is generally flat with minimal vegetation. A dense collection of ornamental and non-native species is located directly adjacent to and west of the site and there are six existing palm trees located along the eastern boundary of the site, between the paved parking lot and the adjacent sidewalk. The southern fence is covered in non-native ivy. The parcel is bordered to the north by Vine Street (and a commercial printing business across Vine Street), to the south by an Advantage Rental Car facility, to the east by Kettner Boulevard, and to the west by the Amtrak Pacific Surfliner, North County Transit District Coaster and San Diego Metropolitan Transit System Trolley railroad tracks. The 69 kV loop-in poles will be located on the west side of these railroad tracks adjacent to Pacific Highway. The area is characterized by light- and medium-industrial, commercial, and office uses; parking lots; and rental car facilities.

12 kV Distribution Relocation

The relocated distribution circuits will be installed within new underground duct banks within Kettner Boulevard from the proposed Vine Substation to West Laurel Street. The approximately 0.75-mile-long alignment will be located within the Kettner Boulevard public ROW. South of West Laurel Street, the distribution circuits will utilize existing conduits for approximately 0.3 mile within Pacific Highway and Kettner Boulevard. Existing uses in the surrounding area include Interstate (I-) 5, rental car facilities, offices, general commercial uses, hotels, and parking lots.

Designated Land Uses

City of San Diego General Plan

As shown in Table 4.10-1: Existing and Designated Land Uses, the proposed Vine Substation and 69 kV loop-in will be located on a site that is designated Industrial Employment. Lands adjacent to the relocated distribution circuits have a General Plan designation of Industrial Employment at the northern end of the line and Multiple Use and Commercial Employment Retail and Services at the southern end. A wide variety of land uses are specified as being appropriate within these designations, including offices, general commercial uses, civic facilities, and light and heavy industrial uses. While utility uses are not explicitly designated as being allowed under these General Plan designations, the General Plan specifically discusses the need to integrate design elements and space requirements necessary for public utilities into planning efforts throughout the city. Figure 4.10-1: Land Use Map presents a depiction of the general land use categories within the Proposed Project area.

Table 4.10-1: Existing and Designated Land Uses

Proposed Project Component	Existing Land Use	General Plan Designation	Zoning Designation	Community Plan Designation
Vine Substation	Parking lot	Industrial Employment	IS-1-1	Light Industrial
12 kV Distribution Relocation	Public street ROW	Industrial Employment, Commercial Employment Retail and Services, Multiple Use	IS-1-1, CC-4-2, CCDC, CCPD-MC	Light Industrial, Transportation Related
69 kV Loop-In	Public street ROW	Industrial Employment	IS-1-1	Light Industrial

Note: The Telecommunication System Extension will be collocated with portions of the 12 kV Distribution Relocation and 69 kV Loop-in.

Sources: City of San Diego General Plan, 2008; City of San Diego General Plan Land Use Map, July 2010; City of San Diego Municipal Code; City of San Diego Zoning Map, June 2009; Midway/Pacific Highway Corridor Community Plan, 1991.

City of San Diego Municipal Code

The proposed Vine Substation, 69 kV loop-in, and the northern portion of the 12 kV distribution relocation are zoned IS-1-1 (Industrial Small Lot), which allows small- and medium-sized industrial and commercial activities promoting economic vitality and neighborhood scale. The southern portion of the 12 kV distribution relocation is zoned CC-4-2, CCDC, and CCPD-MC (Community Commercial designations), which are intended to accommodate high-density commercial uses with strip commercial characteristics, as well as general commercial uses. Utility-related uses—such as power lines, switching stations, and communications facilities—are allowed uses (generally with a Conditional Use Permit) under the IS-1-1, CC-4-2, CCDC, and CCPD-MC zoning designations.

Midway/Pacific Highway Corridor Community Plan

The proposed Vine Substation, 69 kV loop-in, and a portion of the 12 kV distribution relocation (the section north of Laurel Street) are subject to the Midway/Pacific Highway Corridor Community Plan. The plan establishes guidelines for the form of the community and provides specific recommendations for land uses designed to meet the existing and future needs of the community. The Midway/Pacific Highway Corridor Community Plan also recommends actions that will implement the goals and objectives of the City of San Diego's General Plan. The Proposed Project area is designated as Light-Industrial and Transportation Related, though specific use regulations are not contained within the document for this designation. However, the Midway/Pacific Highway Corridor Community Plan does call for a substation at the proposed Vine Substation site in order to meet the electrical power needs of the community. In addition, the plan states that utility lines are recommended to be located underground.

City of San Diego Local Coastal Program

The Proposed Project area is located outside of the City of San Diego Coastal Zone, except for the approximately 0.3-mile portion of the 12 kV distribution relocation that will be placed underground in an existing conduit within Pacific Highway.

SDIA ALUCP

The ALUCP is implemented to protect the public's health, safety, and welfare and to prevent encroachment from degrading the operational capability of the airport. The ALUCP provides the requisite analysis of noise levels, accident potential, and obstruction clearance criteria necessary for safe airport operations. The Proposed Project is located within the SDIA Approach Overlay Zone, as shown in the ALUCP.

NCCPs/Habitat Conservation Plans

In 1995, SDG&E entered into an agreement with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), establishing its Subregional NCCP. The NCCP is intended to establish and implement an agreement between SDG&E, the USFWS, and the CDFW for the long-term preservation of sensitive habitat and animal species while allowing SDG&E to develop, operate, and maintain its facilities. The Proposed Project components are located on lands affected by SDG&E's Subregional NCCP. Relevant policies related to land use were not identified within the Subregional NCCP. The Subregional NCCP is further addressed in Section 4.4 Biological Resources.

No habitat conservation plans (HCPs) were identified as relevant to the Proposed Project area.

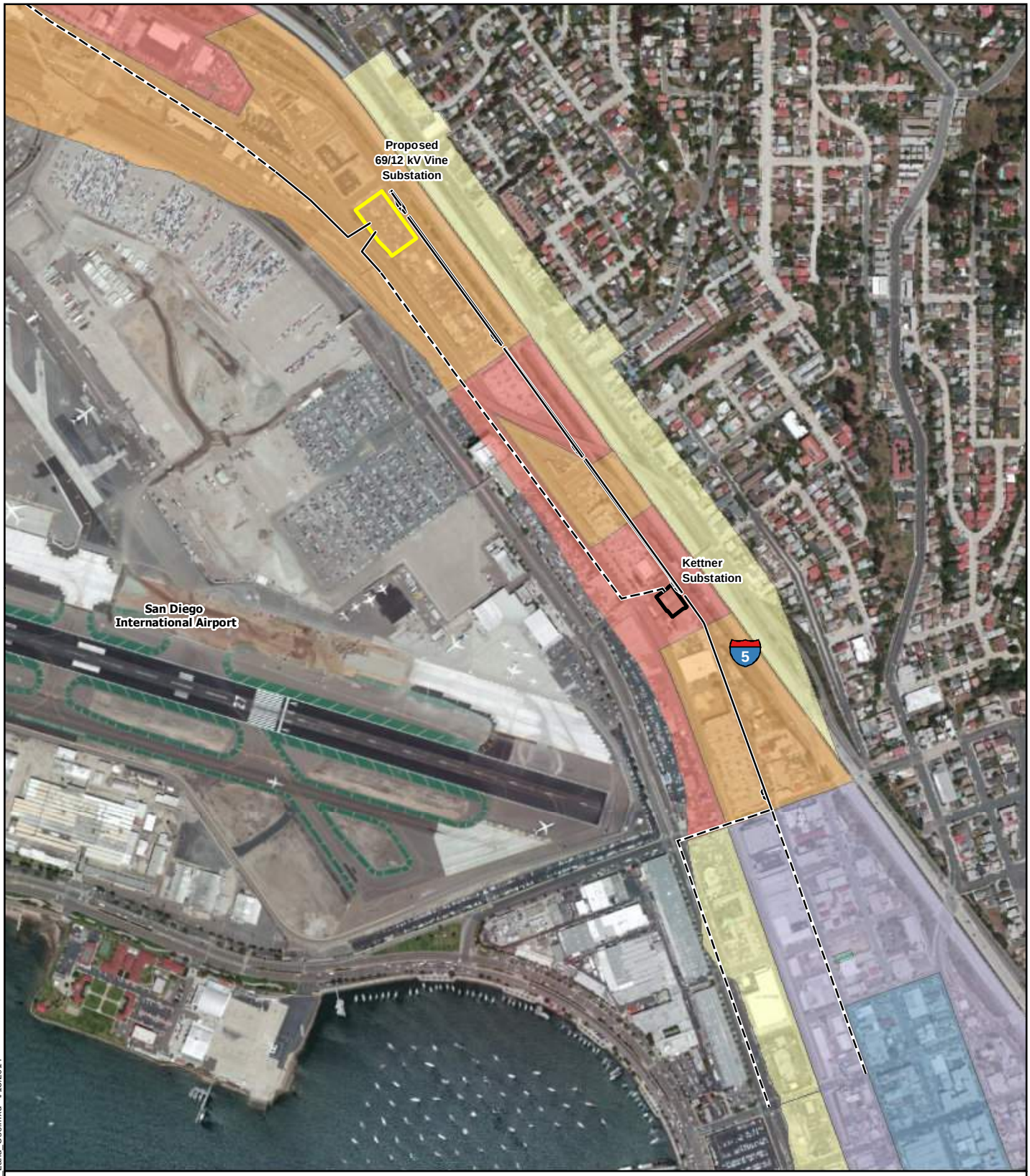

Figure 4.10-1: Land Use Map — **Vine 69/12 kV Substation Project**

- Proposed Vine 69/12 kV Substation
- Existing Kettner Substation
- Existing Power Line
- Proposed Power Line

Land Use

- Open Space
- Mixed Use
- Mixed Commercial
- Heavy Commercial
- Neighborhood Mixed Use Center
- Industrial

1:9,000

0 500 1,000 Feet

N

SDGE A Sempra Energy utility

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City of San Diego MSCP

The Proposed Project is located within the boundaries of the City of San Diego's MSCP Subarea Plan. The MSCP Subarea Plan establishes the conditions under which the City of San Diego—for the benefit of itself, public and private landowners, and other land development project proponents within its subarea boundaries—will receive take authorizations from the USFWS and CDFW; however, take authorization is not anticipated to be required for the Proposed Project. Section 4.4 Biological Resources provides a further description of the MSCP Subarea Plan.

4.10.3 Impacts

Significance Criteria

Standards of significance were derived from Appendix G of the California Environmental Quality Act Guidelines. Impacts to land use and planning would be considered significant if the Proposed Project:

- Physically divides an established community
- Conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Conflicts with any applicable HCP or NCCP

Question 4.10a – Physical Division of an Established Community – *No Impact*

The Proposed Project site is located in a highly urbanized area of San Diego. The area supports a variety of light industrial and commercial uses. The Proposed Project area is bound by public streets, commercial and industrial uses, and a rail line. Further, I-5 is located to the east and the SDIA is located to the west. The proposed underground 12 kV distribution relocation and portions of the telecommunication system extension will be located within public streets bordered by similar light industrial and commercial uses. No residential uses occur within the area immediately surrounding the Proposed Project. Because of the developed, infrastructure-heavy, mixed commercial-industrial nature of the Proposed Project area—and the fact that there are numerous major roadways and rail lines in the vicinity—there are no existing established communities that will be physically divided as a result of the Proposed Project. Thus, no impact will occur.

Access to businesses and other uses in the area surrounding the Proposed Project site will generally be maintained during the construction phase. Although it is not anticipated that the Proposed Project will require any road closures, temporary lane closures will be required for the for installation of the underground distribution lines and telecommunications system. Additional lane and/or road closures may be required for the installation of the 12 kV distribution relocation and 69 kV loop-in. However, such traffic control measures will be temporary and short-term. Lane and/or road closures will generally night for the 12 kV distribution relocation and during the day for the 69 kV loop-in. These land and/or road closures are not anticipated to create a division between area land uses or within the larger community. In addition, the Proposed

Project will obtain and comply with the requirements of a City of San Diego ROW permit and any roadway restrictions will be coordinated with the city. Therefore, no impact will occur.

Operation and maintenance activities of the Proposed Project will be the similar to those currently performed by SDG&E in the area to maintain existing facilities (in particular, the Kettner Substation) and will occur on land owned by SDG&E or within public road ROWs. Such activities do not currently divide an established community, nor will they be anticipated to do so as a result of the Proposed Project; therefore, there will be no impact.

Question 4.10b – Plans and Policy Conflicts – *No Impact*

A summary of the Proposed Project's consistency with applicable goals and policies is provided in Table 4.10-2: Applicable Land Use Plans and Policies Consistency Analysis. Consistency with the City of San Diego General Plan and Midway/Pacific Highway Corridor Community Plan are specifically discussed. The Proposed Project does not conflict with these applicable plans and their respective policies.

The proposed Vine Substation, 69 kV loop-in, 12 kV distribution relocation, and telecommunication system extension will be located within areas designated as Industrial Employment, Commercial Employment Retail and Services, and Multiple Use by the City of San Diego's General Plan, and areas zoned for commercial and industrial uses by the Municipal Code. As previously stated, a variety of land use types are allowed within these designations, including general commercial uses, as well as light and heavy industrial uses. Substations are typically considered an allowed use (or are allowed with a Conditional Use Permit) within these areas. Further, the Midway/Pacific Highway Corridor Community Plan specifically calls for a substation at the proposed Vine Substation site in order to meet the electrical power needs of the community. Therefore, the Proposed Project will not conflict with applicable City of San Diego land use plans, and there will be no impact.

Because the project is located within the SDIA Approach Overlay Zone per the ALUCP and the City of San Diego Municipal Code, an Obstruction Evaluation will be conducted by the Federal Aviation Administration (FAA) prior to construction. The Proposed Project will comply with all FAA requirements resulting from the Obstruction Evaluation, including the potential incorporation of lighting and signage on the poles or within the substation. Because the Proposed Project will comply with all FAA requirements, no conflict with the ALUCP or requirements of the SDIA Approach Overlay Zone will occur. Therefore, there will be no impact.

As previously stated, the Proposed Project lies within the boundaries of the SDG&E Subregional NCCP and the city's MSCP Subarea Plan. However, no land use-related policies were identified within those documents. Therefore, no impact will occur as a result of construction, operation, or maintenance of the Proposed Project.

Table 4.10-2: Applicable Land Use Plans and Policies Consistency Analysis

Plan or Policy	Consistent? (Yes/No)	Explanation
City of San Diego General Plan		
Land Use and Community Planning Element		
Airport Land Use Compatibility Goal: Protection of the health, safety, and welfare of persons within an airport influence area by minimizing the public's exposure to high levels of noise and risk of accidents.	Yes	The proposed Vine Substation will be unstaffed and operated remotely. This will reduce employee exposure to noise and potential aircraft hazards as compared to other allowed uses, such as industrial or office uses. Thus, the Proposed Project will be consistent with this goal.
Policy LU-G.5: Implement the height standards used by the FAA as defined by Code of Federal Regulations Title 14, Part 77 through development regulations and zoning ordinances.	Yes	The Proposed Project site is within 20,000 feet of a public use airport with a runway measuring more than 3,200 feet, so it is subject to obstruction evaluation. The tallest component of the proposed Vine Substation will be the steel substation support components, which will reach approximately 30 feet above the ground surface, and the new poles associated with the 69 kV loop-in, which will reach approximately 100 feet. Although a determination will be required from the FAA, the Proposed Project is not anticipated to conflict with FAA height standards. In addition, the Proposed Project will implement any lighting or signage requirements from the FAA. The Proposed Project will be consistent with this policy.
Public Facilities, Services, and Safety Element		
Goals		
Public utility services provided in the most cost-effective and environmentally sensitive way.	Yes	The Proposed Project is intended to provide improved substation and circuit reliability, as well as reduce area substation loading conditions. In addition, the Proposed Project has been designed to reduce potential environmental impacts to a less-than-significant level or to avoid impacts to sensitive resources. As a result, the Proposed Project will be consistent with this goal.

Plan or Policy	Consistent? (Yes/No)	Explanation
Public utilities that sufficiently meet existing and future demand with facilities and maintenance practices that are sensible, efficient, and well-integrated into the natural and urban landscape.	Yes	As stated previously, the Proposed Project is intended to effectively meet the area's electric capacity needs, provide improved substation and circuit reliability, and reduce area substation loading conditions. The Proposed Project will be consistent with surrounding industrial and commercial land uses and will be designed to avoid impacts to sensitive resources to the extent possible.
Policies		
PF-M.1: Ensure that public utilities are provided, maintained, and operated in a cost-effective manner that protects residents and enhances the environment.	Yes	The Proposed Project is intended to provide improved substation and circuit reliability with added tie-in capacity and reduce area substation loading to optimum operating conditions. In addition, the proposed Vine Substation will be located on a site that has been identified as an appropriate site for a substation per the Midway/Pacific Highway Corridor Community Plan. The Proposed Project is consistent with this policy.
PF-M.4: Cooperatively plan for and design new or expanded public utilities and associated facilities (e.g., telecommunications infrastructure, planned energy generation facilities, gas compressor stations, gas transmission lines, electrical substations and other large-scale gas and electrical facilities) to maximize environmental and community benefits. b. Provide adequate buffering and maintained landscaping between utility facilities and residential and non-residential uses, including the use of non-building areas and/or rear setbacks.	Yes	As stated previously, the proposed Vine Substation will be located on a site that has been identified as appropriate for a substation per the Midway/Pacific Highway Community Plan. The substation will be visually shielded from views by a perimeter wall and new landscaping. In addition, there are very limited residential uses in the vicinity of the Proposed Project. Therefore, the Proposed Project is consistent with this policy.

Plan or Policy	Consistent? (Yes/No)	Explanation
Mobility Element Policies		
ME-A.5: Provide adequate sidewalk widths and clear path of travel, as determined by street classification, adjoining land uses, and expected pedestrian usage. a. Minimize obstructions and barriers that inhibit pedestrian circulation.	Yes	While temporary sidewalk closures may be required during construction of the 12 kV distribution relocation, this work is anticipated to occur at night when pedestrian traffic will be limited. If sidewalk closures are required for any portion of the Proposed Project, alternative pedestrian walking routes around construction areas will be provided. In addition, Proposed Project vaults will be placed underground and any above-ground fixtures will be placed so that they do not obstruct pedestrian circulation in the area. Thus, the Proposed Project is consistent with this policy.
Midway Pacific Highway Corridor Community Plan		
Design Guidelines		
Storage yards, parking areas and outdoor assemblage areas which are visible from the public ROW should be screened. Solid walls or facades should be broken up with recesses and visually softened by landscaping. If feasible, landscaped areas should be placed between the fence and the sidewalk.	Yes	The proposed Vine Substation will be visually shielded from views by a perimeter wall and new landscaping. Thus, the Proposed Project is consistent with this guideline.

Question 4.10c – Habitat Conservation Plan or Natural Community Conservation Plan Conflicts – *No Impact*

SDG&E's existing NCCP and the City of San Diego's MSCP Subarea Plan are the only conservation plans that are relevant to the Proposed Project area. The NCCP addresses potential impacts to sensitive resources associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems, as well as typical expansions of those systems throughout SDG&E's existing service area. The NCCP was developed in coordination with the USFWS and CDFW, and designed to be consistent with local habitat conservation plans and the overall preserve planning effort, including the City of San Diego's MSCP Subarea Plan. The NCCP protocols will be applied to the Proposed Project to avoid and/or minimize potential impacts resulting from construction of the Proposed Project, as further described in Section 4.4 Biological Resources. Therefore, the Proposed Project will not conflict with any applicable conservation plan, and no impacts will occur.

Operation and maintenance activities for the Proposed Project will be the similar to those currently performed by SDG&E in the area to maintain existing facilities. While the Proposed Project is located in an urban area with limited biological resources, NCCP protocols will still be applied as they are currently in order to avoid and/or minimize potential species impacts during operation and maintenance activities. Because SDG&E will utilize its existing NCCP during operation and maintenance activities for the Proposed Project, there will be no conflict with the plan and no impact will occur.

4.10.4 Applicant-Proposed Measures

No conflicts with applicable land use plans or policies will occur as a result of construction of the Proposed Project. In addition, the Proposed Project will not divide an established community. As such, no applicant-proposed measures are proposed.

4.10.5 References

City of San Diego. *General Plan*. 2008. Online. http://www.sandiego.gov/planning/genplan/pdf/generalplan/adoptedtoc.pdf. Site visited December 6, 2013.

City of San Diego. *Midway/Pacific Highway Corridor Community Plan*. Online. http://www.sandiego.gov/planning/community/profiles/midwaypacifichwycorridor/pdf/midwayfullversion.pdf. Site visited December 6, 2013.

City of San Diego. MSCP – City of San Diego Subarea Plan. 1997.

City of San Diego. Zoning Map, Grid 15. Online. http://www.sandiego.gov/development-services/zoning/pdf/maps/grid15.pdf. Site visited December 6, 2013.

City of San Diego, Zoning Ordinance. Online. http://docs.sandiego.gov/municode/MuniCodeChapter13/Ch13Art01Division06.pdf. Site visited December 6, 2013.

SDG&E. Subregional NCCP. 1995.

SDIA ALUCP. Online. http://www.san.org/documents/aluc/sdia_alucp.pdf. Site visited December 9, 2013.

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4.11 MINERAL RESOURCES

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

4.11.0 Introduction

This section discusses the existing conditions in the area for the proposed San Diego Gas & Electric Company Vine 69/12 Kilovolt Substation Project (Proposed Project) and assesses potential impacts that may occur to mineral resources as a result of Proposed Project implementation. Because there are no known mineral resources that will be crossed by the Proposed Project, it will not have an impact on local or regional mineral resources. In addition, no impacts to mineral resources will result from construction or operation and maintenance activities required for the proposed facilities.

4.11.1 Methodology

Mineral resource data were obtained from the City of San Diego General Plan and the California Department of Conservation (DOC).

4.11.2 Existing Conditions

Regulatory Background

The following subsections detail federal, state, and local plans and policies pertaining to mineral resources that are relevant to the Proposed Project.

State

Surface Mining and Reclamation Act of 1975

The California Geological Survey designates mineral resource zones where access to important mineral resources may be threatened, according to provisions of the California Surface Mining and Reclamation Act (SMARA) of 1975. The SMARA requires that all jurisdictions incorporate mapped mineral resource designations approved by the State Mining and Geology Board (SMGB) into their general plans. The SMGB and the DOC's Office of Mine Reclamation (OMR) are jointly charged with ensuring proper administration of the SMARA's requirements.

The SMGB promulgates regulations to clarify and interpret the SMARA's provisions, as well as to serve as a policy and appeals board. The OMR provides an ongoing technical assistance program for lead agencies and operators, maintains a database of mine locations and operational information statewide, and is responsible for compliance-related matters.

Local

City of San Diego General Plan

The City of San Diego Planning Division maintains and implements the City of San Diego General Plan and ensures regulatory compliance with city codes and ordinances. The Conservation element of the General Plan identifies the location of high-quality mineral resource areas in San Diego that are designated for the managed production of mineral resources. The General Plan notes that mineral deposits that are acceptable for use as Portland Cement Concrete grade aggregate are the rarest and most valuable aggregate resources. Extraction activities occur in Mission Valley and other areas of San Diego, such as Carroll Canyon and Mission Gorge. Mining operations also occur within the Multiple Species Conservation Program subarea plan, primarily consisting of sand, rock, and gravel extraction.

Environmental Setting

The Proposed Project site is located in a developed industrial area of the City of San Diego. No known mineral resources have been identified on the Proposed Project site or in the surrounding vicinity. No areas with known or inferred occurrences of mineral resources are located within five miles of the Proposed Project.

