SDGE

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Proponent's Environmental Assessment
for the

MIRA SORRENTO DISTRIBUTION SUBSTATION

Docket Number:

OCTOBER 2011

Proponent's Environmental Assessment

Mira Sorrento Distribution Substation

Docket Number:

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CHAPTER 1: PEA SUMMARY

1.1 Introduction

Consistent with California Public Utilities Commission (CPUC) General Order 131-D, this Proponent's Environmental Assessment (PEA) has been prepared by San Diego Gas & Electric Company (SDG&E). This document is intended to support SDG&E's application for a Permit to Construct the Mira Sorrento 69/12 Kilovolt (kV) Distribution Substation (Proposed Project).

1.2 Project Components

The Proposed Project includes the following main components:

- Construction of a new 120MVA 69/12kV distribution substation (Mira Sorrento Substation);
- Loop-in of the existing 69kV electrical transmission line (TL665) into the new Substation which will require installation of underground transmission facilities offsite of the substation site within franchise positions; and,
- 12kV electrical distribution, telecomm fiber, and telephone duct package infrastructure.

These components are described in greater detail in Section 3.5, *Project Components*, and are shown in Figure 3-7, *Mira Sorrento Substation Layout*. Refer also to Chapter 3.0, *Project Description*, for additional detailed discussion of the components of the Proposed Project.

1.3 Project Location

The Proposed Project is located in the northwestern portion of the City of San Diego, California. The site is located within the community of Mira Mesa, in the northwesterly portion of San Diego County; refer to Figure 3-1, *Regional Map*; Figure 3-2, *Vicinity Map*; and Figure 3-3, *Aerial Photograph*. The Proposed Project site is situated approximately 5.5 miles south of the City of Del Mar, approximately 11 miles southwest of the City of Poway, and approximately nine miles north of Downtown San Diego.

The Project site is located on the northeast corner of the intersection of Vista Sorrento Parkway and Mira Mesa Boulevard, just northeast of Interstate 805 (I-805). The Project site is approximately 3.7 acres and consists of undeveloped land. Access to the site will be from Mira Sorrento Place. The Mira Sorrento Substation will be located entirely on land owned by SDG&E.

1.4 Project Need and Alternatives

The Proposed Project is the construction of a new substation and associated TL655 tie-in, designed to provide additional capacity to serve existing area load as well as forecasted customer-driven electrical load growth and to prevent potential long outages or disruption of service to existing customers in the SDG&E Sorrento Mesa service territory. SDG&E previously filed an application for a Permit to Construct a substation at this location but ultimately withdrew that application due to a change in load forecasts and economic conditions.

Basic objectives of the Proposed Project include the following:

- Meet the area's long-term electric distribution capacity needs by constructing a new substation near planned load growth thereby maximizing system efficiency;
- Provide substation and circuit tie capacity that will provide additional reliability for existing and future system needs;
- Reduce area substation loading to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the Sorrento Mesa service territory;

Additional project objectives include:

- Utilize existing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation; and,
- Meet project need while minimizing environmental impacts.

Refer also to Chapter 2.0, *Project Purpose and Need,* for additional discussion of the Proposed Project's various components and objectives.

The Proposed Project components, their locations, preliminary configuration, and the existing and proposed system configuration are presented in Chapter 3.0, *Project Description*.

Although various substation site alternatives, transmission route alternatives, and system alternatives were considered during the development of the Proposed Project, the Proposed Project was ultimately selected because it best meets all of the Proposed Project objectives and is more cost effective than the alternatives. A discussion of the alternatives to the Proposed Project is located in Chapter 5.0, *Significant Impacts*.

1.5 Agency Coordination

1.5.1 City of San Diego

Coordination with the City of San Diego Development Services Department has occurred on numerous occasions during the planning of this project. Discussions have occurred with the City of San Diego Planning staff on the following issues:

- The location of the Proposed Project was originally selected in part as a result of negotiations with City officials and community stakeholders (San Diego Economic Development Corporation) regarding an appropriate location for a substation in this vicinity relative to the load center. City staff directed SDG&E to this location as the site best suited for the substation.
- SDG&E staff has had discussions with City staff regarding the City's change to the zoning classification on the project site from an industrial zoning designation to a residential zoning designation in 2006, even though there were no changes to land uses or discretionary permits. City staff has advised SDG&E that mistake was an internal mapping error and that City staff can make the correction administratively.
- SDG&E staff met with the Mira Mesa Community Planning Group to present the Proposed Project and solicit comments on several occasions between 2004 and 2010. On October 18, 2010 the planning group voted to support the Proposed Project. The meeting minutes confirming the planning group's position are attached as Appendix A.
- SDG&E staff has had discussions with City staff regarding the consistency of the Proposed Project with the Miramar Marine Corps Air Station (MCAS) Airport Land Use Compatibility Plan (ALUCP) and the City's implementation of that plan. SDG&E had prepared an analysis that demonstrates that the Proposed Project is not considered a new utility project and is consistent with ALUCP compatibility requirements.

1.5.2 San Diego County Regional Airport Authority

SDG&E staff has discussed the Proposed Project with San Diego County Regional Airport Authority staff regarding the Proposed Project's compatibility with the ALUCP for Miramar MCAS. Regional Airport Authority staff directed SDG&E staff to present analysis to City of San Diego staff as they are the land use authority in the case. The City of San Diego City Council would have the ultimate land use decision in the event of a conflict.

1.6 PEA Contents

In accordance with the PEA Checklist for Transmission Line and Substation Projects prepared by the CPUC on November 24, 2008, the Mira Sorrento Transmission Substation PEA has been written to include the following main areas of discussion:

- Chapter 1.0 – *PEA Summary*. This Chapter provides a summary of the Proposed Project components, agency coordination, PEA contents, major conclusions, issues to be resolved, and public outreach efforts.
- Chapter 2.0 – *Project Purpose and Need and Objectives*. This Chapter provides a brief Project overview and identifies the primary objectives of the Project.
- Chapter 3.0 – *Project Description*. This Chapter provides a detailed description of the Proposed Project components and the specific construction and needs for installation of the facilities. Additionally, a description of the anticipated construction schedule, anticipated operations and maintenance activities, Federal and local permits required, and a summary of the Applicant Proposed Measures (APMs) to be implemented as part of the Proposed Project are given.
- Chapter 4.0 – *Environmental Impact Assessment Summary*. This Chapter includes an environmental impact assessment summary and a discussion of the existing environmental conditions and potential impacts of the Proposed Project. As appropriate, APMs are provided to reduce Project impacts to less than significant. This Chapter also includes a Cumulative Analysis, which discusses past, present, and reasonably foreseeable future projects within the Project area and the potential for the Project to contribute a significant cumulative effect.
    - The following resource areas are addressed in Chapter 4.0:
        - Aesthetics
        - Air Quality
        - Biological Resources
        - Cultural Resources
        - Geology, Soils, and Mineral Resources
        - Hazards and Hazardous Materials
        - Hydrology and Water Quality
        - Land Use and Planning
        - Noise
        - Population and Housing
        - Public Services
        - Transportation and Traffic

- Chapter 5.0 – *Detailed Discussion of Significant Impacts*. This Chapter identifies proposed APMs to reduce potential effects of the Project and provides an evaluation of the Project alternatives and potential growth-inducing impacts.
- Chapter 6.0 – *Other Process-Related Data Needs*. This Chapter identified whether there is a need for additional data to evaluate the environmental effects of the Proposed Project. No such additional needs were identified, and the analysis within the PEA is considered to be adequate to identify and address any environmental effects potentially resulting from the Project.

In compliance with the CPUC PEA Checklist, SDG&E has compiled Table 1-1, *PEA Checklist Key*, which identifies the appropriate Section of the PEA where each item in the CPUC checklist has been addressed. If an item was not addressed or not included in the PEA, justification is provided as to why.

1.7 PEA Conclusions

Potential environmental impacts resulting from construction and operation/maintenance of the proposed Mira Sorrento Substation Project are analyzed within the PEA, and appropriate measures are identified to reduce such effects to less than significant. Through preparation of the PEA, it was determined that the following resource areas will not be impacted by the Proposed Project, or that impacts resulting from the Project will be less than significant:

- Land Use and Planning;
- Public Services;
- Population and Housing; and,
- Transportation and Traffic.

Potential impacts were identified in a number of resource areas, as identified below; however, through implementation of SDG&E's APMs, such impacts would remain less than significant.

- Aesthetics – Temporary and permanent visual impacts associated with construction of screening and retaining walls, and the proposed substation.
- Air Quality – Temporary impacts to air quality associated with construction activities.
- Biological Resources – Temporary and permanent impacts to biological resources, including sensitive species and habitats.
- Cultural Resources – Temporary impacts to cultural resources resulting from grading and construction activities.

- Geology, Soils, and Mineral Resources - Temporary and permanent impacts resulting from soil erosion and loss of top soil, exposure to seismic conditions, and conditions relative to potentially liquefiable or expansive soils during design and construction.
- Hazards and Hazardous Materials – Temporary and permanent impacts associated with the transport of hazardous materials, the use of hazardous materials, and wildfires.
- Hydrology and Water Quality – Temporary impacts resulting from potential runoff during construction.
- Noise – Temporary generation of noise during construction activities near sensitive noise receptors.

To ensure that Project impacts remain less than significant, SDG&E will implement APMs. The proposed APMs are discussed relative to each issue area within Chapter 4.0, *Environmental Impact Assessment*, and are summarized in Table 3-6, *Applicant Proposed Measures*.

In the event the Commission determines that further consideration of mitigation measures and alternatives to the Proposed Project is required, the Commission may review the estimated costs of the Proposed Project (among other factors) to determine whether such mitigation measures or alternatives are "feasible" as defined by CEQA. The estimated costs of the Proposed Project range from $40 to $60 million.

1.8 Areas of Controversy and Issues to be Resolved

The CPUC's PEA Checklist for Transmission and Substation Projects calls for a discussion of "any areas of controversy" and "any major issues that must be resolved including the choice among reasonably feasible alternatives and mitigation measures, if any." There are no known areas of controversy or major issues that must be resolved.

1.9 Inter-agency Coordination and Public Outreach Efforts

1.9.1 Inter-agency Coordination

There are ongoing discussions between the City, the Airport Authority and MCAS Miramar regarding language in the applicable Airport Land Use Compatibility Plan (ALUCP) concerning the ability to construct new electrical substations on the Proposed Project site. An amendment to the Airport Authority's ALUCP to clarify that new substations are allowed on that site is expected to be approved by the Airport Authority no later than December 2011.

1.9.2 Community Outreach

SDG&E has been working with the City of San Diego to coordinate and finalize the details on construction of the Mira Sorrento Substation. SDG&E will continue to work with the City

of San Diego to coordinate on land use issues as well as permitting issues, such as grading permits and other ministerial permits required for the construction of the Substation. SDG&E has made several presentations to the Mira Mesa Community Planning Group since 2004 to present the project.