4.11.3 Impacts

Significance Criteria

Under the California Environmental Quality Act, impacts to mineral resources would be considered significant if the Proposed Project:

- Results in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- Results in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

Question 4.11a – Loss of Regional- or State-Valued Mineral Resources – *No Impact*

The proposed Vine Substation site and associated Proposed Project work areas are located in a developed, urbanized area within the City of San Diego. The Proposed Project does not cross any known mineral resources. Therefore, no known mineral resources will be lost due to Proposed Project-related construction or operation and maintenance activities, and no impact will occur.

Question 4.11b – Loss of Locally Important Mineral Resources – *No Impact*

There are no known locally important mineral resources located on the proposed Vine Substation site or within the Proposed Project work areas. No active mining operations or known areas

designated or delineated for mineral resource recovery are located within the Proposed Project area. In addition, no known mineral resources that have noted value to the region or to the residents of the state will be impacted by construction or operation of the Proposed Project. Therefore, no impacts will occur.

4.11.4 Applicant-Proposed Measures

Because the Proposed Project will have no impact on mineral resources, no applicant-proposed measures are proposed.

4.11.5 References

DOC. Mineral Resources. Surface Mining and Reclamation Act Mineral Land Classification. Aggregate Sustainability in California - Map Sheet 52. Online. http://www.consrv.ca.gov/cgs/information/publications/ms/Documents/MS_52_2012.pdf. Site visited March 3, 2014.

City of San Diego. *General Plan*. Conservation Element. Online. http://www.sandiego.gov/planning/genplan/pdf/2012/ce120100.pdf. Site visited March 3, 2014.

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4.12 NOISE

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
e) If located within an airport land use plan or within two miles of a public airport or public use airport for which such a plan has not been adopted, would the project result in exposure of persons residing or working in the project area to excessive noise levels?			✓	
f) If located within the vicinity of a private airstrip, would the project result in exposure of persons residing or working in the project area to excessive noise levels?				✓

4.12.0 Introduction

The purpose of this section is to describe the ambient noise conditions in the vicinity of the proposed San Diego Gas & Electric Company Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) and to assess noise impacts that may potentially occur as a result of Proposed Project implementation, particularly with regard to short-term construction activities and long-term operation. Construction of the Proposed Project will not result in a significant increase in temporary, periodic, or permanent ambient noise levels in the Proposed Project area. In addition, the Proposed Project will not expose sensitive receptors to significant vibration levels.

4.12.1 Methodology

Information regarding existing noise sources and standards was obtained from federal, state, regional and local literature reviews to establish the noise standards for the Proposed Project location. Evaluation of potential noise impacts from the Proposed Project included measuring existing noise levels in the vicinity of the Proposed Project site, characterizing the existing noise environment, calculating noise generation from the proposed Vine Substation equipment, and examining typical noise levels resulting from construction and operation activities. The noise analysis focuses on the construction of the proposed Vine Substation, installation of underground duct banks, and installation of the 69 kV loop-in.

4.12.2 Existing Conditions

Regulatory Setting

Federal

No federal noise standards directly regulate noise from operation of electrical power lines and substation facilities. However, in 1974, the United States (U.S.) Environmental Protection Agency (EPA) established guidelines for noise levels, below which no reason exists to suspect that the general population will be at risk from any of the identified effects of noise. The EPA guidelines include the following:

- equivalent sound level (L_{eq})(24) less than or equal to 70 A-weighted decibels (dBA) to protect against hearing loss;[1]

- day-night equivalent noise level (L_{dn}) less than or equal to 55 dBA to protect against activity interference and annoyance in residential areas, farms, and other outdoor areas where quiet is a basis for use;

- L_{eq}(24) less than or equal to 55 dBA to protect against outdoor activity interference where limited time is spent, such as school yards and playgrounds;

- L_{dn} less than or equal to 45 dBA to protect against indoor activity interference and annoyance in residences; and

- L_{eq}(24) less than or equal to 45 dBA to protect against indoor activity interference in school yards.

These levels are not standards, criteria, regulations, or goals, but are defined to protect public health and welfare with an adequate margin of safety, and to provide guidelines for implementing noise standards locally. The federal government has passed various general laws to regulate and limit noise levels, as identified in the following subsections.

[1] The human ear is not uniformly sensitive to all sound frequencies; therefore, the A-weighting scale has been devised to correspond with the human ear's sensitivity. The A-weighting scale uses the specific weighting of sound pressure levels from about 31.5 hertz (Hz) to 16 kilohertz for determining the human response to sound.

Noise Pollution and Abatement Act of 1970

The Noise Pollution and Abatement Act of 1970 established the Office of Noise Abatement and Control (ONAC) within the EPA, authorized to conduct a full and complete investigation of noise and its effect on public health and welfare. The investigation was to include an identification of noise sources, projected noise levels, and effects of noise on persons, animals, and property.

In 1981, the Administration concluded that noise issues were best handled at the state or local government level. As a result, the EPA phased out ONAC's funding in 1982 as part of a shift in the federal noise control policy to transfer the primary responsibility of regulating noise to state and local governments. However, the Noise Control Act of 1972 and the Quiet Communities Act of 1978, which are described in the following sections, were not rescinded by Congress and remain in effect today.

Noise Control Act of 1972

The Noise Control Act of 1972 was the first comprehensive statement of national noise policy. It declares, "It is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare."

Quiet Communities Act of 1978

The Noise Control Act was amended by the Quiet Communities Act of 1978 to promote the development of effective state and local noise control programs, to provide funds for noise research, and to produce and disseminate educational materials to the public on the harmful effects of noise and ways to effectively control it.

By 2002, agencies—including the Department of Transportation, Department of Labor, Federal Railroad Administration, and Federal Aviation Administration—developed their own noise control programs, with each agency setting its own criteria.

Occupational Health and Safety Act of 1970

This act covers all employers and their employees in the 50 states, the District of Columbia, Puerto Rico, and other U.S. territories. Administered by the Occupational Health and Safety Administration (OSHA), the act assigns OSHA two regulatory functions—setting standards and conducting inspections to ensure that employers are providing safe and healthful workplaces. OSHA standards may require that employers adopt certain practices, means, methods, or processes that are reasonably necessary and appropriate to protect workers on the job. Employers must become familiar with the standards applicable to their establishments and eliminate hazards. Included in this act is a regulation for worker noise exposure at 90 dBA over an eight-hour work shift. Areas where exposure exceeds 85 dBA must be designated and labeled as high-noise-level areas and hearing protection is required.

Federal Aviation Administration

The Federal Aviation Administration establishes 65 decibels (dB) Community Noise Equivalent Level[2] (CNEL) as the noise standard associated with aircraft noise measured at exterior locations in noise-sensitive land uses[3] (NSLU). This standard is also generally applied to railroad noise.

State

California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also recognizes that continuous and increasing noise levels exists in urban, suburban, and rural areas. This act declares that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise.

California Noise Insulation Standards

The California Noise Insulation Standards were adopted in 1974 by the California Commission on Housing and Community Development, which was meant to establish noise insulation standards for multi-family residential buildings. This document establishes standards for interior room noise attributable to outside noise sources. The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such a noise source or sources create an exterior CNEL (or L_{dn}) of 60 dB or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dB.

California Department of Transportation- and Construction-Induced Vibration Guidance

This document provides practical guidance to California Department of Transportation (Caltrans) engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. Continuous or frequent intermittent vibration sources, such as impact pile drivers, are significant when their peak particle velocity (PPV) exceeds 0.1 inch per second. More specific criteria for human annoyance have been developed by Caltrans and will be used to evaluate potential Proposed Project vibration sources. Table 4.12-1: Human Response to Transient Vibration lists Caltrans' thresholds of perception.

[2] CNEL measurements are weighted averages of sound levels gathered over a 24-hour period, essentially measuring ambient noise. Measurements taken during day, evening, and nighttime periods are weighted separately, recognizing that humans are most sensitive to noise in late night hours and are more sensitive during evening hours than in daytime hours.

[3] NSLU is defined as any residence, hospital, school, hotel, resort, library, or any other facility where quiet is an important attribute of the environment.

Table 4.12-1: Human Response to Transient Vibration

Human Response	PPV (inches/second)
Severe	> 0.9
Strongly Perceptible	0.24 to 0.9
Distinctly Perceptible	0.035 to 0.24
Barely Perceptible	< 0.035

Source: Caltrans, 2004

Local

Local governments outline requirements for noise abatement and control in the noise element of their general plans and municipal codes. These noise elements typically set noise goals and objectives, and the municipal codes set sound-level limits and time-of-day restrictions for activities.

City of San Diego General Plan Noise Element

Noise levels within the City of San Diego are regulated by the city's General Plan. The purpose of the Noise Element in the General Plan is to identify existing conditions and to provide general guidelines that would reduce the negative impact of noise on the community in the future. The General Plan's objective is "to protect people living and working in the City of San Diego from excessive noise."

The City of San Diego has an exterior noise level standard of 65 dB CNEL for noise-sensitive uses. These standards are designed to protect noise-sensitive land uses from high noise levels and to be used as guidelines in the planning for future land uses. Noise-sensitive land uses include, but are not necessarily limited to residential areas, hospitals, nursing facilities, intermediate care facilities, educational facilities, libraries, museums, places of worship, child care facilities, and certain types of passive recreational parks and open space.

City of San Diego Noise Ordinance

The City of San Diego Noise Ordinance—Chapter 5, Article 9.5, Division 4 of the City of San Diego Municipal Code—establishes prohibitions for disturbing, excessive, or offensive noise and contains provisions (e.g., sound level limits) for the purpose of securing and promoting public health, comfort, safety, peace, and quiet. Limits, as specified by land use, are provided in Table 4.12-2: City of San Diego Noise Limits. When two adjacent properties each have different zone classifications, the average of the two sound level limits is used. The Noise Ordinance prohibits the creation of any noise that exceeds the applicable limits of the Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced. Fixed-location public utility distribution or power line facilities located on or adjacent to a property line are subject to these noise level limits, measured at or beyond six feet from the boundary of the property upon which the equipment is located.

Table 4.12-2: City of San Diego Noise Limits

Land Use Zone	Time of Day	One-Hour Average Sound Level (dB)
Single-Family Residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multi-Family Residential (Up to a maximum density of ½,000)	7:00 a.m. to 7:00 p.m.	45
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	55
All Other Residential	7:00 a.m. to 7 p.m.	50
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	60
Commercial	7:00 a.m. to 7:00 p.m.	65
	10:00 p.m. to 7:00 a.m.	60
	7:00 p.m. to 10:00 p.m.	60
Industrial or Agricultural	Any time	75

Source: City of San Diego, 2010

Construction is not allowed as follows:

- between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day,
- on legal holidays as specified in Section 21.04 of the City of San Diego Municipal Code, or
- on Sundays.

A permit can be obtained from the Noise Abatement and Control Administrator if construction activities must be conducted outside of these previously listed timeframes. In addition, it is prohibited to conduct any construction activity that results in an average sound level of 75 dB or greater during the 12-hour period between 7:00 a.m. and 7:00 p.m. at or beyond the property lines of any property zoned residential. Emergency work is exempted from the construction noise limits.

Existing Noise Measurements

The sound levels in most communities fluctuate, depending on the activity of nearby and distant noise sources, time of the day, or season of the year. Within an hour, the sound level can fluctuate between the lowest level (L_{min}) and the highest level (L_{max}). In order to quantify existing ambient and operational noise levels, noise monitoring was conducted at the northwest corner of the proposed Vine Substation site during a 25-hour period starting on February 25,

2014 and concluding on February 26, 2014. The monitoring period did not include any seasonal abnormalities; therefore, it is considered to be representative of a typical day at the Proposed Project site. The CNEL at this location was 73 dBA and the L_{eq} ranged between 66 dBA and 72 dBA and averaged 69 dBA. Attachment 4.12–A: Noise Technical Report provides a more detailed description of the noise measurement results.

Existing Noise Sources

The dominant ambient noise sources in the Proposed Project area are transportation-related. One of these sources is aircraft traffic from San Diego International Airport. The Proposed Project is located approximately 750 feet outside of the airport's CNEL 65 dB contour. Additional sources include heavy on-road traffic from Interstate (I-) 5, Kettner Boulevard, and Pacific Highway, and rail traffic from the Amtrak, North County Transit District Coaster and San Diego Metropolitan Transit System Trolley railroad tracks account for a significant portion of the existing ambient noise.

4.12.3 Impacts

Significance Criteria

Noise

Standards of significance were derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Impacts to noise would be considered significant if the Proposed Project:

- Results in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Results in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels
- Results in a substantial permanent increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project
- Results in a substantial temporary or periodic increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project
- Lies within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and, as a result, exposes people residing or working in the Proposed Project area to excessive noise levels
- Lies in the vicinity of a private airstrip and, as a result, exposes people residing or working in the Proposed Project area to excessive noise levels

The construction and operational noise thresholds of significance for the Proposed Project components have been derived from the applicable regulatory documents as discussed previously

in Section 4.12.2 Existing Conditions. Specific significance criteria for construction, operation, and maintenance noise levels are presented in the subsections that follow.

Construction

The following thresholds of significance for temporary or periodic increases and from construction noise have been developed for the Proposed Project-related L_{eq} values at noise-sensitive receptor locations:

- less than 75 dBA when measured at the receiving property line will be considered noticeable, but not significant, and
- 75 dBA and above when measured at the receiving property line will be considered significantly impacted.

Operation and Maintenance

The following thresholds of significance for operational noise have been developed for Proposed Project-related ambient noise increases:

- Less than three dB will be considered not discernible and not significant.
- Between three dB and five dB will be considered noticeable, but not significant if noise levels remain below the City of San Diego's Noise Standards of 75 dBA at six feet from the property.
- Three dB or greater will be considered significant if the noise increase will meet or exceed the City of San Diego's Noise Standards of 75 dBA at six feet from the property.
- Increases that exceed the City of San Diego's Noise Standards of 75 dBA at six feet from the property will be considered significant.

Vibration

Vibration amplitude decreases with distance from the source, as presented in Figure 4.12-1: Construction Vibration Amplitudes. Perceptibility of vibrations from construction equipment can be estimated by comparing the vibration thresholds provided in Table 4.12-1: Human Response to Transient Vibration to Figure 4.12-1: Construction Vibration Amplitudes. Vibration amplitudes with a PPV above 0.035 inch/second will be considered potentially significant. This amplitude corresponds with a distance of approximately 50 feet from construction activities.

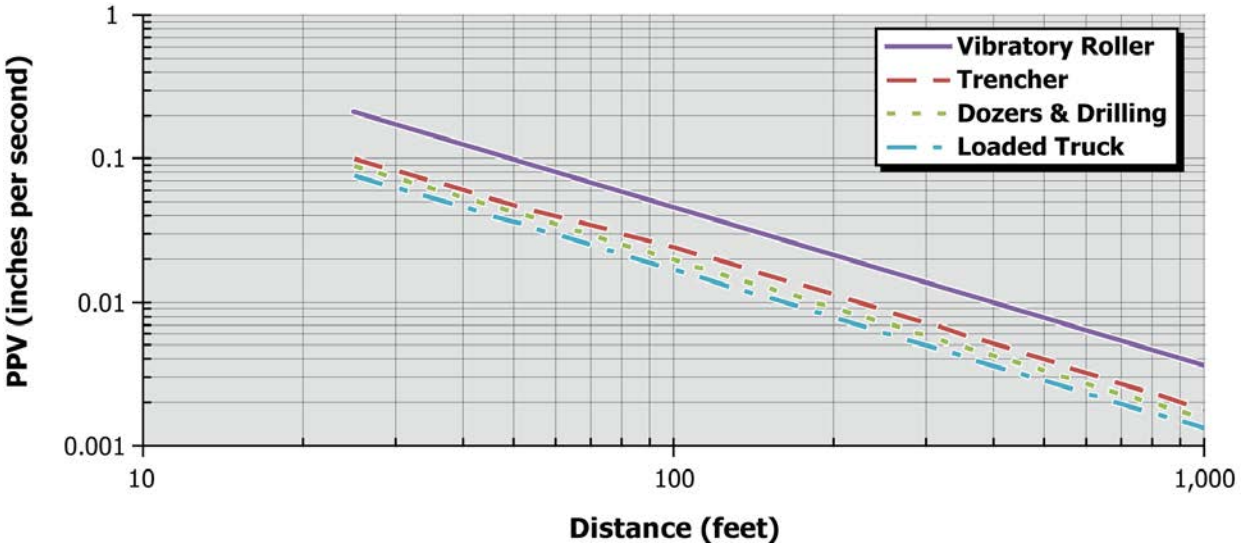
Question 4.12a – Noise in Excess of Standards

Construction – Less-than-Significant Impact

Construction of all of the Proposed Project components will require the temporary use of various types of noise-generating equipment, including graders, back hoes, augers, flatbed boom trucks, rigging and mechanic trucks, air compressors and generators, mobile cranes, concrete trucks, and man lifts. Wire-stringing operations will require pullers, tensioners, and cable reel trailers. Heavy equipment will be used to install substation components. Typical noise levels from construction equipment are provided in Table 4.12-3: Noise Levels Generated by Typical Construction Equipment. As demonstrated by Table 4.12-3: Noise Levels Generated by Typical

Construction Equipment, noise levels from this equipment during construction will typically range from 75 to 89 dBA when measured at a reference distance of 50 feet.

Figure 4.12-1: Construction Vibration Amplitudes



As described in Attachment 4.12–A: Noise Technical Report, the construction schedule and equipment list from Chapter 3 – Project Description was used to simulate the anticipated 12-hour average noise levels from construction. The maximum 12-hour average noise level on site will be approximately 91 dBA, which will occur while both site development and grading activities and boundary wall construction are occurring at the proposed Vine Substation. The nearest noise-sensitive receptors to the proposed Vine Substation are residences located on the east side of I-5, approximately 450 feet from construction activities. Considering the distance to these receptors and the attenuation provided by I-5, noise levels at these residences are anticipated to be approximately 35 dBA below the noise levels at the proposed Vine Substation. As a result, during the period of peak construction, noise levels at the nearest residence will be approximately 56 dBA. As a result, construction-related noise levels will be below the 75 dBA threshold for sensitive receptors under the City of San Diego's Noise Ordinance.

As described in Section 3.6.5 Construction Schedule, construction activities will typically occur during normal work hours from Monday through Saturday. Due to the potential traffic impacts related to open trenching within Kettner Boulevard, construction of portions of the distribution relocation and telecommunication facility extension will occur during the evenings. In addition, some concrete pours may take place during an extended day, depending on the size of the pour. Transformer oil filling may also require continuous work through the night. Actual cutovers of the circuits to the substation will be scheduled in a manner that maintains uninterrupted service to customers, which may require work to be done after normal business hours or on the weekend and/or nights. As a ordinary construction restriction, SDG&E will meet and confer with the City of San Diego, as needed, regarding activities that will be conducted outside of the hours permitted by the Noise Ordinance.

Table 4.12-3: Noise Levels Generated by Typical Construction Equipment

Equipment	Noise Level Range at Approximately 50 Feet (dBA)
Earth-Moving	
Front loader	79 to 80
Back hoe	78 to 80
Tractor, dozer	82 to 85
Scraper, grader	84 to 85
Paver	77 to 85
Truck	74 to 84
Materials-Handling	
Concrete mixer truck	79 to 85
Concrete pump	81 to 82
Crane (movable)	81 to 85
Stationary	
Pump	77 to 81
Generator	70 to 82
Compressor	78 to 80
Impact	
Jackhammers and rock drills	81 to 89
Compactors	80 to 83

Source: The Federal Highway Administration (FHWA), 2006

Because construction-related noise levels will be below the applicable thresholds during day-time work and all nighttime work will be coordinated with the City of San Diego, impacts will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Vine 69/12 kV Substation

The primary noise sources associated with the operation of the proposed Vine Substation will be from the four 69/12 kV transformers, and the cooling systems associated with the four pieces of 12 kV switchgear and the control shelter. As described in Attachment 4.12–A: Noise Technical Report, the operational noise anticipated from the proposed Vine Substation's ultimate arrangement was simulated. The maximum operational noise at the substation wall will be approximately 46.6 dBA, which will be well below the City of San Diego's standard of 75 dBA at a distance of six feet from the property line. As a result, operational noise emissions from the proposed Vine Substation will be consistent with applicable standards and will be less than significant.

The proposed Vine Substation will be unstaffed and electric equipment within the substation will be controlled from SDG&E's central operations facilities. Entry to an operational substation is restricted to authorized personnel only. Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. Equipment used to support this effort will include a crew truck, hydraulic tools, oil filtration equipment and a boom truck. Routine operations will require one or two workers in a light utility truck to visit the substation on a daily or weekly basis. It is anticipated that one annual major maintenance inspection will occur, requiring an estimated 10 personnel. It is anticipated that this inspection will take approximately one week or less to complete using a crew truck, hydraulic tools, oil filtration equipment, and a boom truck. Noise generated as the result of the previously described activities will be masked by the existing transportation sources in the area including air traffic from San Diego International Airport, rail traffic from the adjacent railroad tracks, and vehicular traffic from adjacent roadways including I-5 and Kettner Boulevard. In addition, the proposed maintenance activities will be similar to those being performed at the existing Kettner Substation, which is located approximately 2,300 feet southeast of the Proposed Project site. As a result, there will be no exceedance of established noise standards due to maintenance of the substation, and there will be no impact.

12 kV Distribution Relocation

The relocated distribution circuits will be installed entirely underground; therefore, they will not generate any operational noise. Maintenance—which may include replacement of damaged cables or connectors—will be conducted by crews of four to six personnel and will require a tool truck, cable truck, assist truck, and/or trouble shooter truck. Routine inspections will occur annually to identify connection problems or to inspect for equipment degradation. Because SDG&E operates existing distribution facilities in the vicinity of the relocated circuits, noise from operation and maintenance activities will be consistent with the activities that are currently conducted in the area. As a result, there will be no impact.

69 kV Loop-In

When a power line is in operation, an electric field is generated in the air surrounding the conductors, forming a "corona." The corona results from the partial breakdown of the electrical insulating properties of air surrounding the conductors. When the intensity of an electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy.

Some of the energy may dissipate in the form of small local pressure changes that create audible noise. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120 Hz hum. Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from power lines is generally a foul weather (i.e., wet conductor) phenomenon. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

Following the construction of the 69 kV loop-in, overhead conductors will continue to parallel and cross the existing railroad tracks located adjacent to the proposed Vine Substation. Because the loop-in will continue to be operated at 69 kV and the conductors will be placed in the same general location, the anticipated corona noise from these conductors will not change from existing conditions. As a result, there will be no impact from corona noise.

It is anticipated that the 69 kV loop-in will be inspected once per year. In a non-emergency situation, major maintenance may include the replacement of damaged insulators or other equipment. Maintenance crews, consisting of as many as four people, may require a tool truck, an assist vehicle, and a large bucket truck. Insulators may require washing up to three times a year to prevent flashovers, equipment damage, and outages. SDG&E currently operates and maintains power line facilities in the vicinity of the 69 kV loop-in. Following construction, these activities will not change; therefore, no impact will occur.

Telecommunication System Extension

The proposed overhead fiber optic cable that will be installed within the same alignment as the 69 kV loop-in will not generate any operational noise. The remainder of the fiber optic cable will be installed underground; therefore, these portions of the cable will not generate operational noise. Routine maintenance is not typically conducted for these facilities. Because the fiber optic cable will not generate any noise and no maintenance activities are required, there will be no impact.

Question 4.12b – Groundborne Vibration and Noise

Construction – No Impact

Construction activities can generate varying degrees of ground-borne vibration, depending on the construction procedure and the construction equipment used. Operating construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiving

buildings. Table 4.12-1: Human Response to Transient Vibration states that vibrations become perceptible by humans at an amplitude of approximately 0.035 inch per second. When compared to Figure 4.12-1: Construction Vibration Amplitudes, a PPV of 0.035 inch per second is generated at a distance of approximately 50 feet by a loaded truck. Because there are no sensitive receptors located within 50 feet of the Proposed Project, construction activities will not generate perceivable levels of ground-borne vibration. As a result, there will be no impact.