1.9.3 Letters of Support

Please see Appendix A, which includes the following:

- Meeting minutes from the Mira Mesa Community Planning Group, reflecting the group's support of the project on October 18, 2010; and,
- Letter from MCAS Miramar expressing non-opposition to electrical substations.

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Table 1-1 PEA Checklist Key

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
Chapter 1: PEA Summary		
	Include major conclusions of the PEA.	Section 1.7 PEA Conclusions
	List any areas of controversy.	Section 1.8 Areas of Controversy and Issues to be Resolved.
	Identify any major issues that must be resolved, including the choice among reasonably feasible alternatives and mitigation measures, if any.	Section 1.8 Areas of Controversy and Issues to be Resolved.
	Include a description of inter-agency coordination if any.	Section 1.9 Interagency Coordination and Public Outreach Efforts
	Include a description of public outreach efforts, if any.	Section 1.9 Interagency Coordination and Public Outreach Efforts
Chapter 2: Project Purpose and Need		
2.1 Overview	Include an analysis of Proposed Project objectives and purpose and need that is sufficiently detailed so that the Commission can independently evaluate the Proposed Project need and benefits in order to accurately consider them in light of the potential environmental impacts.	Section 2.1 Overview
	Explain the objective(s) and/or purpose and need for implementing the Proposed Project.	Section 2.2 Objectives
2.2 Project Objectives	Include an analysis of the reason why attainment of these objectives is necessary or desirable. Such analysis must be sufficiently detailed to inform the Commission in its independent formulation of Proposed Project objectives which will aid any appropriate CEQA alternatives screening process.	Sections 2.2.1 through 2.2.5

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
Chapter 3: Project Description		
3.1 Project Location	Identify geographical location: County, City (provide Proposed Project location map[s]).	Section 3.0 Project Location
	Provide a general description of land uses within the Proposed Project site (e.g., residential, commercial, agricultural, recreation, vineyards, farms, open space, number of stream crossings, etc.).	Section 3.0.1 Mira Sorrento Substation. See Figures 3.1 through 3.4
	Determine whether the Proposed Project is located within an existing property owned by the Applicant, traverses existing ROWs, or requires new ROWs. Provide the approximate area of the property or the length of the Proposed Project that is in an existing ROW or which requires new ROWs.	Section 3.0.1 Mira Sorrento Substation. See Figure 3-4
3.2 Existing System	Describe the local system to which the Proposed Project relates.	Section 3.1 Existing Transmission System
	Provide a schematic diagram and map of the existing system.	See Figure 3.5
	Provide a schematic diagram that illustrates the system as it would be configured with the implementation of the Proposed Project.	See Figure 3.5
3.4 Proposed Project	Describe the Proposed Project. Is it an upgrade, a new line, new substations, etc.?	Section 3.5 Project Components
	Describe how the Proposed Project fits into the regional system. Does it create a loop for reliability, etc.?	Section 3.2 Project Objectives
	Describe all reasonably foreseeable future phases, or other reasonably foreseeable consequences of the Proposed Project.	Section 3.3 Proposed Project
	Provide the capacity increase in megawatts (MW). If the Proposed Project does not increase capacity, state that.	Section 3.3 Proposed Project
	Provide geographic information system (GIS) (or equivalent) data layers for the Proposed Project preliminary engineering, including estimated locations of all physical components of the Proposed Project, as well as those related to construction.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.
3.5 Project Components	Describe what type of line exists and what type of line is proposed.	Sections 3.5.2 and 3.5.3 Distribution and Transmission Line 655 Loop-In

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
3.5.1 Transmission Line	Identify the length of the upgraded alignment, the new alignment, etc.	Section 3.5.3 Transmission Line 655 Loop-In
	Describe whether construction would require one-for-one pole replacement, new poles, steel poles, etc.?	(NA)
	Describe what would happen to other lines and utilities that may be collocated on the poles to be replaced (e.g., distribution, communication, etc.).	(NA)
3.5.2 Poles/Towers	Provide information for each pole/tower that would be installed and for each pole/tower that would be removed.	(NA)
	Describe any specialty poles or towers; note where they would be used; make sure to note if any guying would likely be required across a road.	(NA)
	If the Proposed Project includes pole-for-pole replacement, describe the approximate location of where the new poles would be installed relative to the existing alignment.	(NA)
	Describe any special pole types and any special features.	(NA)
3.5.3 Conductor/Cable	Describe the type of line to be installed on the poles/tower.	(NA)
3.5.3.1 Above-Ground Installation	Describe the number of conductors required to be installed on the poles or tower and the number on each side including applicable engineering design standards.	(NA)
	Provide the size and type of conductor and insulator configuration.	(NA)
	Provide the approximate distance from the ground to the lowest conductor and the approximate distance between the conductors (i.e., both horizontally and vertically). Provide specific information at highways, rivers, or special crossings.	(NA)
	Provide the approximate span lengths between poles or towers, note where different if distribution is present or not if relevant.	(NA)
	Determine whether other infrastructure would likely be collocated with the conductor; if so, provide conduit diameter of other infrastructure.	(NA)