Operation and Maintenance – Less-than-Significant Impact

Operation of the Proposed Project will consist of routine maintenance activities and emergency repairs. It is unlikely that these activities will produce significant groundborne vibrations because operation and maintenance activities will not require significant ground-disturbing activities. Operation of transformers at the proposed Vine Substation could produce groundborne vibration; however, groundborne vibrations will be perceptible only in the immediate transformer pad vicinity (i.e., less than 25 feet), if at all This will not be perceptible at the property line, much less to sensitive receptors outside of the site. No other component of the Proposed Project will generate vibrations during operation. Therefore, impacts will be less than significant.

Question 4.12c – Substantial Permanent Ambient Noise Increases

Construction – No Impact

Construction activities will occur over a finite period; therefore, no permanent increase in noise will occur and there will be no impact.

Operation and Maintenance – Less-than-Significant Impact

As described in the response to Question 4.12a, the primary source of operational noise at the proposed Vine Substation will be its transformers, the cooling systems associated with the switchgear and control shelter. Attachment 4.12–A: Noise Technical Report presents the simulated noise contours resulting from the operation of the substation. The maximum operational noise at the substation wall will be approximately 46.6 dBA, which will be well below the City of San Diego's standard of 75 dBA at a distance of six feet from the property line. As a result, operational noise emissions from the proposed Vine Substation will be consistent with applicable standards. With the exception of the 69 kV loop-in, the remaining Proposed Project components will be installed underground, within enclosures, or will not generate any perceptible noise during operation. As a result, these components will not act as permanent ambient noise sources. As described in response to Question 4.12a, the 69 kV loop-in will be installed in the vicinity of the existing Tie-Line 604 and the corona generated by the loop-in will be similar to what is currently being generated by the existing power line conductors in the area. As a result, there will be no new source of permanent ambient noise and no change in the existing operational noise in the area. As a result, impacts will be less than significant.

Question 4.12d – Substantial Temporary or Periodic Ambient Noise Level Increases

Construction – Less-than-Significant Impact

Construction noise will be temporary and impacts during construction are identified in the response to Question 4.12a. Noise-sensitive receptors will not experience a significant increase

in ambient noise during construction activities, as previously described. Impacts will be less than significant due to the short-term nature of the construction phase of the Proposed Project, the existing transportation-related ambient noise sources in the area, the generally industrial setting of the area and the distance between the site and sensitive receptors.

Operation and Maintenance – No Impact

As discussed previously in the response to Question 4.12a, the maintenance activities conducted for the Proposed Project will result in less-than-significant temporary and periodic increases in ambient noise levels due to the operation of crew trucks and heavy equipment. As described previously, the closest sensitive noise receptors to the Proposed Project are located approximately 450 feet to the east. I-5 serves as a major interstate in the area, and is located between these sensitive receptors and the Proposed Project. As a result, the periodic increases in ambient noise from construction vehicles will be masked by the significant amount of traffic noise from vehicles that travel along I-5. In addition, SDG&E already performs similar maintenance activities in the Proposed Project area that will not change following construction. Therefore, there will be no impact.

Question 4.12e – Air Traffic Noise from Public Airports – *Less-than-Significant Impact*

The Proposed Project site is located approximately one mile from San Diego International Airport and is within the area covered by the Airport Land Use Compatibility Plan (ALUCP). The noise compatibility policies and standards in the ALUCP are designed to avoid the establishment of new noise-sensitive land uses—including residences, public and private schools, hospitals and convalescent homes, and places of worship—within the CNEL 65 dB contour. While the proposed Vine Substation is located adjacent to the CNEL 65 dB contour, the substation will not be considered an incompatible land use. As a result, the Proposed Project will not expose workers in the Proposed Project area to excessive noise levels, and impacts will be less than significant.

Question 4.12f – Air Traffic Noise from Private Airstrips – *No Impact*

There are no private airstrips located within two miles of the Proposed Project. Therefore, people working in the Proposed Project area during the construction, operation, or maintenance phases will not be exposed to excessive noise levels attributable to a private airstrip, and no impact will occur.

4.12.4 Applicant-Proposed Measures

Because the Proposed Project will have a less-than-significant impact with regard to noise, no applicant-proposed measures are proposed.

4.12.5 References

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Harris, Cyril. 1979. *Handbook of Noise Control*.

SDG&E. 2014. *Noise Study Vine 69/12 kV Substation.*

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ATTACHMENT 4.12–A: NOISE TECHNICAL REPORT

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14 May 2014

Robert Curley
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Subject: Vine 69/12 Kilovolt Substation Project (Proposed Project) Noise Analysis
Acentech Job No. 624025

Dear Rob:

INTRODUCTION

Project Location & Description

The proposed Vine Substation site is located at the southwest corner of Vine Street and Kettner Boulevard in the City of San Diego.

The 69/12 kV substation will include four transformers and four switchgear units.

APPLICABLE NOISE REGULATIONS & STANDARDS

Federal

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of a project of this type. However, the United States (U.S.) Environmental Protection Agency (EPA) has established guidelines for noise levels below which there is no reason to suspect that the general population will be at risk from any of the identified effects of noise. These levels are not standards, criteria, regulations, or goals, but are defined to protect public health and welfare with an adequate margin of safety, and to provide guidelines for implementing noise standards locally. As a guideline, the EPA identified a day-night average sound level (Ldn) value of 55 A-weighted decibels[1] (dBA) as the threshold of activity interference outside farm residences.

In addition, the federal government has passed various laws to regulate and limit noise levels in the U.S., a discussion of which follows.

[1] The human ear is not uniformly sensitive to all sound frequencies; therefore, the A-weighting scale has been devised to correspond with the human ear's sensitivity. The A-weighting scale uses the specific weighting of sound pressure levels from about 31.5 hertz (Hz) to 16 kilohertz (kHz) for determining the human response to sound.

Noise Pollution and Abatement Act of 1970

The Noise Pollution and Abatement Act of 1970 established the Office of Noise Abatement and Control within the EPA, and requires investigations of noise issues and consultation with the EPA.

Noise Control Act of 1972

The Noise Control Act of 1972 was the first comprehensive statement of national noise policy. It declared "it is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare."

Occupational Health and Safety Act (OSHA) of 1970

The OSHA regulates worker noise exposure to 90 dBA over an eight-hour work shift. Areas where exposure exceeds 85 dBA must be designated and labeled as high-noise-level areas where hearing protection is required.

Federal Aviation Administration (FAA)

The FAA establishes 65 decibels (dB) Community Noise Level Equivalent[2] (CNEL) as the noise standard associated with aircraft noise measured at exterior locations in noise sensitive land uses such as a residence.

State

There are also no regulations at the state level that would apply to noise from substation operation. However, there are state guidelines and standards on noise.

California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California has adopted the California Environmental Quality Act (CEQA) to assess the potential for significant noise impacts as a result of projects. CEQA requires that the following questions be asked:[3]

- Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance or applicable standards of other agencies?
- Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

For purposes of the second question, CEQA does not define what noise level increase would be considered "substantial." However, in CEQA noise analysis, it is common to define a noise impact as

[2] CNEL measurements are weighted averages of sound levels gathered over a 24-hour period, essentially measuring ambient noise. Measurements taken during day, evening and nighttime periods are weighted separately, recognizing that humans are most sensitive to noise in late night hours and are more sensitive during evening hours than in daytime hours.

[3] This list represents a subset of questions that are asked as part of CEQA. Additional questions related to the analysis of potential impacts from noise are not addressed in this report.

significant if the pre-existing noise environment has an L_{dn} of 55 dBA or more and if a project would increase noise levels by more than 3 dB at noise-sensitive receptors.

California Noise Insulation Standards

The California Noise Insulation Standards were adopted in 1974 by the California Commission on Housing and Community Development to establish noise insulation standards for multi-family residential buildings. This document establishes standards for interior room noise attributable to outside noise sources. The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or Ldn) of 60 dB or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or Ldn) of at least 45 dB.

Local

The City of San Diego Noise Ordinance[4] defines noise and regulates it by land-use, and time of day as shown in Table 1. These standards represent the exterior noise level limits, as measured at the property boundary of receiving land use, which is used to determine noise impacts.

Table 1 City of San Diego Exterior Noise Limits

Land Use Zone	Time of Day	One-Hour Average Sound Level (dB)
1. Single Family Residential	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
2. Multi-Family Residential (Up to a maximum density of 1/2000)	7 a.m. to 7 p.m.	45
	7 p.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	55
3. All other Residential	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	60
4. Commercial	7 a.m. to 7 p.m.	65
	10 p.m. to 7 a.m.	60
	7 p.m. to 10 p.m.	60
5. Industrial or Agricultural	Any time	75

[4] Article 9.5: Noise Abatement and Control Division 4: Limits ("Noise Level Limits, Standards and Control"§59.5.0401 Sound Level Limits)

Fixed–location public utility distribution or transmission facilities located on or adjacent to a property line are subject to these noise level limits, measured at or beyond six feet from the boundary of the easement upon which the equipment is located.

Construction is unlawful between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays or on Sundays. A permit can be applied for and granted beforehand by the Noise Abatement and Control Administrator. It is also unlawful to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12–hour period from 7:00 a.m. to 7:00 p.m.

For noise – land use compatibility planning, the City of San Diego currently uses the 1979 General Plan Land Use-Noise Level Compatibility Standards. The City has an exterior noise level standard of 65 dB CNEL for noise-sensitive uses. These standards are designed to protect noise-sensitive land uses from high noise levels and to be used as guidelines in the planning for future land uses. Noise-sensitive land uses include, but are not necessarily limited to the following: residential, hospitals, nursing facilities, intermediate care facilities, educational facilities, libraries, museums, places of worship, child care facilities, and certain types of passive recreational parks and open space.

ENVIRONMENTAL SETTING

Setting & Location

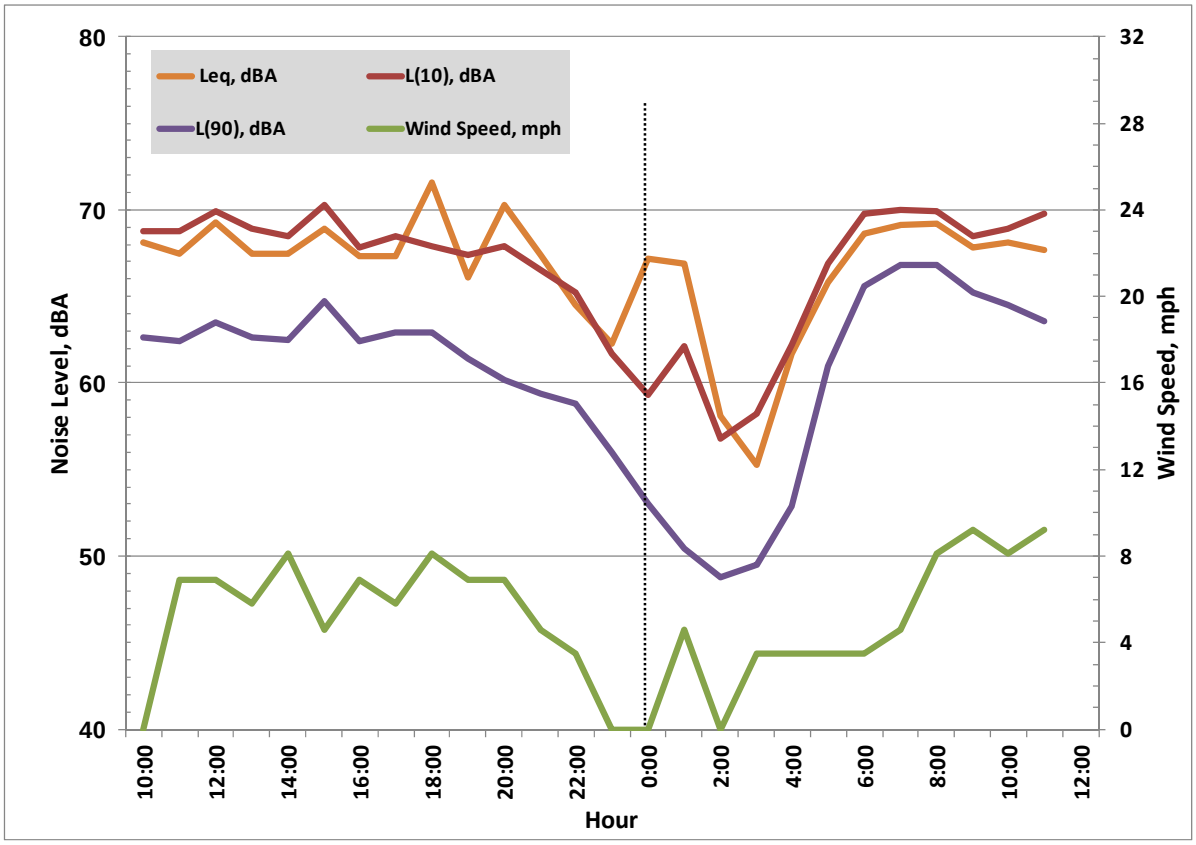
The existing noise environment at the Project site includes contributions from the following sources:

- San Diego Freeway (Interstate 5 [I-5])
- Pacific Highway
- Amtrak and Metrolink Trains
- San Diego International Airport
- Local Traffic on Kettner Boulevard

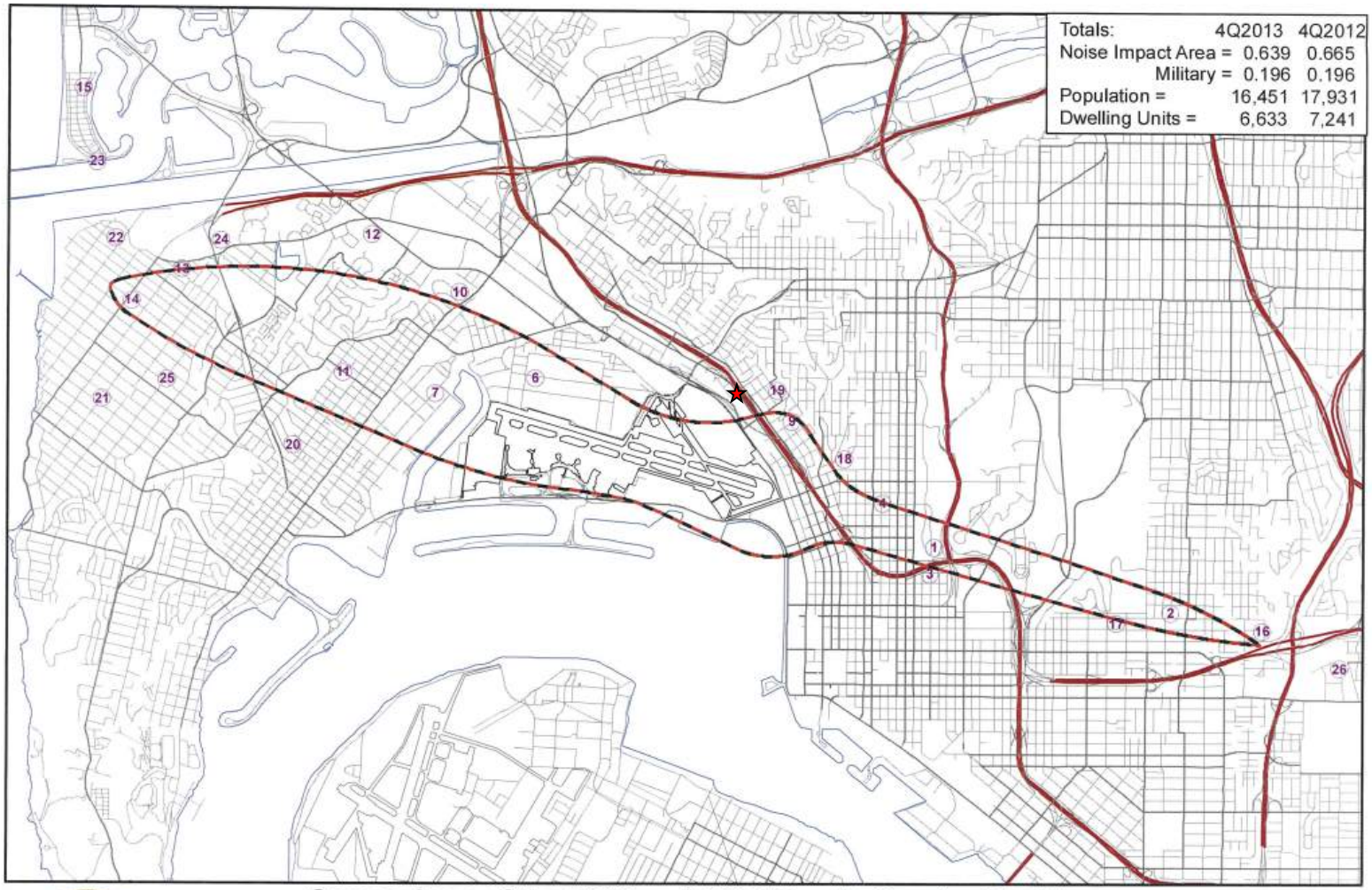
Existing Noise Conditions

The sound levels in most communities fluctuate depending upon the activity of nearby and distant noise sources, time of the day, or season of the year. Noise monitoring was performed at the northwest corner of the proposed Vine Substation site for 25 hours starting 25 February 2014 and ending 26 February 2014. The noise environment at the Project site is greatly influenced by local traffic on the nearby streets and I-5, rail traffic on the adjacent Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor, and airplanes arriving to and departing from San Diego International Airport. As a result, very little seasonal fluctuations are expected and the noise data are considered representative of a typical day.. Figure 1 presents the ambient noise measurement results and the wind speeds occurring during the monitoring period. The CNEL at this location was 73 dBA and the daytime hourly equivalent noise level (Leq) ranged between 66 dBA and 72 dBA and averaged 69 dBA.

Figure 1 Ambient Noise Levels at the Proposed Vine Street Substation



The noise contribution to the local noise environment from aircraft activities related to San Diego International Airport is indicated by the following figure published by the San Diego International Airport that shows the CNEL contour for the airport activities. The Proposed Project is located outside of San Diego International Airport's CNEL 65 dBA Contour.



Comparison of the 2012 and 2013 Fourth Quarter 65 dB Community Noise Equivalent Level (CNEL) Contours

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

0 1,500 3,000 6,000 9,000 12,000 Feet

N W E S

4th Quarter 2013
4th Quarter 2012

Proposed Vine Substation

SAN DIEGO INTERNATIONAL AIRPORT

Acentech

THRESHOLDS OF SIGNIFICANCE

The level of significance evaluation in this study is based on CEQA guidelines, the Federal, State and local noise standards. The significance criteria that follow were established from the laws, ordinances, regulations and standards applicable to the Proposed Project area. Separate noise significance criteria were developed for the construction and operation and maintenance phases of the project.

Human Perception of Noise Level Change

Under controlled conditions, in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of one dB, when exposed to steady, single frequency "pure tone" signals in the mid-frequency range. Outside of such controlled conditions, the trained ear can detect changes of two dB in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of three dB. A five dB increase is readily noticeable, while the human ear perceives a 10 dB increase as a doubling of sound.

In general, any noise that exceeds the local jurisdiction's adopted standards will be considered potentially significant. Specific criteria for construction and operation noise levels follow.

Construction

Given the baseline background noise environment, the following thresholds of significance for temporary or periodic increases and from construction noise have been developed for the Proposed Project-related average daytime Leq values at noise sensitive receptor locations:

- Less than 75 dBA when measured at a residential property line will be considered noticeable, but not significant,
- 75 dBA and above when measured at a residential property line will be considered significantly impacted.

Operation and Maintenance

Based on the above discussion, the following thresholds of significance for operational noise have been developed for Proposed Project-related increases:

- Less than three dB will be considered not discernible and not significant.
- Between three dB and five dB will be considered noticeable, but not significant, if noise levels remain below the City of San Diego's Noise Standards of 75 dBA at 6 feet from the property.
- Three dB or greater will be considered significant if the noise increase will meet or exceed the City of San Diego's Noise Standards of 75 dBA at six feet from the property easement.
- Increases that exceed the City of San Diego's Noise Standards of 75 dBA at six feet from the property easement will be considered significant.

Construction Noise

Proposed Vine 69/12 kV Substation

Site Development and Grading

Construction activities associated with site development will occur over an approximately three-month period and include clearing and grading of the site. Table 2 Site Development and Grading Noise

Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 2 Site Development and Grading Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$ dBA	d_{ref} ft.	Acoustical Use Factor, %	Leq(12-hr) @ dref, dBA
Site Development and Grading						
Scraper	7	4	85	50	40	79
Front-end loader	6	2	80	50	40	73
Dump truck (12 CY)	7	25	80	50	50	75
Dozer (D6 or D8 or D9)	6	2	84	50	40	77
Excavator	6	1	81	50	40	74
Water truck	7	1	80	50	50	75
Compactor (824 or 834)	7	2	83	50	20	74
Skid steer loader	3	2	80	50	40	70
Backhoe	6	2	80	50	40	73
Ditch-witch	6	1	80	50	40	73
Maintenance truck	1	2	80	50	20	62
Paver	6	1	77	50	50	71
Asphalt trucks	1	8	80	50	20	62
Drum roller compactor	6	2	80	50	20	70
Car/Pickup truck	1	15	75	50	10	54
Duration: 3 Months Start Date: January, 2016						

Source: SDG&E, Acentech Incorporated

Retaining/Boundary Wall Construction

Construction activities associated with retaining/boundary wall construction will occur over an approximately two-month period and include excavation along the perimeter of the site. Table 3 Retaining/Boundary Wall Construction Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and the daily average noise emission, Leq(day).

Table 3 Retaining/Boundary Wall Construction Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$ dBA	d_{ref} ft.	Acoustical Use Factor, %	Leq(12-hr) @ dref, dBA
Retaining/Boundary Wall Construction						
Front-end loader (IT28)	9	3	80	50	40	75

Excavator	9	1	81	50	40	76
Water truck	9	1	80	50	50	76
Compactor (563 Ride-On)	9	1	83	50	40	78
Motor grader (blade)	9	1	83	50	40	78
Walk-behind compactor	9	3	80	50	20	72
Car/pickup truck	1	5	75	50	10	54
Delivery truck	1	3	80	50	10	59
Maintenance truck	3	1	80	50	20	67
Duration: 2 months Start Date: March, 2016						

Source: SDG&E, Acentech Incorporated

Below-Grade Construction

Construction activities associated with below-grade construction will occur over an approximately six-month period and include excavation within the perimeter of the site. Table 4 Below-Grade Construction Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 4 Below-Grade Construction Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor, %	Leq(12-hr) @ dref, dBA
Below-Grade Construction						
Backhoe	6	1	80	50	40	73
Loader	6	2	80	50	40	73
Dump Truck (20 CY)	3	2	80	50	50	71
Skid steer loader	4	1	80	50	40	71
Water truck	3	1	80	50	50	71
Concrete truck (2 days/week for 4 months)	0.5	15	80	50	20	59
Ditch-witch	6	1	70	50	40	63
Car/Pickup truck	1	15	75	50	10	54
Duration: 6 months Start Date: April, 2016						

Source: SDG&E, Acentech Incorporated

Substation Equipment Installation

Construction activities associated with substation equipment installation will occur over an approximately 10-month period. Table 5 Substation Equipment Installation Noise Emissions presents the number and type of

equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 5 Substation Equipment Installation Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Substation Equipment Installation						
Crew truck	1	5	65	50	10	44
Boom truck	6	2	80	50	15	69
Manlift	6	1	75	50	10	62
Bucket truck	5	4	80	50	10	66
Pickup/vans/car	1	8	75	50	10	54
Cable dolly (trailer)	0	1				
Stringing rig (trailer)	0	2				
Oil rig (trailer w/generator)	14	1	82	50	50	80
Water truck	2	1	80	50	50	69
Duration:10 months Start Date: September, 2016						

Source: SDG&E, Acentech Incorporated

12 kV Distribution Relocation

Duct Bank Construction and Vault Installation

Construction activities associated with substation duct bank construction and vault installation will occur over an approximately six-month period within Kettner Boulevard. Table 6 Duct Bank Construction and Vault Installation Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and the daily average noise emission, Leq(day).