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
3.5.3.2 Below Ground Installation	Describe the type of line to be installed.	Section 3.5.3 Transmission Line 655 Loop-In and Figures 3-11 and 3-12
	Describe the type of casing the cable would be installed in; provide the dimensions of the casing.	
	Provide an engineering „typical" drawing of the duct bank and describe what types of infrastructure would likely be installed within the duct bank.	
3.5.4 Substations	Provide "typical" plan and profile views of the proposed substation and the existing substation if applicable.	See Figure 3-11
	Describe the types of equipment that would be temporarily or permanently installed and provide details as to what the function/use of said equipment would be.	Section 3.3, See Figure 3-6
	Provide the approximate or "typical" dimensions (width and height) of new structures including engineering and design standards that apply.	Section 3.3 Proposed Project
	Describe the extent of the Proposed Project. Would it occur within the existing fence line, existing property line or would either need to be expanded?	Section 3.6 Permanent Land/Right of Way Requirements
	Describe the electrical need area served by the distribution substation.	Chapter 2 – Project Purpose and Need Section 3.2 Project Objectives
3.6 Right-of-Way Requirements	Describe the ROW location, ownership, and width. Would the existing ROW be used or would a new ROW be required?	Section 3.6 Permanent Land/Right of Way Requirements, see also Figure 3-4
	If a new ROW is required, describe how it would be acquired and approximately how much land would be required (length and width).	Section 3.6 Permanent Land/Right of Way Requirements
	List the properties likely to require acquisition.	Sections 3.6.1 and 3.6.2
3.7 Construction **3.7.1 For All Projects** **3.7.1.1 Staging Areas**	Where would the main staging area(s) likely be located?	Section 3.7.2.1 Staging Areas
	Approximately how large would the main staging area(s) be?	Section 3.7.2.1 Staging Areas
	Describe any site preparation required, if known, or generally describe what might be required.	Section 3.7.2.1 Staging Areas
	Describe what the staging area would be used for.	Section 3.7.2.1 Staging Areas

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	Describe how the staging area would be secured, would a fence be installed? If so, describe the type and extent of the fencing.	Section 3.7.2.1 Staging Areas
	Describe how power to the site would be provided if required.	Section 3.7.2.1 Staging Areas
	Describe any grading activities and/or slope stabilization issues.	Section 3.7.2.1 Staging Areas
3.7.1.2 Work Areas	Describe known work areas that may be required for specific construction activities.	Section 3.7.2.2 Construction Work Areas
	For each known work area, provide the area required (include length and width) and describe the types of activities that would be performed.	Section 3.7.2.2 Construction Work Areas
	Identify the approximate location of known work areas in the GIS database.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.
	Describe how the work areas would likely be accessed.	Section 3.7.1 Construction Access
	If any site preparation is likely required, generally describe what and how it would be accomplished.	Section 3.7.4.1 Site Development
	Describe any grading activities and/or slope stabilization issues.	Section 3.7.4.1 Site Development
	Based on the information provided, describe how the site would be restored.	Section 3.7.4.1 Site Development, Section 3.7.5.6 Clean Up and Post Construction Restoration, see Figure 3-10 Conceptual Landscape Plan
3.7.1.3 Access Roads and/or Spur Roads	Describe the types of roads that would be used and/or would need to be created to implement the Proposed Project.	Section 3.7.1 Construction Access
	For road types that require preparation, describe the methods and equipment that would be used.	Section 3.7.6 Equipment. See attachment 3A, Construction Equipment
	Identify approximate location of all access roads (by type) in the GIS database.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.
	Describe any grading activities and/or slope stabilization issues.	Section 3.7.4.1 Site Development
3.7.1.4 Helicopter Access	Identify which proposed poles/towers would be removed and/or installed using a helicopter.	(NA)

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	If different types of helicopters are to be used, describe each type and what activities they would be used for.	(NA)
	Provide information as to where the helicopters would be staged, where they would refuel, where they would land within the Proposed Project site.	(NA)
	Describe any Best Management Practices (BMPs) that would be employed to avoid impacts caused by use of helicopters, for example: air quality and noise considerations.	(NA)
	Describe flight paths, payloads, hours of operations for known locations, and work types.	(NA)
3.7.1.5 Vegetation Clearance	Describe the types of vegetation clearing that may be required and why.	Section 3.7.4.1 Site Development, Section 4.3 Biological Resources
	Identify the preliminary location and provide an approximate area of disturbance in the GIS database for each type of vegetation removal.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.
	Describe how each type of vegetation removal would be accomplished.	Section 3.7.4.1 Site Development
	For removal of trees, distinguish between tree trimming as required under GO-95D and tree removal.	N/A
	Describe the types and approximate number and size of trees that may need to be removed.	
	Describe the type of equipment typically used.	Section 3.7.6 Equipment
3.7.1.6 Erosion and Sediment Control and Pollution Prevention during Construction	Describe the areas of soil disturbance including estimated total areas and associated terrain type and slope. List all known permits required. For project sites of less than 1 acre, outline the BMPs that would be implemented to manage surface runoff.	Section 3.7.5.6 Clean-Up and Post Construction Restoration.
	Describe any grading activities and/or slope stabilization issues.	Section 3.7.4.1 Site Development
	Describe how construction waste would be disposed.	Section 3.7.5.6 Clean-Up and Post Construction Restoration.
3.7.1.7 Cleanup and Post-Construction Restoration	Describe how cleanup and post-construction restoration would be performed.	Section 3.7.5.6 Clean-Up and Post Construction Restoration.