Cable Installation and Cutover

Construction activities associated with substation cable installation and cutover construction will occur over an approximately three-month period and include cable installation within the perimeter of the site and along Kettner Boulevard, West Hawthorn Street, and Pacific Highway. Table **7 Cable Installation and Cutover Noise Emissions** presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 6 Duct Bank Construction and Vault Installation Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Duct Bank Construction and Vault Installation						
Crane 60 Ton	6	1	81	50	15	70
Crane Support	1	1				
Bobcat	6	4	80	50	40	73
Backhoe	8	3	80	50	40	74
Trackhoe	8	1	80	50	40	74
Dump/Haul Truck	1	9	80	50	40	65
Construction Truck	2	3	80	50	40	68
Pickup Truck	1	3	75	50	10	54
Pickup w/saw cutter trailer	1	2	75	50	10	54
Concrete trucks	1	7	80	50	40	65
Surface Machine	6	1	80	50	40	73
Asphalt dump truck	1	5	80	50	40	65
Dump Truck w/compressor & emulsion sprayer	7	2	84	50	40	78
Pickup truck	1	2	75	50	10	54
Roller	4	2	80	50	20	68
Duration: 6 months Start Date: October, 2016						

Source: SDG&E, Acentech Incorporated

Table 7 Cable Installation and Cutover Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Cable Installation and Cutover						
Line Truck	1	1	80	50	40	65
Puller	2	1				
Reel Trailer	1	1				
Splice Truck	1	1	80	50	10	59
Pickup Truck	1	1	75	50	10	54
Duration: 3 months Start Date: April, 2017						

Source: SDG&E, Acentech Incorporated

69 kV Loop-In

Foundation Installation

Construction activities associated with substation foundation installation for the 69 kV Loop-In will occur over an approximately two-week period and include pouring foundations adjacent to the proposed substation site. Table 8 69 kV Loop-In Foundation Installation Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 8 69 kV Loop-In Foundation Installation Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Foundation Installation						
Drill rig	8	1	85	50	20	76
Forklift	4	1	80	50	40	71
Pickup truck	1	2	75	50	40	60
Concrete truck	4	5	80	50	20	68
Boom truck	3	1	80	50	10	64
Dump truck	4	1	84	50	40	75
Backhoe	4	1	80	50	40	71
Generator	4	1	82	50	50	74
Duration: 0.5 months Start Date: November, 2016						

Source: SDG&E, Acentech Incorporated

Pole Installation and Removal

Construction activities associated with pole installation and removal for the 69 kV Loop-In will occur over an approximately two-week period. Table 9 Pole Installation and Removal Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 9 Pole Installation and Removal Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Pole Installation and Removal						
Boom truck	8	1	80	50	10	68
Bucket truck	8	1	80	50	10	68

Flatbed truck	6	1	75	50	40	68
Jack hammer	8	1	89	50	20	80
Compressor	8	1	78	50	40	72
Duration: 0.5 months Start Date: November, 2016						

Source: SDG&E, Acentech Incorporated

Conductor Installation and Cutover

Construction activities associated with substation conductor installation and cutover for the 69 kV Loop-In will occur over an approximately two-month period. Table 10 Conductor Installation and Cutover Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 10 Conductor Installation and Cutover Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Conductor Installation and Cutover						
Pulling rig	7	1	75	50	40	69
Wire truck/split reel	7	1				
Boom truck	7	1	80	50	10	68
Bucket truck	7	2	80	50	10	68
Duration: 2 months Start Date: January, 2017						

Source: SDG&E, Acentech Incorporated

Telecommunication System Extension

Duct Bank Construction and Vault Installation

Construction activities associated with substation duct bank construction and vault installation will occur over an approximately two-month period. Table 11 Duct bank Construction and Vault Installation presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 11 Duct bank Construction and Vault Installation

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Duct Bank Construction and Vault Installation						
Backhoe or Rockwheel	3	1	80	50	40	70

Dump truck (20 CY)	3	2	80	50	40	70
Skid steer loader	3	1	80	50	40	70
Concrete/asphalt truck	3	4	80	50	40	70
Duration: 2 months Start Date: April, 2017						

Source: SDG&E, Acentech Incorporated

Energization

Testing and Commissioning

Construction activities associated with substation Testing and Commissioning will occur over an approximately five-month period. Table 12 Testing and Commissioning Noise Emissions presents the number and type of equipment used, the typical percent usage during the day, the maximum noise level (Lmax) and reference distance (d_{ref}) for the maximum noise level, and the daily average noise emission, Leq(day).

Table 12 Testing and Commissioning Noise Emissions

Vehicles Type	Hours Operating at Site/Day (per vehicle)	Quantity Required	$Lmax_{ref}$, dBA	d_{ref}, ft.	Acoustical Use Factor %	Leq(12-hr) @ dref, dBA
Testing and Commissioning						
Relay/telecommunication van	3	3	75	50	1	49
Duration: 5 months Start Date: February, 2017						

Source: SDG&E, Acentech Incorporated

Construction Noise Impacts

The noise from construction will be a composite of many concurrent construction activities as indicated in Figure 2 Construction Schedule and Average Leq(day). At the bottom of Figure 2, the noise emissions were summed.

The nearest residence is located on the east side of the I-5 freeway, approximately 460 feet from the center of the substation. Considering distance and the shielding provided by the freeway the construction noise will be approximately 35 decibels below the values presented in Figure 2. During the month with the highest construction noise the noise levels resulting in the nearest residence would be 56 dBA and the noise impacts will be less than significant.

Figure 2 Construction Schedule and Average Leq(day)

Project Component	Activity	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17
Proposed Vine 69/12 kV Substation	*Site Development and Grading*	89	89	89															
	Retaining/Boundary Wall Construction			85	85														
	Below-Grade Construction				81	81	81	81	81	81									
	Substation Equipment Installation									81	81	81	81	81	81	81	81	81	81
12 kV Distribution Relocation	*Duct Bank Construction and Vault Installation*										86	86	86	86	86	86			
	Cable Installation and Cutover																66	66	66
69 kV Loop-In	*Foundation Installation*											82							
	Pole Installation and Removal											82							
	Conductor Installation and Cutover													74	74				
Telecommunication System Extension	*Duct Bank Construction and Vault Installation*																78	78	
Energization	*Testing and Commissioning*														54	54	54	54	54
Total Average Leq(day), dBA		89	89	91	87	81	81	81	81	84	87	89	87	88	88	87	83	83	81

Source: SDG&E, Acentech Incorporated

Operations and Maintenance – Noise Impact

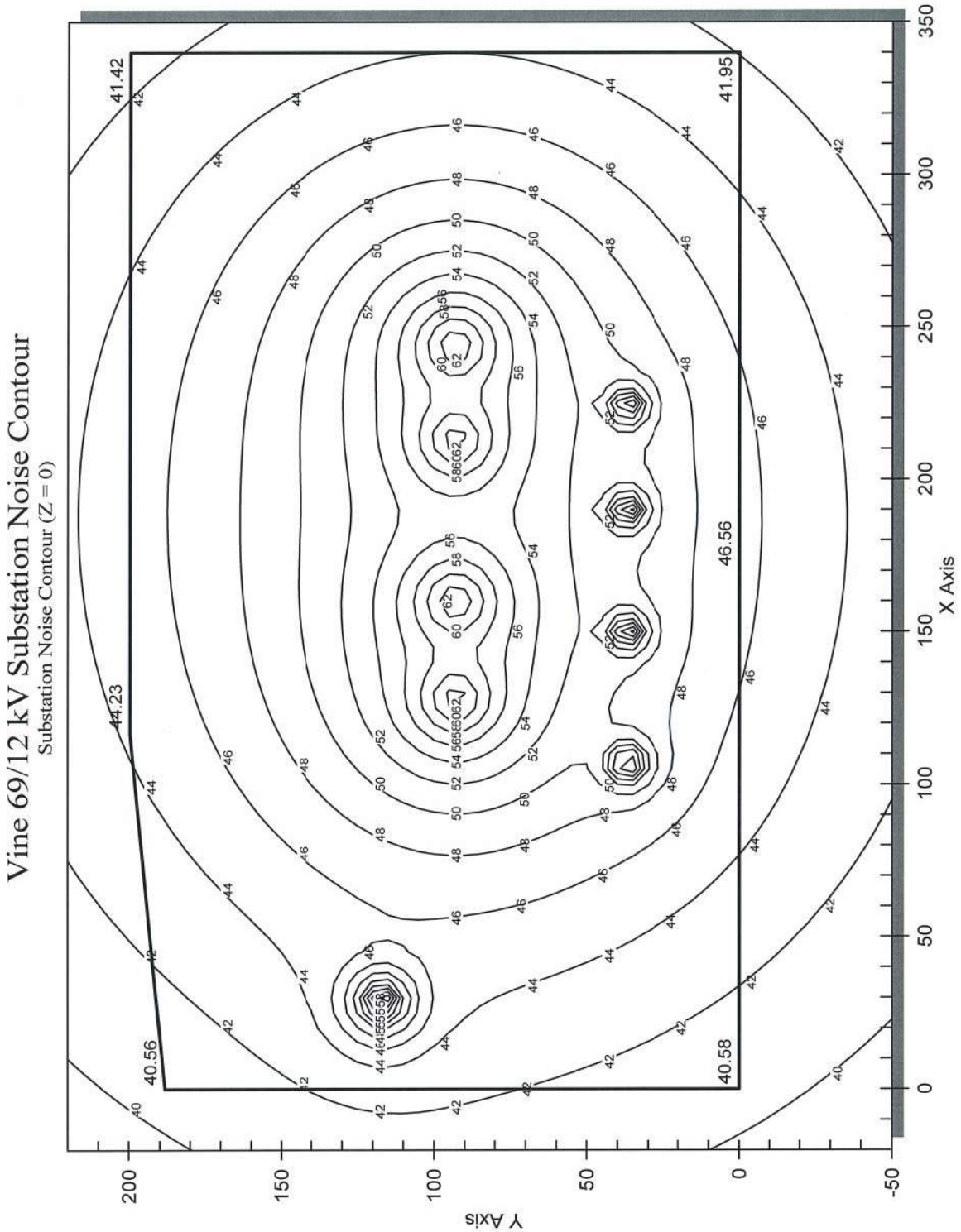
The calculated L_{eq} noise contours (lines of equal sound level) are depicted in Figure 3 Vine Substation Operational Noise Levels. The Contours were developed by San Diego Gas & Electric Company using the following noise-generating equipment and associated noise levels:

- Four 69/12 kV transformers – 61 dBA at 5 feet
- One heating, ventilation, and air conditioning (HVAC) unit for the control shelter – 70 dBA at 5 feet
- Four HVAC units for switchgear – 70 dBA at 5 feet

The noise contour modeling did not consider the effect of the perimeter wall which will reduce the noise levels at a distance of six feet from the property easement by between 5 and 10 dB.

The substation noise levels at six feet from the property are less than 75 dBA; therefore, the impact will be considered less than significant.

Figure 3 Vine Substation Operational Noise Levels



CONCLUSIONS

Acentech Inc. has completed an acoustical analysis for the Proposed Project. The impact assessment in this report has been made in relation to the City of San Diego's General Plan requirements and regulations and CEQA Guidelines.

The results of our analysis indicate that construction and operation noise impacts will be less than significant.

Sincerely yours,

ACENTECH INCORPORATED

Ramon E. Nugent, P.E. (TX)
Director

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4.13 POPULATION AND HOUSING

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

4.13.0 Introduction

This section identifies existing population and housing trends in the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project). The Proposed Project site is located within a highly urbanized area in the City of San Diego, in the Midway/Pacific Highway Corridor Community Plan area. The Proposed Project is intended to accommodate existing and planned growth in the downtown and surrounding area; meet the area's electric capacity needs; and provide improved substation and circuit reliability with added tie capacity. The Proposed Project will not extend service into new areas and, therefore, will not have a significant impact on the local or regional population by inducing growth. In addition, the Proposed Project will not require the displacement of housing or people. As such, no impacts will occur with regard to population and housing.

4.13.1 Methodology

Data used to conduct demographic and economic analyses were obtained primarily from statistical reports published by the United States (U.S.) Census Bureau and the California Employment Development Department (EDD). A literature search was also conducted and included City of San Diego publications and government websites, such as the San Diego Association of Governments (SANDAG) website.

4.13.2 Existing Conditions

The regulatory requirements and overall existing population and housing conditions of the Proposed Project are described in the following subsections.

Population

Table 4.13-1: Population Totals and Trends identifies population totals and trends within the City of San Diego and Midway/Pacific Highway Corridor Community Plan area. In the year 2010, the City of San Diego had an estimated population of 1,301,617 residents, or approximately 42 percent of the 3,095,313 total population of the County of San Diego and approximately 3.5 percent of the 37,253,956 total population of the State of California. In 2010, the Midway/Pacific Highway Corridor Community Plan area had a population of 4,628, representing approximately 0.3 percent of the total population of the City of San Diego. Population within the City of San Diego continues to grow, as demonstrated by an approximate six-percent increase in population between 2000 and 2010.

Table 4.13-1: Population Totals and Trends

Jurisdiction	2000 Census Total	2010 Census Total	Percentage Change Between 2000 and 2010	Projected Population for 2020
City of San Diego	1,223,400	1,301,617	6	1,542,324
Midway/Pacific Highway Corridor Community Planning area	4,660	4,628	-1	4,398

Source: SANDAG, October 2011

Housing

Table 4.13-2: Housing Units and Vacancy Rates identifies data for the County of San Diego and the City of San Diego with regard to the number of housing units and associated vacancy rates. In 2010, the U.S. Census Bureau estimated that the County of San Diego had 1,164,786 housing units with a vacancy rate of 6.7 percent. In 2010, the City of San Diego had an estimated 516,033 housing units with a vacancy rate of 6.4 percent. In 2010, the Midway/Pacific Highway Corridor Community Planning area had 1,851 housing units.

Table 4.13-2: Housing Units and Vacancy Rates

County/City	Total Housing Units	Percentage of Vacant Units
County of San Diego	1,164,786	6.7
City of San Diego	516,033	6.4

Source: U.S. Census Bureau

For 2011, approximately 51.7 percent of the total housing units in the County of San Diego were detached, single-family homes. According to the U.S. Census Bureau, approximately 45.8 percent of the 516,033 housing units in the City of San Diego were also estimated as detached, single-family homes for the same year.

Temporary Housing

The Proposed Project area is located near various visitor accommodations. In 2012, the San Diego Convention and Visitors Bureau reported approximately 461 hotel and motel properties with over 56,000 rooms available to visitors within the County of San Diego. The total average occupancy rate for these lodging establishments was approximately 70.7 percent.

Employment and Income

Table 4.13-3: Employment Figures and Unemployment Range identifies the total employment and unemployment rates for the Proposed Project area. In October 2013, the unemployment rate for the County of San Diego was seven percent, and approximately 112,700 people in the total available labor force of 1,598,900 were unemployed. The City of San Diego had the same unemployment rate of seven percent for October 2013, with approximately 50,300 people in the labor force unemployed.

Table 4.13-3: Employment Figures and Unemployment Range

County/City	Total Employed	Total Unemployed	Unemployment Rate (Percent)
County of San Diego	1,598,900	112,700	7.0
City of San Diego	663,500	50,300	7.0

Source: California EDD, October 2013

According to U.S. Census Bureau data, the median annual household income for the County of San Diego was estimated at $63,857 for 2007 to 2011. For the City of San Diego, the median annual household income was estimated at $63,739 for 2007 to 2011. In 2010, the median household income in the Midway/Pacific Highway Corridor Community Plan area was $39,684.

4.13.3 Impacts

Significance Criteria

Determination of impacts was derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Impacts to population and/or housing would be considered significant if the Proposed Project:

- Induces substantial population growth
- Displaces a substantial number of housing units
- Displaces a substantial number of people

Question 4.13a – Population Growth

Construction – No Impact

It is anticipated that most of the construction workers for the Proposed Project will reside within the County of San Diego, outside the immediate vicinity of the Proposed Project. It is not anticipated that workers will need to reside temporarily at local lodging establishments. Due to the scope of the Proposed Project, construction is not expected to increase the desirability or

affordability of the area, or cause a significant increase in permanent population within the local community or otherwise. As a result, no impact to population growth from construction of the Proposed Project will occur.

Operation and Maintenance – No Impact

Following construction of the Proposed Project, no permanent jobs are expected to be created in the vicinity of the Proposed Project. When in operation, the substation will be unstaffed and remotely operated. One to two workers will visit the substation site on a daily or weekly basis, but the substation will not require dedicated, full-time personnel. Routine maintenance of the substation is expected to require approximately six trips a year by a two- to four-person crew. It is also anticipated that one major maintenance inspection will occur annually, requiring an estimated 10 personnel and approximately one week to complete. SDG&E anticipates that these needs can be met by its existing staff.

The Proposed Project is being built to meet the electrical needs of the area and, therefore, will not induce population growth in the area either directly or indirectly. In addition, long-term operation and maintenance activities for the Proposed Project will not result in the demand for new residential units and will not significantly increase the desirability or affordability of the surrounding area. Similarly, it will not create new opportunities for local industry or commerce or impact population growth in the area. As a result, the Proposed Project is not expected to cause a direct or indirect increase in population growth. As such, no impacts to population growth will occur as a result of operation and maintenance of the Proposed Project.

Question 4.13b – Displacement of Existing Housing

Construction – No Impact

Construction will occur within public right-of-ways (ROWs) and within an unpopulated parcel owned by SDG&E, which is currently being leased for long-term parking. New ROWs will be secured by SDG&E for the distribution relocation, construction of the 69 kV loop-in, and telecommunication system upgrade work. There are no housing units within the proposed new ROW locations or within the proposed Vine Substation parcel.

The proposed staging areas will be located within the proposed Vine Substation site and at existing SDG&E facilities, as described in Section 3.6.0 Staging Areas in Chapter 3 – Project Description. All temporary work areas will be located immediately adjacent to the Proposed Project components within city streets, public areas, and the proposed Vine Substation site. There are no housing units within the proposed temporary work areas. Therefore, existing housing will not be displaced by the staging and temporary work areas and no impact will occur during construction of the Proposed Project.

Operation and Maintenance – No Impact

Operation and maintenance of the proposed facilities will include regular inspection, repair work, and vegetation trimming, as needed. These activities currently occur for the existing SDG&E facilities in the area and will generally remain the same for the proposed Vine Substation and associated components. As there are no housing units located on the proposed substation site or within the proposed ROWs, regular operation and maintenance practices required for the

proposed facilities will not displace any existing housing. Therefore, there will be no impact from operation and maintenance of the Proposed Project.

Question 4.13c – Displacement of People – *No Impact*

The Proposed Project will be constructed, operated, and maintained within a highly developed area within the City of San Diego where surrounding lands generally support light- and medium-industrial and office uses, parking lots, and rental car facilities, with limited residential uses. The proposed Vine Substation site is located on an SDG&E-owned parcel that is presently used as a long-term airport parking lot. All other Proposed Project components will be constructed on lands owned by SDG&E or within public ROWs. Therefore, construction, operation, and/or maintenance of all components of the Proposed Project will not displace any existing housing units, as discussed previously in the response to Question 4.13b. As such, no one will be displaced with implementation of the Proposed Project. Therefore, there will be no impact from construction, operation, or maintenance of the Proposed Project.

4.13.4 Applicant-Proposed Measures

Because the Proposed Project will have no impact on population and housing, no applicant-proposed measures are proposed.

4.13.5 References

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4.14 PUBLIC SERVICES

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

4.14.0 Introduction

The section describes local public services in the area of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) and evaluates potential effects on existing services. Fire and emergency services, police and protective services, hospitals, schools, parks, and other public services are addressed, and the potential effects resulting from construction, operation, and maintenance are evaluated. Through this analysis, it was determined that the Proposed Project will have no impacts on public services.

4.14.1 Methodology

Research regarding fire, police, emergency services, and public libraries involved the review of data from the City of San Diego. Data pertaining to local area schools were obtained from the San Diego Unified School District. Statistics pertaining to local hospitals and recreational amenities were also obtained through additional desktop-level research, utilizing online sources.

4.14.2 Existing Conditions

The regulatory requirements and overall existing public services conditions of the Proposed Project are described in the following subsections.

Fire and Emergency Services

Serving the eighth-largest city in the United States and the second-largest city in California, the San Diego Fire-Rescue Department (SDFD) provides City of San Diego residents with fire and life-saving services, including fire protection, emergency medical services, and lifeguard protection at San Diego beaches. The SDFD serves a population of approximately 1,337,000 and a service area of approximately 331 square miles. The SDFD operates 47 stations with approximately 801 uniformed personnel and 161 civilian personnel.

The Proposed Project will be served by Fire Station 3, located at 725 West Kalmia Street, approximately 0.8 mile southeast of the Proposed Project site. The station provides both fire protection and medical/rescue services. In addition, the Airport Station at San Diego International Airport, located at 3698 Pacific Highway, is approximately 0.5 mile southwest of the Proposed Project site.

Police Protection Services

The City of San Diego Police Department serves the Proposed Project area. The main headquarters are located at 1401 Broadway in downtown San Diego, approximately 2.3 miles southeast of the Proposed Project site. In addition to police protection services, the police department operates a number of specialized divisions that include the domestic violence, financial crimes, forensic science, and traffic units.

The Proposed Project site is served by the police department's Western Division, which serves the communities of Hillcrest, La Playa, Linda Vista, Loma Portal, Midtown, Midway District, Mission Hills, Mission Valley West, Morena, Ocean Beach, Old Town, Point Loma Heights, Roseville-Fleetridge, Sunset Cliffs, University Heights, and Wooded Area. The Western Division is headquartered at 13396 Salmon River Road, approximately 2.1 miles to the northwest of the site, and serves a population of 129,709 people with a service area of approximately 22.7 square miles.

The Proposed Project site will be served by the Peninsula Storefront Station, located at 3750 Sports Arena Boulevard, Suite #3. The station is located approximately 2.4 miles northwest of the Proposed Project site.

Hospitals

The following are the two closest major medical facilities to the Proposed Project site:

- Scripps Mercy Hospital, located at 4077 Fifth Avenue, approximately 1.3 miles northeast of the site, and
- St. Pauls' Program of All-Inclusive Care for the Elderly, located at 111 Elm Street, approximately 1.3 miles southeast of the Proposed Project site.

Schools

The Proposed Project falls within the San Diego Unified School District. The following schools are within approximately one mile of the Proposed Project:

- Montessori School of San Diego, located approximately 0.25 mile southeast of the Proposed Project;
- Grant Elementary School, located approximately 0.7 mile north of the Proposed Project;
- Old Town Academy K-8 Charter School, located approximately 0.85 mile northeast of the Proposed Project;
- Saint Vincent de Paul School, located approximately 0.9 mile north of the Proposed Project;
- Fleur de Lis School, located approximately 0.95 mile northeast of the Proposed Project;
- Museum School, located approximately one mile southeast of the Proposed Project; and
- Florence Elementary School, located approximately one mile northeast of the Proposed Project.

Other Services

The closest public library is the Mission Hills Branch Library, located at 925 West Washington Street, approximately 0.82 mile northeast of the Proposed Project site. The Central Library is located at 330 Park Boulevard, approximately 2.55 miles to the southeast of the Proposed Project site. In addition, the San Diego County Library is located at 5555 Overland Avenue, approximately seven miles northeast of the Project site.