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
3.7.2 Transmission Line Construction (Above Ground) **3.7.2.1 Pull and Tension Sites**	Provide the general or average distance between pull and tension sites.	(NA)
	Provide the area of pull and tension sites including the estimated length and width.	(NA)
	According to the preliminary plan, identify the number of pull and tension sites that would be required, and their locations. Provide the location information in GIS.	(NA)
	Describe the type of equipment that would be required at these sites.	(NA)
	If conductor is being replaced, describe how it would be removed from the site.	(NA)
3.7.2.2 Pole Installation and Removal	Describe how the construction crews and their equipment would be transported to and from the pole site locations. Provide vehicle type, number of vehicles, estimated number of trips, and hours of operation.	(NA)
	Describe the process of removing the poles and foundations.	(NA)
	Describe what happens to the holes that the poles were in (i.e., reused or backfilled)?	(NA)
	If the holes are to be backfilled, what type of fill would be used and where would it come from?	(NA)
	Describe any surface restoration that would occur at the pole sites.	(NA)
	Describe how the poles would be removed from the sites.	(NA)
	If topping is required to remove a portion of an existing transmission pole that would now only carry distribution lines, describe the methodology to access and remove the tops of these poles. Describe any special methods that would be required to top poles that may be difficult to access, etc.	(NA)
	Describe the process of how the new poles/towers would be installed; specifically identify any special construction methods for specific locations or for different types of poles/towers.	(NA)
	Describe the types of equipment and their use as related to pole/tower installation.	(NA)

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	Describe the actions taken to maintain a safe work environment during construction.	(NA)
	Describe what would be done with soil that is removed from a hole/foundation site.	(NA)
	For any foundations required, provide a description of the construction method(s), approximate average depth and diameter of excavation, approximate volume of soil to be excavated, approximate volume of concrete or other backfill required, etc.	(NA)
	Describe briefly how poles/towers and associated hardware are assembled.	(NA)
	Describe how the poles/towers and associated hardware would be delivered to the site; would they be assembled off-site and brought in or assembled on site?	(NA)
	Provide the following information about pole/tower installation and associated disturbance area estimates; pole diameter, lattice tower base dimension, auger hole depth, permanent footprint per pole/tower, number of poles/towers, average work area around poles/towers, and total permanent footprint for poles/towers.	(NA)
3.7.2.3 Conductor/Cable Installation	Provide a process-based description of how new conductor/cable would be installed and how old conductor/cable would be removed, if applicable.	Section 3.7.5 TL 665 Loop-In
	Generally describe the conductor/cable splicing process.	Section 3.7.5 TL 665 Loop-In
	If vaults are required, provide their dimensions and approximate location/spacing along the alignment.	Section 3.7.5 TL 665 Loop-In
	Describe in what areas conductor/cable stringing/installation activities would occur.	Section 3.7.5 TL 665 Loop-In
	Describe any safety precautions or areas where special methodology would be required.	(NA)
3.7.3 Transmission Line Construction (Below Ground)	Describe the approximate dimensions of the trench (e.g., depth, width).	Section 3.7.5 TL 665 Loop-In
3.7.3.1 Trenching	Describe the methodology of making the trench.	Section 3.7.5 TL 665 Loop-In

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	Provide the total approximate cubic yardage of material to be removed from the trench, the amount to be used as backfill and the amount to subsequently be removed/disposed of off-site.	Section 3.7.5 TL 665 Loop-In
	Provide off-site disposal location, if known, or describe possible option(s).	Section 3.7.5 TL 665 Loop-In
	If engineered fill would be used as backfill, provide information as to the type of engineered backfill and the amount that would be typically used.	Section 3.7.5.2 Duct Bank Installation
	Describe if dewatering would be anticipated, if so, how the trench would be dewatered, what the anticipated flows of the water are, whether there would be treatment, and how the water would be disposed.	Section 3.7.5.5 Dewatering
	Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants that could be exposed as a result of trenching operations.	Section 3.7.5.5 Dewatering
	If pre-existing hazardous waste was encountered, describe the process of removal and disposal.	N/A
	Describe any standard BMPs that would be implemented.	Section 3.7.5.5 Dewatering
3.7.3.2 Trenchless Techniques: Microtunnel, Bore and Jack, Horizontal Directional Drilling	Provide the approximate location of the sending and receiving pits.	(NA)
	Provide the length, width and depth of the sending and receiving pits.	(NA)
	Describe the methodology of excavating and shoring the pits.	(NA)
	Describe the methodology of the trenchless technique.	(NA)
	Provide the total cubic yardage of material to be removed from the pits, the amount to be used as backfill and the amount to subsequently be removed/disposed of off-site.	(NA)
	Describe the process for safe handling of drilling mud and bore lubricants.	(NA)
	Describe the process for detecting and avoiding "fracturing-out" during horizontal directional drilling operations.	(NA)

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	Describe the process for avoiding contact between drilling mud/lubricants and stream beds.	(NA)
	If engineered fill would be used as backfill, provide information as to the type of engineered backfill and the amount that would be typically used.	(NA)
	If dewatering is anticipated, describe how the pit would be dewatered, what the anticipated flows of the water are, whether there would be treatment, and how the water would be disposed.	(NA)
	Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants.	(NA)
	If a pre-existing hazardous waste was encountered, describe the process of removal and disposal.	(NA)
	Describe any grading activities and/or slope stabilization issues.	(NA)
	Describe any standard BMPs that would be implemented.	(NA)
3.7.4 Substation Construction	Describe any earth moving activities that would be required; what type of activity and, if applicable, estimate cubic yards of materials to be reused and/or removed from the site for both site grading and foundation excavation.	Section 3.7.4.1 Site Development
	Provide a conceptual landscape plan in consultation with the municipality in which the substation is located.	Section 3.8.3 Site Land Landscaping, See Figure 3-10
	Describe any grading activities and/or slope stabilization issues.	Section 3.7.4.1 Site Development
	Describe possible relocation of commercial or residential property, if any.	N/A
3.7.5 Construction Workforce and Equipment	Provide the estimated number of construction crew members.	Section 3.7.8 Personnel
	Describe the crew deployment, whether crews would work concurrently, if they would be phased, etc.	Section 3.7.8 Personnel
	Describe the different types of activities to be undertaken during construction, the number of crew members for each activity, and the number and types of equipment expected to be used for said activity. Include a written description of the activity.	Section 3.7.8 Personnel

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	Provide a list of the types of equipment expected to be used during construction of the Proposed Project as well as a brief description of the use of the equipment.	See Attachment 3A
3.7.6 Construction Schedule	Provide a preliminary project construction schedule; include contingencies for weather, wildlife closure periods, etc.	Section 3.7.7 Schedule
3.8 Operation and Maintenance	Describe the general system monitoring and control.	Section 3.8 Operation and Maintenance
	Describe the general maintenance program of the Proposed Project include timing of inspections, type of inspection, and a description of how the inspection would be implemented.	Section 3.8 Operation and Maintenance
	If additional full time staff would be required for operation and/or maintenance, provide the number of workers and for what purpose they are required.	Section 3.8 Operation and Maintenance
3.9 Applicant Proposed Measures	If there are measures that the Applicant would propose to be part of the Proposed Project, include those measures and reference plans or implementation descriptions.	Section 3.10 Applicant Proposed Measures and Table 3-6
Chapter 4: Environmental Setting		
	For each resource area discussion within the PEA, include the following: a description of the physical environment in the vicinity of the Proposed Project (e.g. topography, land use patterns, biological environment) and regional environment.	Each resource area provides a discussion of the both the physical environment in the vicinity of the Proposed Project and the regulatory environment.
	For each resource area discussion within the PEA, include a description of the regulatory environment/context (federal, state, and local)	Each resource area provides a discussion of the both the physical environment in the vicinity of the Proposed Project and the regulatory environment.
Chapter 5: Environmental Impact Assessment Summary		
5.1 Aesthetics	Provide visual simulations of prominent public view locations, including scenic highways, to demonstrate the views before and after project implementation.	See Figures 4-1-1 through 4.4-4
5.2 Agriculture Resources	Identify the types of agricultural resources affected.	No Agricultural Resources would be affected by the proposed project.
5.3 Air Quality	Provide supporting calculations/spreadsheets/technical reports that support emission estimates in the PEA.	Tables 4.2-8 and 4.2-9

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	Provide documentation of the location and types of sensitive receptors that could be impacted by the project.	Table 4.2-4
	Identify Proposed Project greenhouse gas (GHG) emissions.	Table 4.2-6
	Quantify GHG emissions from a business as usual snapshot. That is, what the GHG emissions will be from the proposed project if no mitigations were used.	Table 4.2-6
	Quantify GHG emission reductions from every APM that is implemented. The quantifications will be itemized and placed in a table format.	Section 4.3.3 Impacts
	Identify the net emissions of a project after mitigations have been applied.	Table 4.2-10
	Calculate and quantify GHG emissions (CO2 equivalent) for the project including construction & operation.	Table 4.2-10
	Calculate and quantify the GHG reduction based on reduction measures proposed for the project.	Section 4.3.3 Impacts
	Propose APMs to implement and follow to maximize GHG reductions. If sufficient, CPUC will accept them without adding further mitigation measures.	Section 4.2.4 APMs
	Discuss programs already in place to reduce GHG emissions of a system wide level. This includes Applicant˝s voluntary compliance with USEPA SF6 reduction program, reductions from energy efficiency, demand response, LTTP, et al.	Section 4.2.3
	Ensure that the assessment of air quality impacts are consistent with PEA Sections 3.7.5 and 3.7.6, as well as with the PEA˝s analysis of impacts during construction, including traffic and all other emissions.	Section 4.3.3 Impacts
5.4 Biological Resources	Provide a copy of the Wetland Delineation and supporting documentation. If verified, provide supporting documentation.	Appendix D – Wetland Delineation Report
	Provide a copy of special-status surveys for wildlife, botanical and aquatic species, as applicable. Any GIS data documenting locations of special-status species should be provided.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
5.5 Cultural Resources	Cultural Resources Report documenting a cultural resources investigation of the Proposed Project.	Appendix E- Cultural Resources Report
	Provide a copy of the records found in the literature search.	Appendix E- Cultural Resources Report
	Provide a copy of all letters and documentation of Native American consultation.	Appendix E- Cultural Resources Report
5.6 Geology, Soils, and Mineral Resources	Provide a copy of the geotechnical investigation if completed, including known and potential geologic hazards such as ground shaking, subsidence, liquefaction, etc.	Appendix F – Geotechnical Report
5.7 Hazards and Hazardous Materials	Include the Environmental Data Resources report.	Appendix G – Phase I ESA
	Include a Hazardous Substance Control and Emergency Response Plan, if required.	Section 4.6.4 Impacts and Section 4.6.5 APMs
	Include a Health and Safety Plan, if required.	Section 4.6.4 Impacts and Section 4.6.5 APMs
	Describe the Worker Environmental Awareness Program	Section 4.6.4 Impacts and Section 4.6.5 APMs
	Describe which chemicals would be used during construction and operation of the Proposed Project.	Section 4.6.4 Impacts and Section 4.6.5 APMs
5.8 Hydrology and Water Quality	Describe impacts to groundwater quality including increased runoff due to construction of impermeable surfaces, etc.	Section 4.7.4 Impacts
	Describe impacts to surface water quality including the potential for accelerated soil erosion, downstream sedimentation, and reduced surface water quality.	Section 4.7.4 Impacts
5.9 Land Use and Planning	Provide GIS data of all parcels within 300 feet of the Proposed Project with the following data: APN number, mailing address, and parcel˝s physical address.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.
5.10 Mineral Resources	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	No Mineral Resources would be affected by this project.
5.11 Noise	Provide long term noise estimates for operational noise.	Section 4.9.4 Impacts
5.12 Population and Housing	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	Section 4.10 Impacts