Many local, regional, county, and state parks are located in and around the City of San Diego. The parks nearest to the Proposed Project site include the following:

- Pioneer Park, located approximately 0.7 mile north of the Proposed Project;
- Mission Hills Park, located approximately 0.7 mile north of the Proposed Project;
- Beeson Field, located approximately 0.9 mile west of the Proposed Project;
- Maple Canyon Trail, located approximately 0.95 mile east of the Proposed Project;
- Beth Israel Park, located approximately one mile southeast of the Proposed Project; and
- Balboa Park, located approximately one mile east of the Proposed Project.

4.14.3 Impacts

Significance Criteria

Determination of impacts was derived from Appendix G of the California Environmental Quality Act Guidelines. Impacts to public services are considered potentially significant if they result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities—or the need for new or physically altered governmental facilities—in order to maintain acceptable service ratios, response times, or other performance objectives. These public services include fire and police protection, emergency services, hospitals, schools, and public facilities.

Question 4.14a – Adverse Impact to Public Services – *No Impact*

Construction – No Impact

The Proposed Project will be constructed within the City of San Diego. Up to 30 construction personnel are expected to be required to be on site during the various phases of construction. Construction of the proposed facilities will not likely to affect the use or operation of any public services or facilities within the immediate area, including fire or police protection services, emergency services, hospitals, schools, parks, or other services (i.e., libraries), because the crew members will likely commute from within the San Diego County area where they are already using such services. Moreoever, this small number of construction personnel represent an insignificant fraction of the region's existing population. It is not anticipated that workers will need to reside temporarily at local lodging establishments. In addition, the Proposed Project will not result in a permanent need for new or additional public services, because it will not directly induce population growth or result in the construction of residential or other land uses that will indirectly induce area population growth.

Fire and Police Protection

Several emergency providers are located in the vicinity of Proposed Project; however, none are located within approximately 0.25 mile. Therefore, construction of the proposed facilities will not directly interfere with fire and police protection or other emergency service providers in the immediate area. The Proposed Project will not result in an increase in the temporary demand for nor alter the level of local public services required, as it will not increase the population or demands for housing in the area. In addition, it will not materially increase the density of the nearby built environment. An emergency could arise as a result of Proposed Project construction, but such an incident is of low probability and will be well within the current capabilities of the existing emergency services. Construction is not anticipated to affect response times because no road closures will be required for construction activities. While lane closures will be necessary during construction, traffic controls will be implemented as required by the Encroachment Permit that will be obtained from the City of San Diego, and emergency vehicles will be provided access. As a result, no impacts to fire and police protective services are anticipated.

Schools

The Proposed Project will not increase the temporary demand for school enrollment because it will not perceptibly increase local population during construction. The majority of the construction crew is likely to be hired from the local operators union and local electrical workers union, which can provide the approximately 30 potential workers from the San Diego area; therefore, construction of the Proposed Project will not create a significant new workforce that will result in a new or increased demand for school services. Family relocation will not be necessary. No new hires will be required for operation and maintenance of the Proposed Project. Therefore, school enrollment will not be affected, and no new schools will be necessary as a result of the Proposed Project. As a result, no impacts to schools are expected.

Parks

No recreational facilities are found within 0.25 mile of the Proposed Project site. The nearest recreational facilities—Pioneer Park and Mission Hills Park—are located approximately 0.7 mile north of the Proposed Project and on the east side of Interstate (I-) 5. Construction of the Proposed Project will notincrease local population growth resulting in the need for new parks or park expansion, nor will it cause a reduction in the availability of recreational resources in the area, as none will be affected by the Proposed Project. Therefore, no impacts to parks or other recreational facilities will result.

Other Public Facilities

No other public facilities are located within 0.25 mile of the Proposed Project components. The closest public library, the Mission Hills Branch Library, is located approximately 0.82 mile northeast of the Proposed Project site and on the east side of I-5. The Proposed Project will not increase the local population or otherwise result in a change that will necessitate alteration or expansion of the public library or other existing public services. As a result, no impacts will result.

Operation and Maintenance – No Impact

After construction, the proposed Vine Substation will be unstaffed and will be visited by one or two workers on a daily or weekly basis. Routine maintenance of the substation is expected to require approximately six trips a year by a two- to four-person crew. In addition, it is anticipated that one annual major maintenance inspection will occur, requiring an estimated 10 personnel from SDG&E's existing workforce. The annual inspection will take approximately one week to complete. Operation and maintenance of the 12 kV distribution relocation, 69 kV loop-in, and telecommunication system extension will be conducted in a manner similar to the existing facilities in the area. These activities will not impede the use of existing public services nor result in a need for new services because they will be limited to routine periodic visits once a year and for no more than a few days on each occasion. As a result, there will be no impacts to public services from the operation and maintenance of the Proposed Project.

4.14.4 Applicant-Proposed Measures

Because the Proposed Project will have no impacts on public services, no applicant-proposed measures are proposed.

4.14.5 References

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4.15 RECREATION

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				✓

4.15.0 Introduction

This section describes the existing recreational facilities in the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt Substation Project (Proposed Project) site and evaluates potential impacts to recreational resources that may result from construction, operation, and maintenance of the Proposed Project. It is not anticipated that recreational facilities will be impacted as a result of construction of the Proposed Project.

4.15.1 Methodology

The recreation analysis involved a review of the City of San Diego General Plan. In addition, Google Earth aerial photographs of the Proposed Project area were reviewed.

4.15.2 Existing Conditions

The nearest recreational facilities—Pioneer Park and Mission Hills Park—are located approximately 0.7 mile north of the Proposed Project and east of Interstate 5. The parks contain passive recreational areas, a playground, picnic facilities, a restroom, and a parking lot. Three additional parks and one recreational trail are located within approximately one mile of the Proposed Project. One of these parks is Balboa Park, which is comprised of more than 1,000 acres of museums, various gardens, and international cultural associations, as well as the San Diego Zoo.

4.15.3 Impacts

Significance Criteria

Standards of significance were derived from Appendix G of the California Environmental Quality Act Guidelines. Impacts to recreation would be considered significant if the Proposed Project:

- Increases the use of existing neighborhood and regional parks or other recreational facilities to the extent that substantial physical deterioration of the facilities would occur or be accelerated

- Requires the construction or expansion of recreational facilities to meet population demand, potentially resulting in an adverse physical effect on the environment

Question 4.15a – Recreational Facilities Use

Construction – No Impact

It is anticipated that up to 33 workers will be employed for the site development phase of the Proposed Project. Between 12 to 24 workers are expected during the foundation and below-grade work, as well as the construction of the proposed substation and power line facilities. The relocation of the 12 kV distribution circuits will require between 12 and 20 workers. However, these crew members will likely commute from the San Diego County area. The minor increase in daily worker population will not put additional demand on existing recreational facilities due to the small and temporary nature of the increase. Thus, no impact will occur.

Operation and Maintenance – No Impact

As described in Section 4.13 Population and Housing, the Proposed Project will not create a need for additional housing or long-term population immigration, which would result in a permanent increase in park use. No new employees will be hired to operate or maintain the Proposed Project facilities. The facilities will be operated and maintained by existing SDG&E personnel in the same manner that existing facilities in the surrounding area are operated and maintained. Thus, no impact will occur.

Question 4.15b – Recreational Facilities Changes

Construction – No Impact

The Proposed Project will be located in an area characterized predominately by light- and medium-industrial and office uses, parking lots, and rental car facilities, and will not involve the construction of new recreational facilities or the expansion of existing facilities. Therefore, there will be no impact.

Operation and Maintenance – No Impact

Operation and maintenance activities for the Proposed Project facilities will be conducted in a similar manner as they are for the existing facilities. Operation and maintenance practices do not currently impact recreational uses or facilities in the area; thus, no impacts will occur.

4.15.4 Applicant-Proposed Measures

The Proposed Project will not result in any significant impacts to recreational resources; therefore, no applicant-proposed measures are proposed.

4.15.5 References

City of San Diego. *General Plan*. 2008. Online. http://www.sandiego.gov/planning/genplan/. Site visited December 5, 2013.

City of San Diego. Parks and Recreation Department. Parks and Open Spaces. Online. https://www.sandiego.gov/park-and-recreation/. Site visited December 5, 2013.

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4.16 TRANSPORTATION AND TRAFFIC

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			✓	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			✓	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓	
e) Result in inadequate emergency access?			✓	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			✓	

4.16.0 Introduction

This section describes the existing transportation and traffic conditions within the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project) area and evaluates potential Proposed Project-related transportation and traffic impacts. A summary of existing roadways, transit and rail service, airports, and bicycle facilities are presented, as well as a description of the regulatory setting for transportation and traffic. In addition, an analysis of transportation and traffic impacts that will result from the Proposed Project is provided. The Proposed Project is located adjacent to several major roadways (including Interstate [I-] 5, Kettner Boulevard, and Pacific Highway) and rail lines, but will not have a significant impact on transportation and traffic in the area and will not conflict with any adopted alternative transportation policies.

4.16.1 Methodology

Transportation and traffic data for the Proposed Project area was obtained primarily through relevant literature and Internet research. The City of San Diego General Plan and Municipal Code, the Midway/Pacific Highway Corridor Community Plan, the City of San Diego Traffic Impact Study Manual, and the San Diego Association of Governments' (SANDAG) 2030 Regional Transportation Plan were reviewed. A site visit was also conducted on December 10, 2013 to obtain a visual understanding of the traffic patterns along the public roadways that may be directly or indirectly affected by the Proposed Project.

4.16.2 Existing Conditions

Regulatory Background

Construction projects that cross public transportation corridors are subject to federal, state, and local encroachment permits. Permits are also required for activities that result in the use or obstruction of navigable airspace. The following summarizes transportation and traffic regulations that are applicable to the construction of electric facilities, such as the Proposed Project.

Federal

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). Title 14, Section 77 of the Code of Federal Regulations (CFR) establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects that exceed 200 feet above ground level—or that extend at a ratio greater than 100 to one (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet—are considered potential obstructions and require notification to the FAA.

State

The use of California state highways for purposes other than normal transportation may require written authorization or an encroachment permit from the California Department of Transportation (Caltrans). Caltrans has jurisdiction over the state's highway system and is responsible for protecting the public and infrastructure. Caltrans reviews all requests from utility companies that plan to conduct activities within its right-of-way (ROW). Encroachment permits

may include conditions or restrictions that limit when construction activities can occur within or above roadways under the jurisdiction of Caltrans.

Local

Chapter 12, Article 9, Division 7: Public ROW Permits of the City of San Diego Municipal Code addresses the use of or encroachment into public ROWs for private uses. The City requires approval of a Public ROW Permit for the construction of privately owned structures or facilities within the public ROW.

The Mobility Element of the City of San Diego General Plan provides measures for improving the efficiency of the city's transportation system and facilitates the long-term planning required to improve mobility through the development of a balanced, multi-modal transportation network, while minimizing potential environmental and neighborhood impacts. The Mobility Element is aimed at creating a system wherein each mode of transportation contributes to an overall goal of providing transit services that meet varied user needs, while implementing a strategy to reduce traffic congestion and provide increased transportation choices with consideration for varying land use types. The City of San Diego also utilizes a Traffic Impact Study Manual, which provides acceptable level of service (LOS) standards for the city, as well as triggers and guidelines for the preparation of traffic studies.

SANDAG's 2030 San Diego Regional Transportation Plan: Pathways for the Future was approved in October 2011 and provides guidance for the establishment of a coordinated transportation system for the greater San Diego area. The plan is intended to connect and improve the regional transportation network of freeways, public transit, and roadways.

Existing Roadway Network

The Proposed Project is located in a primarily industrial and commercial area within the City of San Diego. Figure 3-1: Project Location Map in Chapter 3 – Project Description depicts the location of the Proposed Project area and the existing roadway network. A list of roadways that are adjacent to the Proposed Project and that may be used for construction equipment travel has been included in Table 4.16-1: Public Roadways Adjacent to the Proposed Project Area. This list also includes the classification, number of lanes, LOS information (where available), and the allowable increase in traffic volume for each roadway per the City of San Diego Traffic Impact Study Manual.

I-5 is a major north-south transportation corridor located approximately 150 feet east of the Proposed Project area. It is an eight-lane divided freeway with a posted speed limit of 70 miles per hour. I-5 will serve as the main route to the Proposed Project area. Construction vehicles and equipment will likely utilize the South Kettner Boulevard and the North India Street exits from I-5 to access the Proposed Project.

Within the Proposed Project area, Vine Street, Sassafras Street, West Laurel Street, and West Hawthorn Street are local public streets that run east-west; Kettner Boulevard, California Street, and Pacific Highway run north-south. Access to the Vine Substation will be accomplished from Vine Street during construction via the existing driveway. Access to the 69 kV loop-in will primarily occur from Vine Street, California Street, and Pacific Highway.

Table 4.16-1: Public Roadways Adjacent to the Proposed Project Area

Roadway	Cross Street	Number of Lanes	Average Weekday Traffic Volume	LOS a.m./p.m. Peak	Allowable Increase in Volume/Capacity Ratio
Vine Street	Kettner Boulevard and California Street	2	Not Available (NA)	NA	NA
Kettner Boulevard	Vine Street	3	19,300	C	0.04
California Street	Vine Street	2	NA	NA	NA
Pacific Highway	Sassafras Street	6	23,000	A	0.10
Sassafras Street	Kettner Boulevard and Pacific Highway	3	9,700	C	0.04
West Laurel Street	Kettner Boulevard and Pacific Highway	4	14,600	E/F	0.02
West Hawthorn Street	Kettner Boulevard and Pacific Highway	3	25,200	C	0.04

Source: SANDAG, 2008; City of San Diego Traffic Impact Study Manual.

Railway

The North Country Transit District (NCTD) Coaster provides commuter rail service to the Proposed Project area. The Coaster tracks are located immediately adjacent to and west of the proposed Vine Substation. These tracks will also be spanned by the 69 kV loop-in's overhead conductors. The service links the North County and the City of San Diego and operates more than 20 Coaster trains each weekday, with 10 trains operating on Saturdays. The Coaster does not operate regular service on Sundays.

Amtrak California (a service of Caltrans and Amtrak) operates the Pacific Surfliner train, which runs from San Luis Obispo to the Santa Fe Depot in the City of San Diego. The tracks along which the Amtrak trains travel are owned by the BNSF Railway. In the vicinity of the Proposed Project, Amtrak is located adjacent to the Coaster; therefore, it will be located directly adjacent to and west of the proposed Vine Substation. These tracks will also be spanned by the 69 kV loop-in's overhead conductors. The Pacific Surfliner runs between five and seven trains on a daily basis, generally between 5:50 a.m. and 12:59 p.m.

Airports

San Diego International Airport (also known as Lindberg Field) is located directly adjacent to and west of the Proposed Project. This airport operates approximately 600 arrivals and departures daily along a single runway that measures approximately 9,400 feet long. The airport is operated by the San Diego County Regional Airport Authority.

Bus

Bus service to the Proposed Project area is provided by the San Diego Metropolitan Transit System (MTS). Routes serving the immediate Proposed Project area include routes 10, 30, and 150. The closest bus stop is located on Washington Street, which is located approximately 0.3 mile north of the Proposed Project. This bus stop is serviced by Route 10. There are no bus routes that travel adjacent to the Proposed Project area along Kettner Boulevard.

Trolley

The MTS Trolley's Green Line connects downtown San Diego in the south to the City of Santee in the northeast. This trolley line is located adjacent to the Proposed Project area, and runs along California Street. The nearest stations are the Washington Street Station and the Middletown Station. Westbound weekday service from the Santee station to downtown begins at 5:04 a.m. and continues until 11:19 p.m., with trolleys departing every 15 minutes. Eastbound weekday service from the Downtown Station (12th and Imperial) to Santee begins at 4:51 a.m. and continues until 11:36 p.m., with trolleys departing every 15 minutes.

Bicycle Facilities

The City of San Diego designates and maintains three types of bicycle facilities—bike paths, bike lanes, and bike routes. Within the vicinity of the Proposed Project site, an existing bikeway runs along Pacific Highway. The bikeway is designated as a Class III bike route (i.e., shared use with motor vehicle traffic within the same travel lane) north along Pacific Highway to Washington Street. At Washington Street, the bikeway becomes a Class II bike lane (i.e., exclusive bicycle travel as defined by pavement striping) and continues north toward Mission Bay.

4.16.3 Impacts

Significance Criteria

Activities associated with construction of the Proposed Project will have the potential to affect existing traffic patterns or cause traffic delays due to the transport of equipment and materials to and from the Proposed Project area. Due to the nature of the proposed land use, traffic resulting from operation and maintenance activities of the proposed Vine Substation and associated components will generate minimal effects on the existing circulation system, as typically a limited amount of vehicular activity (i.e., less than one vehicle trip per day) will be required over the long-term. As a result, the following analysis of Proposed Project-related traffic impacts is generally focused on the construction phase. Operational impacts are addressed and analyzed, where appropriate, with regard for the significance criteria.

According to Appendix G of the California Environmental Quality Act Guidelines, impacts to transportation and traffic would be considered significant if the Proposed Project:

- Results in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the circulation system
- Results in a conflict with an applicable congestion management program
- Results in a change in air traffic patterns
- Results in a substantial increase in hazards due to design feature or incompatible uses
- Results in inadequate emergency access
- Conflicts with adopted policies, plans, or programs supporting alternative transportation

Question 4.16a – Circulation Plan or Policy Conflicts

Construction – Less-than-Significant Impact

Construction of the Proposed Project will not result in a conflict with relevant circulation plans or policies establishing measures of effectiveness for the performance of the circulation system. While lanes of travel along Kettner Boulevard will be closed to traffic during the relocation of the distribution circuits, this work will be short-term in nature and will occur at night when vehicle, bicycle, and pedestrian traffic is at its lowest level. In addition, at least one lane of travel through construction areas will always remain open to circulation for cars, buses, bicycles, and pedestrians utilizing the public ROW, as will be consistent with requirements of the Proposed Project's Public ROW Permit. Because the Proposed Project will comply with all requirements of the Public ROW Permit, there will be no conflict and no impact.

No policies or requirements related to the Proposed Project were identified within the SANDAG 2030 San Diego Regional Transportation Plan: Pathways for the Future. The Proposed Project will comply with Policy ME-A.5 of the Mobility Element of the City of San Diego General Plan. This policy states that adequate sidewalk widths and clear paths of travel should be provided for pedestrian usage, and obstructions and barriers that inhibit pedestrian circulation should be minimized. While temporary sidewalk closures may be required as part of the Proposed Project during relocation of the 12 kV distribution lines and extension of the telecommunication system, this work is anticipated to occur at night when pedestrian traffic will be limited. In addition, alternative pedestrian walking routes around construction areas will be provided during any closures. Vaults and hand holes associated with the 12 kV distribution relocation and telecommunication system extension will be placed underground and any aboveground fixtures will be placed so that they do not obstruct pedestrian circulation in the area. Thus, the Proposed Project is consistent with Policy ME-A.5, and there will be no impact.

Construction of the Proposed Project will not impact policies related to mass transit providers, as no such policies were identified that relate to the Proposed Project. While new poles associated with the 69 kV loop-in will be placed adjacent to the Coaster, Amtrak, and Trolley rail lines west of the proposed Vine Substation site, construction will not conflict with any policies related to the rail system operation. Stringing the overhead line from the new poles into the proposed Vine Substation will be conducted over the rail tracks and could potentially impact the operation of the trains and Trolley. However, SDG&E will coordinate with rail transit providers to conduct work at night (or during other transit provider-preferred times) when train service is less

frequent. SDG&E will obtain the necessary Right-of-Entry permits from the NCTD and MTS, as well as a License Agreement from the NCTD, and a Temporary Occupancy Agreement and a Utility Agreement License from BNSF Railway. As a SDG&E ordinary construction restriction, the Proposed Project will comply with all requirements of applicable encroachment permits and approvals; therefore, impacts from conflicts with applicable plans and policies will be less than significant.

Operation and Maintenance – No Impact

Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. No alternative modes of transportation such as rail, bus, or bicycle traffic or pedestrian circulation patterns would be altered or adversely affected by long-term operation and maintenance activities. As such, no impact will occur.

Question 4.16b – Congestion Management Program Conflict

Construction – Less-than-Significant Impact

The City of San Diego Traffic Impact Study Manual provides acceptable LOS standards for the city. For roadways and intersections in the urban areas of the city, the acceptable LOS standard is D, and the LOS standard in undeveloped areas is C. Table 4.16-1: Public Roadways Adjacent to the Proposed Project Area shows the LOS levels of the roadways in the Proposed Project area and provides the allowable increase of the volume/capacity ratio that will trigger a significant impact. It is anticipated that up to 33 workers will be employed for the site development phase of the Proposed Project. Between 12 and 24 workers are expected during the foundation and below-grade work, as well as the construction of the proposed Vine Substation. The 12 kV distribution relocation will require between 12 and 20 workers. Final testing and checkout will require nine electricians and/or engineers. Construction workers' daily transportation is not expected to cause a significant impact because Proposed Project-generated traffic will be minimal, will occur over the course of the day, and will not result in an increase of the volume/capacity ratio to the point that a significant impact will occur, per the City of San Diego Traffic Impact Study Manual.

Vehicle trips generated by construction personnel will generally occur with workers arriving at the site in the morning and leaving the site at the end of the day, with limited worker-related trips to or from the worksite during the course of the day. It is estimated that construction personnel will generate a maximum of 63 personal vehicle trips per day during peak construction times. On average, approximately 33 personal vehicle trips per day will be required. To reduce the potential number of daily worker-related vehicle trips to and from the site, SDG&E will encourage carpooling to the greatest extent possible.

It is anticipated that construction of the Proposed Project will require a maximum of 27 truck trips per day during the three months of proposed substation grading. In addition, approximately five additional trips per day are anticipated for the delivery of materials and equipment for the duration of construction. All construction vehicles and equipment will enter the proposed Vine Substation site from Vine Street. Although some disruption to traffic flow may occur when trucks ingress or egress the proposed Vine Substation site, such events will be periodic and temporary. As needed, signage or flagmen may be utilized to reduce potential disruptions to traffic flow and to maintain public safety during construction.

As described previously, lanes of travel within Kettner Boulevard will be limited during relocation of the 12 kV distribution circuits, which could impact the LOS in the area. However, this work will be short-term in nature, lasting up to a few weeks at a time, and will occur at night when vehicle traffic is at its lowest level. Trenching operations will be staged in intervals so that only a maximum of 500 feet of trench will be left open at any one time, or as allowed by permit requirements, thus the overall impact will be limited. In addition, SDG&E will coordinate with the City of San Diego through the Public ROW Permit process and comply will all requirements of the Proposed Project's Public ROW Permit. SDG&E, as part of their ordinary construction restrictions, will prepare and implement a Traffic Management Plan to further reduce potential impacts. As required by the City of San Diego, the Traffic Management Plan will provide a detailed drawing of the area where work will occur—including any transition area, buffer space, work area, and termination area—directional signage to be posted, a detour plan (if required), and a pedestrian and bicycle plan.

Because the increase in vehicle trips potentially generated by the Proposed Project during construction will add an insignificant percentage of traffic to surrounding roadways and will not trigger a significant impact per the City of San Diego Traffic Impact Study Manual, and because SDG&E will comply with the requirements of the Proposed Project's Public ROW Permit, there will be no conflict with congestion management programs and impacts as a result of conflicts with such programs will be less than significant.

Operation and Maintenance – No Impact

Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. Routine operations will require one to two workers in a light utility truck to visit the proposed Vine Substation on a daily or weekly basis. Vehicle trips associated with operation and maintenance activities will constitute a negligible increase in traffic in the area and will not affect roadway LOS or result in conflicts with other congestion management plans or policies. As a result, there will be no impact.

Question 4.16c – Air Traffic Changes

Construction – No Impact

At this time, helicopter use is not anticipated for the construction of the Proposed Project. Because no aircraft will be required for the Proposed Project, no changes to air traffic patterns will be required to accommodate construction. Thus, there will be no impact.