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
5.13 Public Services	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	Section 4.11 Impacts
5.14 Recreation	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	No impacts on recreation would occur as a result of this project.
5.15 Transportation and Traffic	Discuss traffic impacts resulting from construction of the Proposed Project including ongoing maintenance operations.	Section 3.12.4 Impacts
	Provide a preliminary description of the traffic management plan that would be implemented during construction of the Proposed Project.	Section 3.7.2
5.16 Utilities and Services Systems	Describe how treated wood poles would be disposed of after removal, if applicable.	No impact to utilities and services would occur as a result of this project.
5.17 Cumulative Analysis	Provide a list of projects within the Proposed Project area that the applicant is involved in.	N/A
	Provide a list of projects that have the potential to be proximate in space and time to the Proposed Project.	Table 4.13-1
5.18 Growth-Inducing Impacts, If Significant	Provide information on the Proposed Project‟s growth- inducing impacts.	Section 5.3
	Provide information on any economic or population growth, in the surrounding environment that will directly or indirectly, result from the Proposed Project.	Section 5.3
	Describe any increase in population that could further tax existing community service facilities (i.e., schools, hospitals, fire, police, etc.), that will directly or indirectly result from the Proposed Project.	Section 5.3
	Describe any obstacles to population growth that the Proposed Project would remove.	Section 5.3
	Describe any other activities, directly or indirectly encouraged or facilitated by the Proposed Project that would cause population growth that could significantly affect the environment, either individually or cumulatively.	Section 5.3

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
Chapter 6: Detailed Discussion of Significant Impacts		
6.1 Mitigation Measures Proposed to Minimize Significant Effects	Discuss each mitigation measure and the basis for selecting a particular mitigation measure should be stated.	N/A
6.2 Description of Project Alternatives and Impact Analysis	Provide a summary of the alternatives considered that would meet most of the objectives of the Proposed Project and an explanation as to why they were not chosen as the Proposed Project. Include system or facility alternatives, route alternatives, route variations, alternative locations.	N/A
	Alternatives considered and described by the Applicant should include, as appropriate, system or facility alternatives, route alternatives, route variations, and alternative locations.	N/A
	Include a description of a "No Project Alternative" should be included.	N/A
	If significant environmental effects are assessed, the discussion of alternatives shall include alternatives capable of substantially reducing or eliminating any said significant environmental effects, even if the alternative(s) substantially impede the attainment of the Proposed Project objectives and are more costly.	N/A
6.3 Growth-Inducing Impacts	Discuss if the Proposed Project would foster economic or population growth, either directly or indirectly, in the surrounding environment.	N/A
	Discuss if the Proposed Project would cause an increase in population that could further tax exiting community services (e.g. schools, hospitals, fire, police, etc.).	N/A
	Discuss if the Proposed Project would remove obstacles to population growth.	N/A
	Discuss if the Proposed Project would encourage and facilitate other activities that would cause population growth that could significantly affect the environment, either individually or cumulatively.	N/A

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
6.4 Suggested Applicant Proposed Measures to address GHG Emissions	Include a menu of suggested APMs that applicants can consider to address GHG emissions. Suggested APMs include, but are not limited to: 1. If suitable park-and-ride facilities are available in the Project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Proposed Project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the Project's construction schedule.	Section 4.2.5 APMs
	2. To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.	Section 4.2.5 APMs

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	3. Use low-emission construction equipment. Maintain construction equipment per manufacturing specifications and use low-emission equipment described here. All off-road construction diesel engines not registered under the CARB Statewide Portable Equipment Registration Program shall meet at a minimum the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Sec. 2423(b)(1). 4. Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling. 5. Alternative Fuels: CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel. 6. Alternative Fuels: Ethanol, increased use of ethanol fuel 7. Green Buildings Initiative 8. Facility wide energy efficiency audit. 9. Complete greenhouse gas emissions audit. The audit will include a review of the greenhouse gases emitted from those facilities (substations), including carbon dioxide, methane, CFC and HFC compounds, (SF6).	
	10. There is an EPA approved SF6 emissions protocol. http://www.epa.gov/electricpower-sf6/resources/index.html#three 11. SF6 program wide inventory. For substations keep inventory of leakage rates. 12. Increase replacement of breakers once leakage rates exceed 1% within 30 days of detection. 13. Increased investment in current programs that can be verified as being in addition to what the utility is already doing.	Section 4.2.5 APMs