Because the Proposed Project is located within 20,000 feet of the San Diego International Airport, an FAA Obstruction Evaluation is required to be completed prior to construction, pursuant to Part 77 of the CFR and San Diego International Airport Land Use Compatibility Plan requirements. Because the 69 kV steel poles—which will reach approximately 100 feet high and are approximately 2,100 feet from the nearest active runway—will exceed the one-to-100 ratio required by 14 CFR Part 77.9 for airspace and navigation, SDG&E will consult with the FAA. The FAA will conduct an obstruction evaluation, for which the resulting requirements will be implemented by SDG&E. Therefore, it is not anticipated that the Proposed Project will result in a change in air traffic patterns or an increase in safety risks and no impact to air traffic will occur.

Operation and Maintenance – No Impact

Operation and maintenance activities will include routine inspections, ongoing maintenance, and repairs necessary to ensure that integrity of the system is maintained over the long-term. Inspections may occur in the form of aerial patrol through the use of helicopters, or through ground patrols visiting the facilities. Consistent with the approach toward other facilities in the area, if helicopters are used to assist with operation and maintenance activities, SDG&E will notify the FAA and any additional local agencies, as appropriate, prior to conducting maintenance activities requiring a helicopter. Therefore, no impact will occur.

Question 4.16d – Increase in Hazards

Construction – Less-than-Significant Impact

Construction of the Proposed Project will result in temporary traffic lane closures at night along Kettner Boulevard during the 12 kV distribution relocation and telecommunication system extension. Additional lane closures during the day will occur along Pacific Highway during the installation of new poles and conductor for the 69 kV loop-in. These lane closures could increase hazards if appropriate safety measures are not in place, such as proper signage, orange cones, and flaggers. However, SDG&E will obtain the required Public ROW Permit from the City of San Diego and will implement the traffic control measures articulated by that permit. While there may be a limited increase in hazards due to obstructions implemented as part of the lane closures, the closures will be temporary and will be conducted in compliance with City of San Diego safety standards and requirements. Therefore, impacts will be less than significant.

Operation and Maintenance – No Impact

New facilities are being placed within roadways as part of the 12 kV distribution relocation and telecommunication system extension; therefore, it is anticipated that the number of temporary lane closures necessary to accommodate routine operation and maintenance activities will likely increase to a small degree. While temporary roadway obstruction could result in increased hazards, the frequency and duration of these closures will be short-term and limited to a few times per year. In addition, SDG&E will implement necessary traffic control measures and Public ROW Permit requirements. Thus, any increase in hazards will be minimal and the impact will be less than significant.

Access to the proposed Vine Substation will occur primarily from Vine Street. The existing driveway that serves the current parking lot will be relocated approximately 50 feet southwest along Vine Street to connect to the proposed Vine Substation's interior access road. An existing driveway along Kettner Boulevard will also be relocated approximately 125 feet southeast and will provide secondary access to the proposed Vine Substation. The relocated driveways will be constructed in compliance with current standards for width and sight-distance visibility and will be similar to other commercial driveways in the immediate vicinity. Because the relocated driveways will be constructed in accordance with required standards and primary access will occur from a street with limited traffic, the potential for increased hazards will be less than significant.

Question 4.16e – Emergency Access Effects

Construction – Less-than-Significant Impact

Emergency access will not be directly impacted during construction because all streets will remain open to emergency vehicles at all times throughout construction. Although lane closures along Kettner Boulevard will occur during relocation of the distribution circuits, at least one lane will remain open to provide access for emergency vehicles. Further, SDG&E will coordinate with adjacent businesses and local emergency providers to ensure that ingress and egress routes are maintained for the duration of Proposed Project construction. In addition, construction of the proposed Vine Substation will not require any road closures and no improvements to public roadways are required. Therefore, impacts to emergency access will be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project are not expected to generate additional traffic on area roadways, as compared to existing conditions. While temporary road closures could increase due to maintenance activities for the 12 kV distribution relocation and telecommunication system extension, the closures will be limited and short-term, as described previously. In addition, emergency vehicle access will always be provided during operation and maintenance activities. As such, no impacts on emergency vehicle access will occur during operation and maintenance activities for the Proposed Project.

Question 4.16f – Alternative Transportation Conflicts

Construction – Less-than-Significant Impact

The Proposed Project is located in a highly urbanized area. Construction will occur within the public ROW and on SDG&E-owned land. The Proposed Project will not involve any activities that will conflict with alternative transportation policies, plans, or programs, including bus transportation in the area. SDG&E will obtain Public ROW Permits to conduct work within the public ROW and will ensure that access for pedestrians and bicyclists is provided during construction. Rail tracks utilized by the Coaster, Amtrak, and Trolley are located adjacent to the proposed Vine Substation site, and conductor pulling activities will occur over the tracks, which could impact operations of these rail services. However, SDG&E will coordinate with the rail agencies to conduct work at night (or during other transit provider-preferred times, as feasible) to minimize rail service disruptions or delays. Therefore, impacts to alternative transportation modes will be less than significant.

Operation and Maintenance – No Impact

The operation and maintenance activities for the Proposed Project will not change from current practices that are conducted on other facilities located in the vicinity, which require less than one vehicle trip, on average, per day. Rail, bus, and bicycle traffic are not affected by current operation and maintenance activities, and there will be no change to the activities as a result of the Proposed Project. Therefore, no impact will occur.

4.16.4 Applicant-Proposed Measures

Any impacts resulting from conflicts with applicable transportation-related policies as a result of construction of the Proposed Project will be less than significant. In addition, the Proposed

Project will not create significant air traffic or transportation-related hazards or result in a significant impact to emergency access in the area. As such, no applicant-proposed measures are proposed.

4.16.5 References

City of San Diego. 2013 Bicycle Master Plan. Online. https://www.sandiego.gov/planning/programs/transportation/mobility/pdf/sdbmpu_final_draft_july_2013.pdf. Site visited February 28, 2014.

City of San Diego. *General Plan*. 2008. Online. http://www.sandiego.gov/planning/genplan/pdf/generalplan/adoptedtoc.pdf. Site visited December 6, 2013.

City of San Diego. *Midway/Pacific Highway Corridor Community Plan*. Online. http://www.sandiego.gov/planning/community/profiles/midwaypacifichwycorridor/pdf/midwayfullversion.pdf. Site visited December 6, 2013.

City of San Diego. Traffic Impact Study Manual. Online. http://www.sandiego.gov/development-services/pdf/industry/trafficimpact.pdf. Site visited March 4, 2014.

SANDAG. 2030 San Diego Regional Transportation Plan: Pathways for the Future. Online. http://sandag.org/uploads/publicationid/publicationid_1342_7635.pdf. Site visited March 3, 2014.

SANDAG. Average Weekday Traffic Volumes. 2008. Online. http://www.sandag.org/resources/demographics_and_other_data/transportation/adtv/index.asp. Site accessed March 3, 2013.

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4.17 UTILITIES AND SERVICE SYSTEMS

Would the Proposed Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?				✓
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?				✓
d) Have sufficient water supplies available from existing entitlements and resources to serve the project from existing entitlements and resources, or are new and expanded entitlements needed?				✓
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓

4.17.0 Introduction

This section describes local utility services and infrastructure—including cable television and telephone, water treatment, water supply availability, sewer, solid waste disposal, and electricity services—in the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt Substation Project (Proposed Project). The Proposed Project will not require the

use of public utilities during construction, operation, or maintenance activities, with the exception of minimal water use during construction activities to control dust on non-paved portions of the Proposed Project area. A temporary tap to an existing distribution line may be installed to provide electrical service to the staging area within the proposed Vine Substation during construction. This temporary tap may be used to power construction trailers, lighting, or small hand-held machinery or tools until the substation is energized. The Proposed Project will generate a limited amount of solid waste during construction; which will ultimately be transported to nearby licensed landfill. Construction of the Proposed Project will not substantially increase the existing velocity or volume of storm water flows either on-site or in off-site areas. Areas disturbed during grading will be restored to their original contours, and the surrounding area will be repaired, as appropriate. Therefore, the Proposed Project will result in less-than-significant impacts to utilities and service systems.

4.17.1 Methodology

Information regarding local utilities was obtained from the City of San Diego's General Plan and Urban Water Management Plan. Internet searches were also conducted to gather information regarding utility service providers in the vicinity of the Proposed Project.

4.17.2 Existing Conditions

Potable Water

Water service within the City of San Diego is provided by the Public Utilities Department through a purchase agreement with the San Diego County Water Authority (SDCWA)—a wholesale water agency that provides imported water to its 24 member agencies. The SDCWA, in turn, purchases the majority of its water from the Metropolitan Water District of Southern California (MWD), which is comprised of 26 cities and water agencies serving 18 million people in six counties. The MWD imports water from two primary sources: from the Colorado River via the MWD's Colorado Aqueduct and from Northern California via the State Water Project (SWP). Water is delivered to Southern California by way of the MWD's approximately 242-mile-long aqueduct, which transports Colorado River water from Lake Havasu to MWD's service area. In addition, water from Northern California is delivered to Southern California through an approximately 444-mile-long aqueduct. The water is captured in reservoirs north of Sacramento and released through natural rivers and streams into the Sacramento-San Joaquin Delta. The MWD then blends the Colorado River and SWP water at a facility in Riverside County and transfers the untreated water via pipelines operated by MWD and SDCWA to the city's three treatment facilities—the Miramar Water Treatment Plant, the Alvarado Water Treatment Plant, and the Otay Water Treatment Plant.

Water within the City of San Diego is also obtained from the City's local water supplies consisting of nine surface water reservoirs with more than 408,000 acre-feet of capacity, eight of which are connected directly or indirectly to the city's three water treatment facilities. The geographic areas served by the three water treatment facilities are flexible such that various areas within the City of San Diego can be supplied by more than one of the treatment plants.

Water Drainage Facilities

As described in Attachment 4.4-B: Biological Survey Memo, small concrete-lined drainage designed for storm water conveyance is located on the west side of the proposed Vine Substation site. The channel is an approximately 12-inch wide concrete v-ditch that was designed for storm water conveyance. There was no vegetation or accumulated sediment observed within the channel. No other drainage facilities are located in the Proposed Project area or in the immediate area surrounding the Proposed Project.

Electricity

Electricity in the City of San Diego is provided by SDG&E.

Cable and Telephone

Telephone, wireless phone, video/cable, and internet services are available from AT&T for residents within the Proposed Project area. Cox Communications and Time Warner Cable also provide cable, broadband, and phone services.

Sewer

The Metropolitan Wastewater System provides sewer services to the City of San Diego and 15 other cities and districts from a 450-square-mile are with a population of over 2.2 million. An average of 180 million gallons of wastewater is treated daily. Wastewater is conveyed through approximately 2,987 miles of collection pipelines and 83 pump stations to the North City Water Reclamation Plant, the Point Loma Wastewater Treatment Plan, and the South Bay Water Reclamation Plant. Treated effluent is discharged to the Pacific Ocean through two ocean outfalls. Solids from the wastewater treatment plants are processed at the Metro Biosolids Center located at the Marine Corps Air Station Miramar.

Solid Waste

Non-recyclable solid waste disposal in the City of San Diego is accommodated by the Miramar Landfill—a city-operated landfill. The Miramar Landfill is the City of San Diego's only active landfill and is located north of Highway 52 at 5180 Convoy Street. The Miramar Landfill accommodates approximately 910,000 tons of waste per year and is expected to reach capacity by the year 2022. The Miramar Landfill is owned and operated by the City of San Diego, which also provides solid waste curbside pick-up service within city limits. Currently, only two other landfills provide disposal capacity within the urbanized region—Allied Waste's Sycamore and Otay landfills. The Sycamore Landfill is located to the east of the Proposed Project, within the City of San Diego's boundaries, and the Otay Landfill is located south of the Proposed Project in the City of Chula Vista.

4.17.3 Impacts

Significance Criteria

Potential impacts to public utilities and service systems were determined in accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Impacts to public utilities and service systems would be considered significant if the Proposed Project:

- Exceeds wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB)
- Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities
- Requires or results in the construction of new storm water drainage facilities or the expansion of existing facilities
- Results in the need for a new or expanded water supply
- Results in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Proposed Project's projected demand
- Results in inadequate access to a landfill with sufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs
- Causes a breach of national, state, or local standards relating to solid waste

In addition to the guidelines specified in Appendix G, the Proposed Project would have significant adverse impacts to public utilities and service systems if it resulted in the disruption of existing utility systems.

Question 4.17a – Wastewater Treatment Requirement Exceedances

Construction – No Impact

Construction of the Proposed Project will not generate wastewater. Portable toilets will be provided for on-site use by construction workers and will be maintained by a licensed sanitation contractor. Portable toilets will be used in accordance with applicable sanitation regulations established by the Occupational Safety and Health Administration, which generally requires one portable toilet for every 10 workers. The licensed contractor will dispose of the waste at an off-site location and in compliance with standards established by the RWQCB.

No dewatering is anticipated during construction. However, in the event that groundwater is encountered, dewatering may be necessary. The water will be pumped to a desiltation tank and tested to ensure compliance with the RWQCB National Pollutant Discharge Elimination System requirements. The water will be discharged to land, transported to a nearby sewer inlet, or disposed of at an approved SDG&E disposal site. As a result, it will not require treatment at a wastewater facility and no impact will occur.

Operation and Maintenance – No Impact

Long-term operation and maintenance of the proposed Vine Substation will not generate wastewater. The substation will be unstaffed and no sanitary facilities that require waste treatment will be constructed on site. Thus, no impact will result.

Question 4.17b – Water and Wastewater Treatment Facility Expansion

Construction – No Impact

As part of SDG&E's ordinary construction restrictions, water will be applied to non-paved portions of the Proposed Project area to control dust. Because this water will be dispersed on site and will either evaporate or be absorbed into the ground, no wastewater is anticipated. In addition, portable restrooms will be used and maintained during construction and removed after the completion of the Proposed Project. Construction of the Proposed Project will not require additional capacity to existing municipal water or wastewater treatment systems and, therefore, will have no impact on these systems.

Operation and Maintenance – No Impact

Wastewater will not be generated by long-term operation and maintenance of the Proposed Project. Water use will be limited to irrigation of any on-site landscaping associated with the facilities. No sanitation facilities will be located on site and, therefore, no impact will occur.

Question 4.17c – Stormwater Drainage Facilities

Construction – No Impact

Construction-related activities will result in minor deviations to the existing drainage patterns on site, due to grading, and will have the potential to temporarily contribute additional runoff water to existing or planned storm water drainage systems during construction. The Proposed Project site is currently paved and relatively flat and will be graded with minimal slope, similar to the existing slope found on site. Therefore, such changes will not substantially increase the existing velocity or volume of storm water flows either on-site or in off-site areas. All areas outside of the proposed Vine Substation parcel that will be disturbed during grading will be restored to their original contours, and the surrounding area will be repaired, as appropriate. To reduce potential impacts to water quality from runoff during construction activities, SDG&E will implement measures from its Water Quality Construction Best Management Practice (BMP) Manual. In addition, SDG&E will obtain coverage under the State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-DWQ. SDG&E will implement the Proposed Project's Storm Water Pollution Prevention Plan to reduce impacts to municipal storm water drainage facilities. The use of BMPs during construction activities to control runoff will not necessitate the construction of new storm water drainage facilities or expansion of existing facilities. Therefore, no impact will occur.

Operation and Maintenance – No Impact

On-site drainage patterns established during construction will generally remain unchanged with long-term operation and maintenance of the proposed Vine Substation. The proposed grading improvements are not anticipated to result in impacts from increased on- or off-site erosion or siltation. As such, no impacts to drainage facilities will result.

Question 4.17d – Water Supply Availability

Construction – No Impact

Minimal water will be required during site grading and below-grade construction activities to control dust on non-paved portions of the Proposed Project area. Water will be brought to the site in trucks specially equipped to allow for the dispersal of water. Approximately 1,440,000 total gallons of water will be required for these activities. Water for the trucks will be obtained from municipal water sources. The City of San Diego has approximately 78 billion gallons of water available in its water supply during a normal year; therefore, a sufficient water supply is available to meet water demands for construction needs. The demand for water will be temporary and short-term, and no new entitlements will be required. Therefore, no impact will occur.

Operation and Maintenance – No Impact

Water use will be limited to irrigation of any on-site landscaping associated with the facilities (i.e., revegetative groundcover or landscape screening). This small quantity of water will be obtained from municipal sources. As a result, no impact will occur.

Question 4.17e – Wastewater Treatment Capacity – *No Impact*

As previously addressed in the responses to Questions 4.17a and 4.17b, construction, operation, and maintenance of the Proposed Project will not generate wastewater. Therefore, no impact will occur.

Question 4.17f – Landfill Capacity

Construction – Less than Significant Impact

The Proposed Project will generate a limited amount of solid waste during construction (i.e., refuse, spoils, trash, poles, etc.). All waste will ultimately be transported to the Miramar Landfill or another approved facility and disposed of properly and in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste disposal. The Miramar Landfill has sufficient capacity to accommodate the amount of waste anticipated to be generated during construction. Therefore, impacts will be less than significant.

Operation and Maintenance – No Impact

The operation and maintenance of the Proposed Project will generate a limited amount of solid waste. The proposed substation will not require staff and will not produce waste. The only waste generated will be associated with operational equipment maintenance, crew lunches, and packaging material associated with replacement parts. Excess material or waste resulting from the repair or replacement of a structure or equipment (e.g., replacement of an insulator) will be taken to an existing SDG&E maintenance yard and will either be reused, recycled, or disposed of in accordance with federal, state, and local statutes and regulations. Any remaining waste will be minimal and will be properly disposed of at an approved landfill. Therefore, no impact will occur.

Question 4.17g – Solid Waste Statutes and Regulations

Construction – No Impact

Construction of the Proposed Project will generate a minimal amount of solid waste (i.e., refuse, spoils, trash, poles, etc.). As previously discussed in the response to Question 4.17f, solid waste produced during construction will be disposed of at a nearby licensed landfill. Management and disposal of solid waste will comply with all applicable federal, state, and local statutes and regulations. Thus, the Proposed Project will not violate any solid waste statutes or regulations, and there will be no impact.

Operation and Maintenance – No Impact

Handling and disposal of all waste products associated with operation and maintenance activities will comply with all applicable statutes and regulations. Therefore, no impact will occur.

4.17.4 Applicant-Proposed Measures

Because no potentially significant impacts relative to utilities and service systems will result from the Proposed Project, no applicant-proposed measures are provided.

4.17.5 References

California Public Utilities Commission. Memorandum. *Applicants Filing Proponent's Environmental Assessment*. November 24, 2008.

California Resources Agency. 2007. Title 14 California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act. CEQA Guidelines.

City of San Diego. 2008. *General Plan*. Online. http://www.sandiego.gov/planning/genplan/#genplan. Site visited December 5, 2013.

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City of San Diego. Environmental Services Department. Miramar Landfill. Online. http://www.sandiego.gov/environmental-services/miramar/index.shtml. Site visited December 5, 2013.

SDCWA. Water Supplies. Online. http://www.sdcwa.org/water-supplies. Site visited December 5, 2013

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4.18 CUMULATIVE ANALYSIS

4.18.0 Introduction

This chapter discusses potential cumulative impacts related to the construction and operation of the proposed San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project). As discussed in Chapter 2 – Purpose and Need, the purpose of the Proposed Project is to ensure that SDG&E maintains the reliability of the substation and distribution system in downtown and the surrounding area, provide added capacity to serve existing and future area load growth, and to prevent potentially long outages or disruption of service to existing and new customers in downtown San Diego and the surrounding area. Implementation of the Proposed Project will not result in a significant cumulative environmental impact in any of the resource areas evaluated under the California Environmental Quality Act (CEQA).

4.18.1 Significance Criteria

Section 15130(a)(1) of the CEQA Guidelines define a cumulative impact as one "which is created as a result of the project…together with other [past, present, and future] projects causing related impacts." Impacts will be considered significant if they exceed the individual criterion established for each resource area, as described in Sections 4.1 through 4.17; if this occurs, the Proposed Project's contribution will be analyzed to determine whether it is cumulatively considerable (Guidelines § 15064(h)(1)). Section 15064(h)(1) of the CEQA Guidelines further explains that "when assessing whether a cumulative effect requires an [Environmental Impact Report], the lead agency shall consider whether the cumulative impact is significant and [whether] the project's incremental effect, though individually limited, is 'cumulatively considerable.'" Applying this qualitative standard necessarily requires application of judgment based on the facts of a particular project subject to CEQA. Further, the significance of an impact may be weighed against the overall effect as both increases and decreases in impacts may balance one another. As noted in Section 15064(h)(4), the CEQA Guidelines, "the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable."

4.18.2 Timeframe of Analysis

For the purpose of this cumulative impacts analysis, the Proposed Project is defined in terms of construction duration and post-construction operation and maintenance. SDG&E anticipates that construction of the Proposed Project will take a total of approximately 19 months. Construction of the proposed Vine Substation is anticipated to begin in January 2016. The operational lifetime of the Vine Substation is anticipated to be approximately 40 years.

4.18.3 Area of Analysis

A list of past, present, and planned future projects within one mile of the Proposed Project has been developed in accordance with CEQA Guidelines Section 15130(b). Potential cumulative impacts were analyzed within one mile of the Proposed Project components because this distance was estimated to be the farthest that Proposed Project impacts will extend.

4.18.4 Methodology

Existing conditions and reasonably foreseeable projects were identified within a one-mile radius of each Proposed Project component. Information was gathered from Internet searches of local planning department and state agency websites and correspondence with agency staff. The websites of the following entities were reviewed, and/or these agencies were contacted regarding development projects, road and utility improvement projects, and capital investment projects:

- California Energy Commission (CEC),
- California Department of Transportation (Caltrans),
- California Independent System Operator (CAISO),
- California Public Utilities Commission (CPUC),
- City of San Diego,
- County of San Diego,
- San Diego International Airport, and
- San Diego Unified Port District (Port District).

4.18.5 Existing/Operating Projects

Land uses surrounding the Proposed Project are characterized by light- and medium-industrial and office uses, parking lots, and rental car facilities. The Proposed Project site is bordered to the north by Vine Street and a commercial printing business across Vine Street, to the south by an Advantage Rental Car facility, to the east by Kettner Boulevard, and to the west by the Amtrak, North County Transit District Coaster and San Diego Metropolitan Transit System Trolley railroad tracks. As such, the existing and operating projects in the area consist mainly of commercial, industrial, and transportation activities, existing utility infrastructure operation and maintenance, and ongoing road maintenance.

4.18.6 Foreseeable Projects Inventory

For the purposes of this document, "reasonably foreseeable" refers to projects that federal, state, or local agency representatives have knowledge of resulting from the formal application process. Table 4.18-1: Planned and Proposed Projects Within One Mile lists 15 known projects that are within one mile of all of the Proposed Project components. An approximately one-mile radius is appropriate based on the size, location, and the minimal impacts associated with the Proposed Project. Given the approximately 1.5-acre size of the proposed substation site and its use strictly as a substation, it does not have the potential to change land use patterns in the area. The Proposed Project is located adjacent to the Interstate (I-) 5 freeway and east of Pacific Highway and is physically separated from any development projects to the west. The Proposed Project is also surrounded by existing commercial and industrial developments. Finally, the Proposed Project site has been previously disturbed as a result of the construction of a long-term parking lot. As an unstaffed substation, the Proposed Project will not generate a substantial amount of traffic that will be distributed into nearby intersections and roadways. For these reasons, the approximately one-mile radius is an appropriate distance to determine the potential for other reasonably foreseeable projects to be cumulatively considerable.

Table 4.18-1: Planned and Proposed Projects Within One Mile

Project	Approximate Location	Approximate Distance from the Proposed Project	Project Description/Size	Anticipated Construction Schedule	
				Start	End
San Diego County Regional Airport Authority Parking	North side of San Diego International Airport, west of Pacific Highway	0.25 mile	Construction of a public surface parking lot, which includes 1,964 parking spaces, three approximately 44-square-foot parking control kiosks, two approximately 60-square-foot shuttle bus shelters, an approximately 750-square-foot portable office trailer, an approximately 64-square-foot portable guard booth, an approximately 80-square-foot maintenance shed, fencing, landscaping, and approximately 35,606 cubic yards of grading (14,753 cubic yards of cut and 20,853 cubic yards of fill); and construction of an interior circulation road and associated utilities to provide access to the proposed parking lot	2013	2014
San Diego County Airport North Side Development Project – Fixed-Base Operator (FBO) Building	North side of San Diego International Airport, west of Pacific Highway	0.3 mile	Construction of a state-of-the-art FBO campus, with an approximately 20,000-square-foot terminal, an approximately 250,000-square-foot ramp, and five hangars on approximately 12.4 acres of airfield	2013	2014
San Diego County Airport North Side Development Project – Consolidated Car Rental Facilities	North side of San Diego International Airport, west of Pacific Highway	0.11 mile	Construction of an approximately 17-acre consolidated car rental facility	2013	2015

Project	Approximate Location	Approximate Distance from the Proposed Project	Project Description/Size	Anticipated Construction Schedule	
				Start	End
Pacific Highway Obstructed Curb Ramp Barrier Removal (Capital Improvement Project)	West side of Pacific Highway	0.35 mile	Installation of missing curb ramps at three locations along Pacific Highway: Frontage Road at Bandini Street, Estudillo Street, and Sutherland Street	2015	2015
Bayside Fire Station	1595 Pacific Highway (southeast corner of Pacific Highway and Cedar Street)	0.27 mile	Construction of a three-bay fire station	Not Available	Not Available
County Waterfront Park	Pacific Highway and Cedar Street	0.2 mile	Conversion of the existing, approximately eight-acre, on-grade parking lots north and south of the historic Administration Center to a large community and regional open space amenity. The park will include large civic greens, a children's play area, intimate garden rooms, and an expansive interactive fountain. Parking will be provided in a new underground parking garage off of Ash Street.	2012	2015
401 West Ash Street Hotel Development	Northeast corner of Ash, Colombia, and State streets	0.5 mile	Construction of a 410-room hotel, approximately 3,200 square feet of retail/commercial space, and 133 parking spaces.	2014	2016
Bella Pacifico Condominiums	Grape Street at Pacific Highway (1919 Pacific Highway)	0.12 mile	Construction of a 71-unit residential condominium development, approximately 3,200 square feet of retail and commercial space, and 118 parking spaces	Not Available	Not Available

Project	Approximate Location	Approximate Distance from the Proposed Project	Project Description/Size	Anticipated Construction Schedule	
				Start	End
Harbor View Hotel (Fat City)	Pacific Highway and Hawthorn Street	0.02 mile	Construction of a 364-room hotel	2013	2014
H.G. Fenton Development (India and Date Apartments)	Date Street between India Street and Columbia Street	0.25 mile	Construction of 97 apartment units and approximately 14,000 square feet of retail	Not Available	Not Available
Kettner and Ash Condominiums	Southwest corner of Kettner Boulevard and Ash Street	0.44 mile	Construction of 285 condominium residences and approximately 25,000 square feet of retail space	Not Available	Not Available
Lane Field North	900 West Broadway	0.72 mile	Construction of a 400-room, dual-branded hotel in a single building on the northern portion of the site fronting Pacific Highway, and an approximately two-acre public park on the western portion fronting Harbor Drive	Not Available	Not Available
Navy Broadway Complex	West side of Harbor Drive	0.84 mile	Development of approximately 1,265 square feet of office space, approximately 350,000 square feet of Navy office space, approximately 1,500 square feet of hotel space, approximately 160,000 square feet of retail space, and an approximately 40,000-square-foot museum	Not Available	Not Available
Pacific Highway and Broadway (Bosa Development)	East side of Pacific Highway at Broadway	0.72 mile	Construction of 232 condominium residences and approximately 16,000 square feet of retail	2014	2017
Palatine Apartments	North side of Fir Street between Columbia Street and State Street	0.19 mile	Construction of 101 apartment units	Not Available	Not Available

4.18.7 Potential Cumulative Impacts

This section discusses whether the Proposed Project will result in significant short-term or long-term environmental impacts when combined with other past, present, and planned and probable future projects in the area. Short-term impacts are generally associated with construction of the Proposed Project, while long-term impacts are those that result from permanent Proposed Project features or operation of the Proposed Project.

Construction, operation, and maintenance of the Proposed Project will not impact the following resources and, therefore, will not contribute to a cumulative effect in these areas:

- Agriculture and Forestry Resources,
- Biological Resources,
- Geology and Soils,
- Land Use and Planning,
- Mineral Resources,
- Population and Housing,
- Public Services,
- Recreation, and
- Utilities and Service Systems.

As a result, these resource areas were not further analyzed with regard to cumulative impacts.

Cumulative impacts to the following resources could occur as a result of construction of the Proposed Project in conjunction with the other planned and probable projects:

- Aesthetics,
- Air Quality,
- Cultural Resources,
- Greenhouse Gas Emissions,
- Hazards and Hazardous Materials,
- Hydrology and Water Quality,
- Noise, and
- Transportation and Traffic.

These resources are discussed further in the subsections that follow.

Aesthetics

Cumulative impacts to visual resources could occur where Proposed Project facilities are viewed in combination with other past, present, and probable developments. The significance of cumulative visual impacts depends on a number of factors, including the degree to which the viewshed is altered and the extent to which scenic resources in the area are disrupted due to either view obstructions or direct impacts to scenic resource features. The Proposed Project viewshed is defined as the general area from which it is visible or can be seen. For the purpose of this analysis, the potential effects on foreground viewshed conditions are emphasized. The

foreground is defined as the zone between 0.25 and 0.5 mile from the viewer. Landscape detail is most noticeable and objects generally appear most prominent when seen in the foreground.

The Proposed Project components will be located within an SDG&E right-of-way or within lands that are owned by SDG&E. The construction schedule for the Proposed Project could overlap with the construction schedules for three of the planned and proposed projects listed Table 4.18-1: Planned and Proposed Projects Within One Mile. An additional seven projects have construction timelines that are unknown and could overlap with the Proposed Project. These projects will increase the potential for adverse cumulative impacts to occur from construction equipment, vehicles, materials, staging areas, and project personnel. However, adverse visual impacts during construction will be temporary and are generally accepted by the public. While portions of the Proposed Project site will be visible during construction, surrounding lands are characterized by light- and medium-industrial and office uses, parking lots, and rental car facilities, and resulting visual impacts will be minimal when compared to the existing visual setting. In addition, the Proposed Project components are separated from the 401 West Ash Street Hotel Development by a distance of approximately 0.5 mile. The Pacific Highway Obstructed Curb Ramp Barrier Removal Project is located approximately 0.35 mile from the Proposed Project and will consist of minimal visual disturbances. While the San Diego County Airport North Side Development Project – Consolidated Car Rental Facilities Project will be located approximately 0.11 mile from the Proposed Project, these sites are separated by Pacific Highway and the San Diego International Airport to the west. In addition, views of construction from these cumulative projects would not likely be visible within the same view shed as the Proposed Project given the intervening topography and existing structures. These temporary aesthetic impacts will be cumulative; however, they are not expected to be significant.

Permanent cumulative visual impacts could occur as a result of project components being located near other proposed developments in the project area. Expected visual changes associated with the future development in the project area will result from a combination of the Proposed Project with other planned projects. Twelve of the projects identified in Table 4.18-1: Planned and Proposed Projects Within One Mile are located within 0.5 mile of the Proposed Project. However, from many locations in the surrounding area, views of the Proposed Project are partially or fully screened by intervening topography and structures. The Proposed Project will represent an incremental visual change to the urban landscape, and given the industrial setting, will not be particularly noticeable. The introduction of landscaping along Vine Street also results in a minor improvement to the streetscape. Further, the earth-toned masonry perimeter wall (in place of the chain link fence) that will be constructed as part of the Proposed Project will reduce visual clutter within this predominantly industrial landscape. In addition, the Proposed Project will not substantially affect views of the San Diego Bay or the downtown San Diego skyline. For these reasons, the Proposed Project is not expected to result in a cumulatively considerable impact to aesthetics.

Air Quality

The construction schedule for the Proposed Project and three of the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile could occur simultaneously. In addition, the construction schedules for seven additional projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile are unknown and could overlap with the Proposed

Project. As a result, a cumulative air quality impact could occur in the Proposed Project area during construction. SDG&E will implement ordinary construction restrictions to reduce emissions and dust during construction, as discussed in Section 4.3 Air Quality. Similarly, other projects within the study area will be required to comply with local ordinances and regulations regulating air quality, including dust control during construction activities. Measures will be required for the cumulative projects to reduce potential impacts on air quality to less than significant. As a result, cumulative impacts are expected to be less than significant.

In addition, a significant impact may occur if a project is inconsistent with the rules and regulations of the San Diego County Air Pollution Control District (SDAPCD) or if it induces growth in excess of that anticipated by the SDAPCD Regional Air Quality Strategy. Long-term operation of the proposed Vine Substation will not include any permanent, stationary sources of pollution, and will not induce population growth or area employment. Therefore, the Proposed Project will not contribute to a cumulatively considerable air quality impact associated with operation or power generation, or population growth.

Cultural Resources

Cumulative impacts to cultural resources could occur as a result of increased ground-disturbing activities by multiple projects within the study area. The results of the record search conducted for the Proposed Project indicate that no cultural resources or cultural resource sites are located within the Proposed Project area. However, ground-disturbing construction activities have the potential to inadvertently impact unknown cultural resources within the Proposed Project area. These activities disturb subsurface soils and can potentially disturb or destroy unknown buried cultural deposits (i.e., archaeological sites). However, the Proposed Project areas have been previously disturbed for the construction of the parking lot and roadways; therefore, the potential to discover unknown cultural resources is unlikely. All the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile will occur within areas that are previously disturbed/developed, and where no resources are likely to occur. As a result, no cumulative impacts are anticipated.

Although no known paleontological resources have been identified on the Proposed Project site, the site is located in an areas with a high potential—the Bay Point and San Diego formations—and moderate potential—within the Lindavista Formation—for discovery of a sensitive paleontological resource. As such, fossils may be encountered during excavation activities for the Proposed Project. However, due to the disturbed nature of the Proposed Project area, the likelihood of discovering buried paleontological resources is improbable. In addition, all projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile will occur within areas that are previously disturbed/developed, where the likelihood of encountering paleontological resources is unlikely. Regardless, SDG&E will implement the APMs discussed in Section 4.5.4 Applicant-Proposed Measures, which include implementation of a complete paleontological resource mitigation program that will reduce the Proposed Project's impacts to a less-than-significant level. For these reasons, the Proposed Project will not result in a cumulatively considerable impact to paleontological resources.

Operation and maintenance activities associated with the Proposed Project will be conducted in areas that were previously disturbed during construction of the Proposed Project. As a result, it

is not anticipated that cultural and paleontological resources will be encountered during such activities, and there will be no cumulative impact.

Hazards and Hazardous Materials

Cumulative impacts to hazards and/or hazardous materials can result from the construction of concurrent projects and the Proposed Project having an increased effect on public or worker safety, including exposure to hazardous materials, increased fire potential, or physical hazards. The Proposed Project and three of the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile could occur simultaneously. In addition, seven other projects do not have a defined timeline. As a result, several of these projects have the potential to result in a cumulative impact to overall hazards or hazardous materials when combined with the Proposed Project. Because each of these projects requires construction equipment, these projects have the potential to create a temporary impact from accidental releases of diesel and gasoline fuel, hydraulic fluids, and other hazardous liquids. While no impact is anticipated, there is a potential for accidental spills or leaks. Though this potential hazard will exist during construction, it is very unlikely that a spill will occur in the same immediate vicinity during a similar timeframe. Large releases of hazardous materials from multiple projects are highly unlikely with adherence to federal and state regulations. Small releases will be contained, cleaned up, and disposed of properly. As the nearest project that could be constructed during the Proposed Project's timeframe is approximately 0.11 mile away, the potential for accidental releases to result in a cumulative impact is low. As a result, a cumulative impact to hazardous materials is not anticipated.

Greenhouse Gas Emissions

The construction schedule for the Proposed Project and three of the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile could occur simultaneously. In addition, seven other projects do not have defined construction timelines. A cumulative greenhouse gas (GHG) impact in the Proposed Project area could occur during construction of these projects. The vehicles and heavy equipment used during construction will be the primary sources of these emissions. However, emissions generated during Proposed Project construction will be negligible when compared to existing baseline GHG emissions in the area. SDG&E will be required to adhere to the standards and requirements established by the SDAPCD to minimize the potential for the Proposed Project's construction activities to contribute to potential cumulative impacts with regard to GHG emissions. The other projects in the area will also be required to adhere to the SDAPCD standards and requirements. As such, impacts will be reduced to a less-than-significant level and will not be cumulatively considerable.

During operation, various projects may potentially contribute to GHG accumulation by emitting carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Projects that will contribute to GHG accumulation generally include those that will induce population growth, such as condominium developments and hotels. The Proposed Project, on the other hand, will not contribute to this cumulative impact because SDG&E already operates and patrols facilities in the area. As a result, no cumulative impact will occur.

Hydrology and Water Quality

Cumulative impacts to hydrology and/or water quality have the potential to result from increases in local groundwater use and alterations to the existing and natural drainage patterns of the landscape. All of the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile will be constructed in previously developed areas where there are no existing hydrological or natural drainage features. Pollutants or sediment disturbed during grading or construction could potentially enter the watershed and increase the potential for construction-related contaminants to reach surface water or groundwater. However, other planned or future projects within the cumulative study area will be required to conform to City of San Diego regulations and policies and/or the National Pollutant Discharge Elimination System General Construction Permit, which requires the implementation of best management practices to reduce potential construction-related (as well as long-term) impacts on hydrology and water quality to a less-than-significant level. As a result, a cumulative impact is not anticipated.

Noise

Construction of the Proposed Project and three of the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile could occur simultaneously. Seven additional projects could also occur in the same timeframe, as their construction schedules are currently not defined. The simultaneous construction of these projects could result in a cumulative impact to overall noise levels when combined with the Proposed Project. The Proposed Project components are separated from the 401 West Ash Street Hotel Development Project by a distance of approximately 0.5 mile. The Pacific Highway Obstructed Curb Ramp Barrier Removal Project is located approximately 0.35 mile away, and construction will be limited in duration. While the San Diego County Airport North Side Development Project – Consolidated Car Rental Facilities Project will be located approximately 0.11 mile from the Proposed Project, these sites are separated by Pacific Highway and the San Diego International Airport to the west. At these distances and with the existing dominant noise sources in area (e.g., San Diego International Airport, railroad use, and I-5), it is unlikely that construction noise from simultaneous projects would be discernable at a sensitive receptor. The construction-related noise levels from the Proposed Project will not exceed the 75 A-weighted decibel threshold from the City of San Diego's Noise Ordinance. In addition, noise-sensitive receptors will not experience a significant increase in ambient noise during construction activities. Impacts will be less than significant due to the short-term nature of the construction phase of the Proposed Project, the existing transportation-related ambient noise sources in the area, and the generally industrial setting of the area. Therefore, the Proposed Project is not anticipated to contribute to a cumulatively significant noise impact.

Long-term operation of the proposed Vine Substation will not significantly increase noise levels beyond the noise levels that presently exist in the area, because surrounding land uses (e.g., San Diego International Airport) and several roadways (e.g., I-5, Kettner Boulevard and Pacific Highway) currently experience high-volume traffic and associated vehicle noise. As a result, the Proposed Project's contribution to a significant cumulative noise impact will be minimal and the cumulative impact will be less than significant.

Transportation and Traffic

During the construction phase, cumulative traffic impacts will occur from projects that have overlapping construction timeframes. In this case, the Proposed Project will potentially overlap with three of the projects listed in Table 4.18-1: Planned and Proposed Projects Within One Mile. Seven additional projects could also overlap with Proposed Project construction as their construction timelines are unknown. Traffic could be increased in the surrounding area during concurrent construction of these projects. Within the Proposed Project area, Vine Street, Sassafras Street, West Laurel Street, and West Hawthorn Street are local public streets that run east to west; and Kettner Boulevard, California Street, and Pacific Highway run north to south. During construction, Vine Substation will be accessible from Vine Street via the existing driveway. Lanes of travel within Kettner Boulevard will be limited during relocation of the 12 kV distribution circuits, which could impact the level of service (LOS) in the area. However, this work will be short-term in nature and will occur at night when vehicle traffic is at its lowest level. In addition, all of the roadways within the Proposed Project area are currently operating at acceptable LOS standards—with the exception of West Laurel Street.

Due to the locations of the other cumulative projects, it is unlikely there will be overlapping traffic resulting in significant cumulative traffic impacts. Given the small and limited nature of the Pacific Highway Obstructed Curb Ramp Barrier Removal Project, it is unlikely to have significant overlapping traffic associated with its construction. The 401 West Ash Street Hotel Development Project activities will have the potential to overlap with the Proposed Project. However, this project is located approximately 0.5 mile away on the northeast corner of Ash, Columbia, and State streets and will not likely utilize the same roads as the Proposed Project. Construction of the San Diego County Airport North Side Development Project has the potential to increase traffic to surrounding roadways. Access to this project will likely be provided by Washington Street, Pacific Highway, and Midway Avenue. As a result, it is unlikely that significant transportation and traffic-related impacts will occur as a result of this project, when combined with the Proposed Project. Construction of the Proposed Project is not expected to cause a significant impact because Proposed Project-generated traffic will be minimal, will occur over the course of the day, and will not result in an increase of the volume/capacity ratio to the point that a significant impact will occur, per the City of San Diego Traffic Impact Study Manual. For these reasons, the Proposed Project's contribution to transportation and traffic impacts will not be cumulatively considerable.

Permanent cumulative impacts are not anticipated as a result of the Proposed Project in combination with the other proposed projects. Operation of the proposed Vine Substation will generate approximately six trips per year by a two- to four-person crew and SDG&E already operates and maintains facilities in the vicinity of the substation. Therefore, a significant impact is not expected. For these reasons, the Proposed Project's contribution to transportation and traffic impacts will not be cumulatively considerable.

4.18.8 Conclusion

While the Proposed Project will contribute to certain cumulative impacts with the level of development activity in its vicinity, its contribution to these impacts is anticipated to be minimal. It is anticipated that the other projects within the vicinity of the Proposed Project will be required to implement avoidance and minimization measures similar to SDG&E's APMs, mitigation

measures, and permit conditions. These measures will minimize potential environmental impacts, thereby minimizing the overall cumulative effects. As a result, cumulative impacts are expected to be less than significant.

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CHAPTER 5 – DETAILED DISCUSSION OF SIGNIFICANT IMPACTS

5.0 INTRODUCTION

In accordance with the Proponent's Environmental Assessment (PEA) Checklist issued by the California Public Utilities Commission (CPUC) on November 24, 2008, this Section:

- identifies the potentially significant impacts that would result from the construction, operation, or maintenance of the San Diego Gas & Electric Company (SDG&E) Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project);
- discusses the alternatives that were evaluated in determining the Proposed Project and the justification for the selection of the preferred alternative; and
- discusses the Proposed Project's potential to induce growth in the area.

5.1 APPLICANT-PROPOSED MEASURES TO MINIMIZE SIGNIFICANT IMPACTS

Based on the findings in Chapter 4 – Environmental Impact Assessment, the Proposed Project is not likely to result in significant impacts to any resource areas after implementation of the applicant-proposed measures (APMs) and SDG&E's ordinary construction and operating restrictions. SDG&E has identified four APMs that it plans to implement during construction and/or operation of the Proposed Project to reduce or avoid impacts. Chapter 3 – Project Description provides the APMs that have been proposed as part of the Proposed Project, as well as the justification for each.

5.2 DESCRIPTION OF PROJECT ALTERNATIVES AND IMPACT ANALYSIS

5.2.0 Introduction

Section 15126.6, subdivisions (a) and (f)(2)(A) of the California Environmental Quality Act (CEQA) Guidelines and Assigned Commissioner's Ruling on Application 01-07-004 (dated October 16, 2002) do not require a review of alternatives when a project would not result in significant environmental impacts after mitigation, as is the case with the Proposed Project. However, the CPUC has adopted an "Information and Criteria List" in order to determine whether applications for projects are complete. The list specifies the information required from any applicant for a project subject to the CEQA. As the lead agency, the CPUC requires applicants for a Permit to Construct or a Certificate of Public Convenience and Necessity to describe a reasonable range of alternatives within the PEA.

This Section summarizes and compares the environmental advantages and disadvantages of the Proposed Project and the alternatives considered. In accordance with CPUC requirements, SDG&E evaluated a reasonable range of alternatives that meet most of the project objectives. Under the CEQA, the intent of analyzing project alternatives is to identify ways to mitigate or avoid the significant effects of the Proposed Project on the environment (Public Resources Code Section 21002.1). The discussion of alternatives only needs to focus on the alternatives to the

Proposed Project or the locations that are capable of avoiding or substantially decreasing the significant impacts of the Proposed Project.

This environmental alternatives analysis evaluates the No Project Alternative, five system or facility alternatives to the Proposed Project as a whole, and four alternative locations for the proposed Vine Substation. Route alternatives were not developed and analyzed as part of this process. The proposed 12 kV distribution relocation route represents the shortest distance between the existing facilities and the proposed Vine Substation, is located entirely within an existing roadway, and avoids traversing existing developed land uses. The 69 kV loop-in route also represents the shortest route that can be feasibly connected to the proposed Vine Substation while reducing the number of crossings over the existing railroad tracks and utilizing available franchise easements.

Each alternative is evaluated for its feasibility and ability to fulfill the Proposed Project objectives, as well as its ability to reduce environmental impacts compared to the Proposed Project. Figure 5-1: System Alternatives depicts each of the evaluated system alternatives. Figure 5-2: Alternative Substation Sites shows the location of each of the substation site alternatives on an aerial-based map. Table 5-1: Alternatives Considered lists each alternative that was considered during the alternatives evaluation process. All of the site alternatives are located in the downtown area of the City of San Diego. System alternatives that were clearly not feasible were rejected early in the evaluation process and are not discussed in detail in this document. Alternatives to the Proposed Project that were evaluated, including the No Project Alternative, are summarized in sections that follow. Feasible alternatives that were considered but eliminated because they did not meet the Proposed Project objectives or reliability requirements are discussed briefly in Section 5.2.5 Construct a New Substation Alternative.

5.2.1 Methodology

The CEQA does not provide specific direction regarding the methodology of alternatives comparison. Resource areas that are generally given more weight in comparing alternatives are those with long-term impacts, such as visual impacts, permanent loss of habitat, or land-use conflicts. Impacts associated with construction (i.e., temporary or short-term) or those that are easy to mitigate to a less-than-significant level are considered to be less important. In order to properly analyze each alternative, SDG&E followed the following three-step process:

1. SDG&E began by determining if each alternative is feasible; that is, they evaluated whether the requirements to build the alternative are reasonable, as defined in the CEQA Guidelines.

2. SDG&E then determined which alternatives attain all or a majority of the Proposed Project objectives.

3. Lastly, SDG&E evaluated the relative environmental impact of each site alternative for select resource areas. Even though the Proposed Project has no significant unmitigated impacts, SDG&E considered whether an alternative would reduce one or more impacts further than under the Proposed Project.

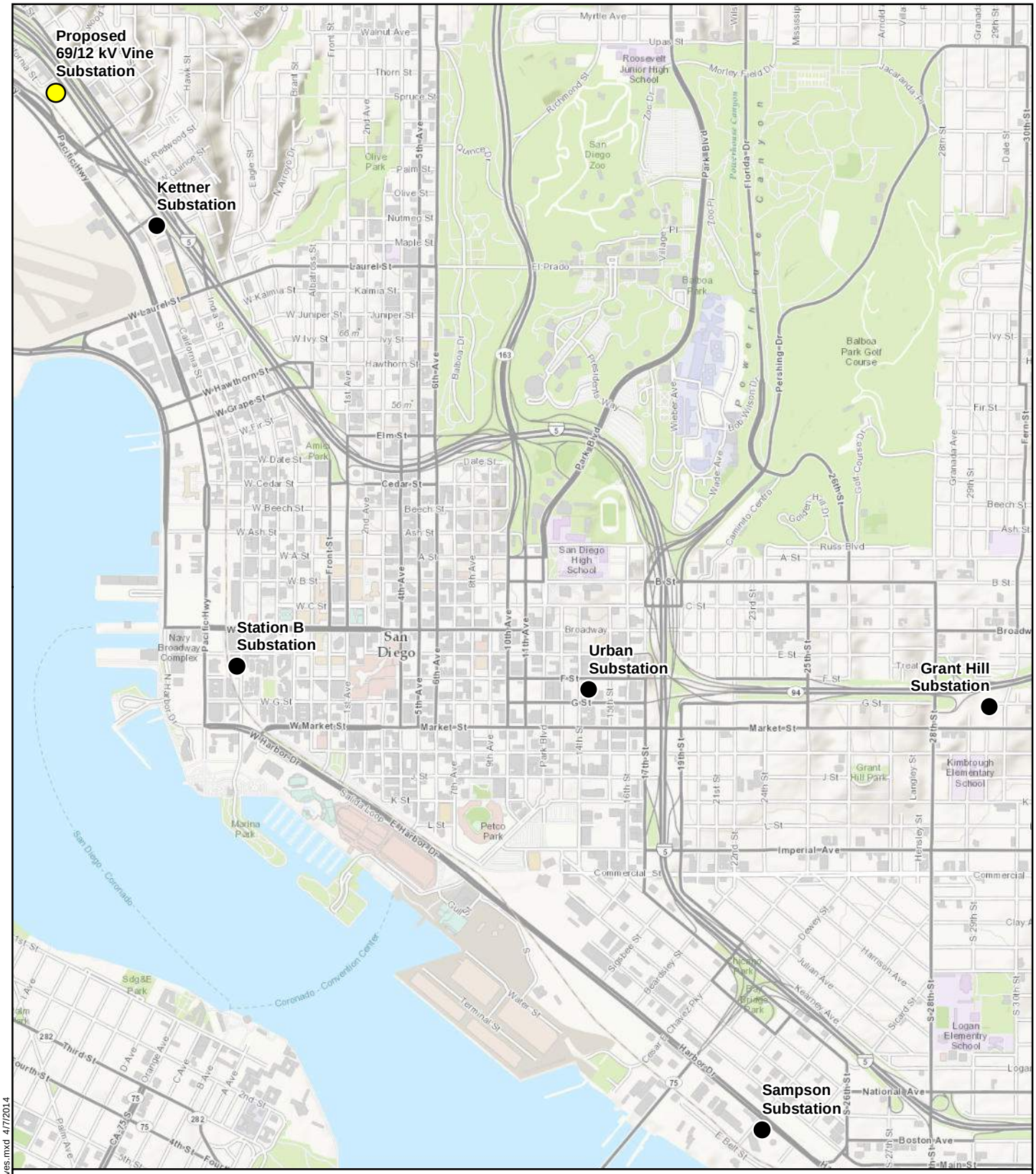

Figure 5-1: System Alternatives **Vine 69/12 kV Substation Project**

- Existing Substation
- Proposed Substation

1:26,000
0 1,000 2,000 Feet

Figure 5-2: Alternative Substation Sites **Vine 69/12 kV Substation Project**

Existing Kettner Substation
Proposed Vine Substation
Alternative Substation Site

1:20,000
0 1,000 2,000 Feet

SDGE A Sempra Energy utility
INSIGNIA ENVIRONMENTAL

Z:\Projects\SDGE_Vine\MXDs\Fig5_2_Alternative_Substation_Sites.mxd 4/8/2014

Table 5-1: Alternatives Considered

Type of Alternative	Alternative	Evaluated or Eliminated
No Action Alternatives	No Action (No Project) Alternative	Eliminated Prior to Environmental Review
System Alternatives	Rebuild Kettner Substation Alternative	Eliminated Prior to Environmental Review
	Expand Sampson Substation Alternative	Eliminated Prior to Environmental Review
	Expand Station B Substation Alternative	Eliminated Prior to Environmental Review
	Expand Urban Substation Alternative	Eliminated Prior to Environmental Review
	Expand Grant Hill Substation Alternative	Eliminated Prior to Environmental Review
Substation Site Alternatives	Vine Substation Site (Preferred)	Evaluated for Potential Environmental Impacts
	Hillcrest Substation	Eliminated Prior to Environmental Review
	County of San Diego Substation Site	Evaluated for Potential Environmental Impacts
	Adjacent to Urban Substation Site	Evaluated for Potential Environmental Impacts
	State Street Substation Site	Eliminated Prior to Environmental Review

The No Project Alternative and System Alternatives listed in Table 5-1: Alternatives Considered, were analyzed based on their ability to meet the engineering requirements and Proposed Project objectives. Because they did not meet all of the Proposed Project objectives, no further analysis was conducted. The Site Alternatives were analyzed based on their ability to meet the engineering requirements, then the Proposed Project objectives, and then the environmental constraints. This analysis resulted in the selection of a new 69/12 kV substation (Vine Substation), which is described in detail in Chapter 3 – Project Description.

5.2.2 Proposed Project Objectives

The Proposed Project is being proposed to meet several objectives identified by SDG&E. The overall objective of the Proposed Project is to construct a new substation and associated power line loop-in, and to relocate/re-arrange various distribution circuits. The Proposed Project is designed to eliminate existing reliability concerns at the Kettner Substation and to increase distribution system reliability in downtown and the surrounding area. In addition, the Proposed Project will ultimately provide 90 megavolt amperes (MVA) of additional capacity in its eventual configuration, which will provide a reliable solution for serving existing and future area

load and prevent potential long outages or disruption of service to existing and new customers in downtown and the surrounding area. Specifically, the Proposed Project has the following four objectives:

- Objective 1: Maintain existing substation and distribution system reliability standards.
- Objective 2: Provide substation and circuit tie capacity that will provide additional reliability for existing and future system needs.
- Objective 3: Meet the area's long-term electric distribution capacity needs by constructing a substation near planned load growth.
- Objective 4: Utilize existing SDG&E-owned land previously purchased for substation use to meet the scheduled in-service date.

Each of these Proposed Project objectives is more thoroughly described in Chapter 2 – Project Purpose and Need.

5.2.3 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project (CEQA Guidelines, Section 15126.6(e)). Under the No Project Alternative, the proposed Vine Substation and 69 kV loop-in would not be constructed, and the various distribution circuits would not be relocated/re-arranged.

In providing electrical service to downtown and the surrounding area, SDG&E currently operates four substations—Kettner Substation, Urban Substation, Station B Substation, and Sampson Substation. Grant Hill Substation is an existing facility in the surrounding area that was also evaluated as a potential alternative to the Proposed Project in order to serve capacity needs. Commercial growth in downtown and the surrounding area is driving the existing substations to their ultimate capacities. Because the projected load indicates that all substations in downtown and the surrounding area will exceed 85 percent of their capacity by 2018, SDG&E has determined that an additional 30 megavolt-amperes (MVA) is needed by mid-2017 to serve this growth. The optimum maximum substation load is 85 percent, as it allows for transformer bank loads to be transferred in the event of a transformer bank outage. Optimum operating conditions maintain substation reliability and reduce outage times. All of the substations—with the exception of Grant Hill and Sampson substations—are near capacity and will begin to exceed their 85-percent ratings in 2015 or sooner. Grant Hill Substation has ultimate capacity remaining; however, this substation is not optimal for providing additional capacity due to its distance from downtown and the surrounding areas. In addition to the existing customer-driven growth in downtown and the surrounding area, expansion of San Diego International Airport and construction of Ballpark Village—a new mixed use development consisting of apartments, condominiums, and commercial and retail space—is expected to commence construction at the end of 2015.

The No Project Alternative will not meet any of the Proposed Project's objectives. The No Project Alternative will not address the reliability concerns at the Kettner Substation and will not provide the additional 30 MVA of capacity to offload the congested downtown and surrounding area substations. The No Project Alternative will also not provide the opportunity to maintain

substation and circuit reliability with added tie capacity. In addition, if the No Project Alternative was selected, a new substation will not be available to meet increased capacity needs driven by commercial growth in the area.

5.2.4 System Alternatives

Alternatives were examined for correcting the projected system overloads and reliability deficiency in the downtown and surrounding service area. The following five system alternatives were considered but rejected as preferred to substation construction, as described in the subsections that follow.

Rebuild and Expand Kettner Substation Alternative

SDG&E evaluated the expansion of Kettner Substation—an aging facility with obsolete equipment. The location of the Kettner Substation is depicted in Figure 5-1: System Alternatives. The Kettner Substation has a variety of reliability concerns due to its physical layout and aging infrastructure. Given its current state, without significant repair these concerns will likely become an operational/security/safety issue.

Due to space constraints at the Kettner Substation, acquisition of an adjacent approximately 0.25-acre parcel would be required to address some of the current reliability issues on site, including the rebuild of the existing control shelter and repair of the perimeter fence line. Even with the purchase of the adjacent parcel, the expanded site will not have enough space to install an additional transformer. By failing to add capacity at this site, the substation will continue to operate near its ultimate capacity, which will not address the future load needs of downtown and the surrounding area. As a result, this system alternative was not selected as preferred.

Expand Sampson Substation Alternative

Sampson Substation is located south of downtown San Diego in the community of Barrio Logan, as depicted in Figure 5-1: System Alternatives. SDG&E evaluated expansion or upgrade of this substation to avoid projected system overloads in the service planning area; however, this substation is already built out to its ultimate capacity and due to the limited size of the parcel (0.75 acre) it lacks available space within its existing footprint to accommodate further expansion. Due to the surrounding commercial uses, it is not feasible to expand the Sampson Substation. As a result, this system alternative was eliminated from further consideration.

Expand Station B Substation Alternative

Station B Substation is located south of Broadway along Kettner Boulevard, as shown in Figure 5-1: System Alternatives. The Station B Substation site is too small (0.83 acre) to accommodate an additional transformer and there is no available space to expand the substation within its existing footprint. Therefore, this substation cannot be expanded or upgraded to avoid projected system overloads in the service planning area because they are all built out to their maximum configurations. In addition, the site is surrounded by existing commercial uses that would make acquiring additional adjacent property infeasible. As a result, this system alternative was not selected as the Preferred Project.

Expand Urban Substation Alternative

Urban Substation is located north of Market Street, between F and G Street, as depicted in Figure 5-1: System Alternatives. SDG&E determined that Urban Substation—currently fed by two power lines—could accommodate a fourth bank; however, this would require the addition of a new third power line, which would be very challenging due to required reconfiguration of the 69 kV portion of the existing substation. Reconfiguration of this portion of the existing substation will require taking portions of the substation out of service, which would have the potential to reduce customer reliability. Further, this site is already serving 14 distribution circuits and can only accommodate one additional distribution circuit, with the addition of another transformer. This is not considered an optimum configuration. As a result, this alternative would not completely address distribution capacity needs. In addition, the City of San Diego has raised concerns in the past about the location of this substation and its desire to have it either relocated or undergrounded to eliminate visual impacts to the surrounding community. As a result, this alternative was determined to be infeasible and was eliminated from further consideration.

Expand Grant Hill Substation Alternative

Grant Hill Substation is the only substation that can accommodate additional distribution capacity. Grant Hill Substation is located east of Interstate 5, south of State Route 94 on 30th Street in the community of Grant Hill, as shown in Figure 5-1: System Alternatives. The Grant Hill Substation was built to accommodate the east downtown area and is located outside of the desired coverage area. Consequently, adding additional circuits to this substation would require long distribution circuits—thereby decreasing efficiency of the system. In addition, upgrades to the substation for purposes of downtown and the surrounding area would be detrimental to the east downtown area, should the area ever require additional capacity. As a result, this system alternative was eliminated from further consideration.

5.2.5 Construct a New Substation Alternative

After evaluating several alternatives that would upgrade existing substation facilities, SDG&E determined none of the existing substations in downtown and the surrounding area can be expanded or upgraded to correct the projected system overloads and reliability deficiency in the downtown and surrounding service area. Therefore, SDG&E determined that it was necessary to investigate potential sites for the construction of a new distribution substation in this service area. The following section discusses the alternative substations sites that were evaluated.

Substation Site Alternatives

A total of five substation sites were initially considered for construction of the proposed Vine Substation. These potential substation sites are depicted in Figure 5-2: Alternative Substation Sites. Two of these substation sites—State Street and Hillcrest—were determined to be too small (0.7 acre and 0.3 acre, respectively) and narrow to maintain the required operation and maintenance clearance around the substation equipment and to accommodate the connection of power lines. In addition, the State Street site was too narrow in configuration to accommodate a

substation. The remaining three sites were evaluated based on the following differentiating criteria in order of importance:

- Engineering Factors
  - Parcel size (minimum 1 acre) and of appropriate shape
  - Close proximity to existing power lines
- Ability to meet the Proposed Project objectives
- Ability to secure the parcel in accordance with schedule constraints
- Environmental Constraints
  - Potential visibility from residences and recreational areas, based on proximity
  - Potential for land use conflicts

From these three alternatives, a preferred substation location was determined based on these criteria.

Vine Substation Site – Preferred Site

The proposed Vine Substation site is a 1.5-acre parcel located at the southwestern corner of the intersection of Vine Street and Kettner Boulevard, just west of Interstate (I-) 5 and east of Pacific Highway. An existing overhead power line is located adjacent to and to the west of the site. The site will allow SDG&E to meet all of the Proposed Project objectives. The site is owned by SDG&E and was previously being leased for long-term airport parking, thus there is no schedule constraint associated with site acquisition. The site is designated Industrial Employment; thus, the use is consistent with the General Plan, though substations in this designation are not explicitly discussed. The parcel is bordered to the north by Vine Street and a commercial printing business across Vine Street, to the south by an Advantage Rental Car facility, to the east by Kettner Boulevard, and to the west by the North County Transit District Coaster and San Diego Metropolitan Transit System Trolley rail tracks. Views toward the site from the residential neighborhood of Midtown are almost completely blocked by the Interstate 5 embankment as well as by the closely spaced buildings and mature vegetation lining the streets of this residential neighborhood. Thus, the proposed Vine Substation site was selected as the preferred site because it meets the engineering criteria, meets all of the Proposed Project objectives, is already owned by SDG&E, and does not result in any environmental impacts that exceed those of the alternatives. A detailed analysis of this site is provided in Chapter 4 – Environmental Impact Assessment.

County of San Diego Substation Site

The site is 1.23 acres, located along Kettner Boulevard, approximately 600 feet from an existing SDG&E power line, as depicted in Figure 5-2: Alternative Substation Sites. The site is comprised of six developed parcels owned by the County of San Diego. Construction of a substation at this site would require an underground power line crossing of the North County Transit District Coaster and San Diego Metropolitan Transit System Trolley rail tracks. Due to the number of parcels that would need to be acquired, this alternative is not considered feasible from a schedule perspective. This alternative would also be visible from residences located directly across from the site on Kettner Boulevard. In addition, existing uses on the site consist of industrial warehouses and a parking lot, thus existing businesses would need to be removed to accommodate a new substation. For these reasons, the site was not considered environmentally superior to the Proposed Project site.

Near Urban Substation Site

Two parcels located adjacent to the existing Urban Substation, as shown in Figure 5-2: Alternative Substation Sites, were evaluated as potential sites for a new substation. Construction of a substation at these sites would require approximately four to five blocks of underground construction to accommodate the interconnection of at least one new 69 kV line. The 0.23-acre parcel located immediately adjacent to the existing Urban Substation is owned by the City of San Diego. The other parcel, which is 0.25-acre in size and located further east, is owned by a private entity. Historically, the City has opposed the location of a substation within the community. Therefore, the City would be unlikely to sell this site to SDG&E for a substation, greatly affecting acquisition time. For these reasons, the site is not considered environmentally superior to the Project site.

5.2.6 Conclusion

A number of alternative system development approaches and site locations for the Proposed Project were evaluated against the Proposed Project objectives to provide continued service to downtown and the surrounding area. The No Project Alternative, Rebuild Kettner Substation Alternative, Expand Sampson Substation Alternative, Expand Station B Substation Alternative, Expand Urban Substation Alternative, and Expand Grant Hill Substation Alternative were evaluated and rejected based upon their inability to meet Proposed Project objectives and engineering design requirements.

With regard to the alternative sites that were evaluated, Table 5-2: Alternative Site Comparison Summary, identifies the relative differences between the sites based on the identified criteria. Many of these sites do not meet the minimum land area and shape requirement criteria or would require the extension of power lines outside of the existing ROW, resulting in increased land requirements or greater construction impacts than would result from the Proposed Project. SDG&E would not be able to acquire many of the sites according to the Proposed Project schedule. Many of the sites would also have environmental impacts that would exceed those of the Proposed Project. Each of the alternatives failed to meet basic Proposed Project objectives. The proposed Vine Substation site, by comparison, meets the engineering criteria, meets all of the Proposed Project objectives, is already owned by SDG&E, and does not result environmental impacts that exceed those of the alternatives. Thus, the proposed Vine Substation site was selected as the preferred substation site.

5.3 GROWTH-INDUCING IMPACTS

5.3.0 Growth-Inducing Impacts

The CEQA requires a lead agency to review and discuss ways in which a project could induce growth. The CEQA Guidelines (Section 15126.2d) consider a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding area. New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. Other examples of growth-inducing projects are the expansion of urban services into previously undeveloped areas or the removal of major obstacles to growth, such as transportation corridors and potable water supply.

Table 5-2: Alternative Site Comparison Summary

Criteria		Substation Site Alternatives		
		Vine Substation (Preferred/Proposed Project)	**County of San Diego**	**Near Urban**
Engineering Requirements	Approximate Proximity to Existing Power Line (feet)	Immediately adjacent	600	6,500
	Size (acres)	1.5	1.2	0.25 and 0.22
Number of Project Objectives Met		4	2	2
Land Rights	Ability to secure the parcel in accordance with schedule constraints	Good, SDG&E owned	Poor, many parcels	Poor, unwilling seller
Environmental Requirements	Proximity to residences and recreational areas	None	Many	Many
	Potential for land use conflicts	None	Yes, currently developed	None

The growth-inducing potential of the Proposed Project could be considered significant if it were to stimulate human population growth or a population concentration in the City of San Diego or other surrounding communities, above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the Proposed Project were to provide infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. Because the Proposed Project will not increase housing, bring in new services, or improve the existing infrastructure system (with the exception of making the existing electric service more reliable and adding additional capacity to accommodate planned growth), it will not stimulate population growth or result in a new concentration of residents, businesses, or industries.

5.3.1 Growth Caused by Direct and Indirect Employment

The construction and operation of the Proposed Project itself will not affect employment patterns in the area. SDG&E will employ an average of approximately 33 workers throughout the 19-month-long construction period. During the peak construction period, up to 63 workers may be employed. The workers will consist of existing SDG&E employees and contract workers. The majority of construction workers are anticipated to come from San Diego County and will not require lodging.

Operation and maintenance of the Proposed Project will be performed by current SDG&E employees and will, therefore, not create new jobs. Because the Proposed Project will not result in an increase in employment during the operation and maintenance phase, the Proposed Project will not increase the demand for new housing.

5.3.2 Growth Related to the Provision of Additional Electric Power

The population of San Diego County has increased every year since 1944. As a result, growth is part of the past, present, and expected future of the region. The San Diego Association of Governments (SANDAG) is the regional planning entity for the San Diego region and is composed of representatives from 18 cities and the county government. SANDAG serves as the forum for regional decision-making. SANDAG makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life.

The cities and county have designated SANDAG as the regional planning board, pursuant to a voter-approved proposition. The cities and county provide SANDAG with information about their general plans, local growth patterns, and land use regulations. In return, SANDAG generates regional management plans and population forecasts. As members of SANDAG, the cities and county review and approve all plans and forecasts prepared by SANDAG. The cities and county use SANDAG's findings to develop and shape their respective general plans and land use regulations. The county and each city are required to adopt a general plan, which must be updated on a regular basis. All general plans and subsequent amendments are subject to CEQA review.

SANDAG prepared a Regional Comprehensive Plan (RCP) in 2004 to provide policy guidance on accommodating the growth projected by SANDAG. A key element of the RCP is the Integrated Regional Infrastructure Strategy (IRIS), which outlines guidance for planning the

region's infrastructure. The goal of the IRIS is to ensure internal consistency with respect to long-term regional infrastructure planning to meet the needs of the growth projected by SANDAG. The IRIS addresses the energy supply and delivery system as key infrastructure elements. As the primary utility that provides electric service to approximately 3.4 million people using approximately 1.4 million meters in its service area, which includes all of San Diego County and the southern part of Orange County, SDG&E participates in and supports this aspect of the planning process. SANDAG has been preparing long-range forecasts of population, housing, and employment since the 1970s. SANDAG's forecasts represent the changes anticipated for the region based on the best available information. The forecast is produced by using established computer models that evaluate land use, demographics, regional and local economics, and transportation patterns. The SANDAG forecasts utilize a complex set of assumptions, input data, computations, and model interactions.

The latest Regional Growth Forecast (RGF) was developed for 2050 and provides an update of expected growth from the previous model that was developed for 2030. The 2050 RGF is based on data from the 2008 estimate produced by the California Department of Finance plus updated information for all model inputs.

The 2050 RGF predicts that economic and local population will continue at a steady rate through 2050, although at a slightly slower rate than in the previous 40 years. These updated projections suggest that the region will approach 4.4 million residents, 1.9 million jobs, and 1.5 million housing units by 2050.

SANDAG does not use energy as a driver of growth; however, its regional growth model recognizes the investment in energy infrastructure as necessary to support the implementation of the RCP. SDG&E coordinates with SANDAG to address this component of its regional planning process. Only local government entities with jurisdiction over land use approvals can either directly cause or prevent growth. How and where development occurs within SDG&E's service area is dictated by the land use agencies with this authority. SDG&E responds to such development.

5.3.3 Proposed Project and Growth

The objectives of the Proposed Project are to maintain existing reliability standards for the distribution and substation systems, provide substation and circuit tie capacity that will provide additional reliability for existing and future system needs, meet long-term electric distribution capacity needs by constructing a substation near planned load growth, fulfill long-term electric distribution capacity needs by constructing a substation near planned load growth, and to meet project need while minimizing environmental impacts. The Proposed Project will provide additional capacity to serve existing and future area load and to prevent potential long outages or disruption of service to existing and new customers in downtown and the surrounding area. Furthermore, the Proposed Project will not create a new service or source of power that will indirectly allow for an increase in population or housing as a result, as it will not extend infrastructure into previously un-served areas.

The Proposed Project will accommodate existing and planned power demands in SDG&E's service territory, as well as those based on state- and locally adopted plans and projections.

SDG&E responds to projected development and forecasts, rather than inducing growth by extending infrastructure for future unplanned development. Therefore, the Proposed Project will not induce population growth in the area.

5.4 REFERENCES

California Resources Agency. 2014. Title 14 California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act. CEQA Guidelines.

SANDAG. Regional Comprehensive Plan. Online. http://www.sandag.org/programs/land_use_and_regional_growth/comprehensive_land_use_and_regional_growth_projects/RCP/rcp_final_complete.pdf. Site visited March 7, 2014.

SANDAG. Regional Growth Forecast 2050. Online. http://www.sandag.org/2050forecast. Site visited March 7, 2014.