Table 1-1 PEA Checklist Key, continued

Location in CPUC Checklist	Checklist Item	Responsible Party to Provide Information
	14. The SF6 Emission Reduction Partnership for the Electric Power Systems was launched in 1999 and currently includes 57 electric utilities and local governments across the U.S. SF6 is used by this industry in a variety of applications, including that of dielectric insulating material in electrical transmission and distribution equipment such as circuit breakers. Electric power systems that join the Partnership must, within 18 months, establish an emission reduction goal reflecting technically and economically feasible opportunities within their company. They also agree to, within the constraints of economic and technical feasibility, estimate their emissions of SF6, establish a strategy for replacing older, leakier pieces of equipment, implement SF6 recycling, establish and apply proper handling techniques, and report annual emissions to EPA.EPA works as a clearinghouse for technical information, works to obtain commitments from all electric power system operators and will be sponsoring an international conference in 2000 on SF6 emission reductions. 15. Quantify what comes into the system and track programmatically SF6. 16. Applicant can propose other GHG reducing mitigations.	
Chapter 7: Other Process-Related Data Needs		
	Include an excel spreadsheet that identifies all parcels within 300 feet of any Proposed Project component with the following data: APN number, owner mailing address, and parcels physical address.	A CD containing the relevant GIS and AutoCadd data for the Proposed Project has been submitted under separate cover as part of this PEA package.

CHAPTER 2: PROJECT PURPOSE AND NEED

The following section identifies the purpose, need and objectives for San Diego Gas & Electric Company's (SDG&E) proposed Mira Sorrento 120MVA 69/12 kilovolt (kV) Distribution Substation (Proposed Project). The following information is provided as required by the California Public Utilities Commission's (CPUC) Proponent's Environmental Assessment Guidelines (CPUC Information and Criteria List, Appendix B, Section V) and the California Environmental Quality Act (CEQA) Guidelines (Section 15126.6(a)). In accordance with CPUC General Order 131-D, additional data pertaining to the purpose and need for the Proposed Project is provided in SDG&E's application prepared for the CPUC.

2.1 Overview

SDG&E is a regulated public utility that provides electric service to 1.4 million customers within a 4,100-square-mile service area that encompasses 25 cities throughout San Diego and southern Orange counties. The Proposed Project is the construction of a new substation to meet existing and anticipated customer-driven electrical load growth and to improve distribution equipment reliability that would prevent potential long outages or disruption of service to existing customers in SDG&E's service territory in the vicinity of Sorrento Mesa.

In providing electrical service to the Sorrento Mesa area, SDG&E currently operates five substations: Eastgate Substation, Mesa Rim Substation, Genesee Substation, Torrey Pines Substation and North City West Substation. There is commercial growth in the area driving the existing substations to their ultimate capacities. All five substations are 69/12kV distribution substations, and each has been expanded to its full complement of transformer banks. A new Mira Sorrento Substation is planned for 2014 to meet the area ultimate capacity requirements. The latest 2013 forecast indicates Mesa Rim Substation will be loaded at 92%, Genesee Substation 89%, Torrey Pines 89%, and North City West 98% loading. Eastgate Substation serves the City of San Diego North City Water Reclamation Plant (NCWRP) and other commercial customers. The NCWRP ultimate load is the capacity of one transformer bank that will exceed the total Eastgate Substation capacity when City of San Diego requires the capacity. A 15% reserve capacity is desired for each area substation to handle outages and routine maintenance by transfer of load to avoid disruption of customer

service. Expected electrical load growth and the desire to prevent extended outages and disruption of services to new and existing customers in the area, as well as maintain reliable service to SDG&E customers, are the prime driving factors in determining the need to construct a new substation in the area. To begin the process, SDG&E's site selection team met with the City of San Diego's Economic Development Corporation and assisted SDG&E with site review and selection for the new substation.

A further benefit of the developing a new substation is that it will ensure reliability of service to customers. SDG&E designs and develops distribution substations to ensure reliability of service. SDG&E considers additional substation transformer capacity when: the loss of a single transformer may cause an interruption to major commercial/industrial load that cannot be restored through use of 12kv circuit ties to other substations. The planning and design of the Mira Sorrento Substation meets this requirement as it will provide needed capacity and additional 12kV distribution circuit ties with the substations currently serving the area.

The Proposed Project has been designed to meet engineering and site design objectives to ensure feasibility. These objectives include adequate electric transmission and distribution system access, acceptable site development characteristics, community acceptance and cost efficiency.

2.2 Project Objectives

The Proposed Project is being proposed to meet several objectives identified by SDG&E. The primary objective of the Proposed Project is to construct a new substation and associated TL655 tie-in, designed to provide additional capacity to serve existing area load as well as forecasted customer-driven electrical load growth and to prevent potential long outages or disruption of service to existing customers in the SDG&E Sorrento Mesa service territory.

Basic objectives of the Proposed Project include the following:

- Meet the area's long-term electric distribution capacity needs by constructing a new substation near planned load growth thereby maximizing system efficiency;
- Provide substation and circuit tie capacity that will provide additional reliability for existing and future system needs;
- Reduce area substation loading to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the Sorrento Mesa service territory;

Additional project objectives include:

- Utilize existing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation; and,
- Meet project need while minimizing environmental impacts.

The Proposed Project components, their locations, preliminary configuration, and the existing and proposed system configuration are presented in Chapter 3.0, *Project Description*.

2.2.1 Meet the Area Electric Capacity Needs

The Torrey Pines / Sorrento Mesa area is fed primarily from Torrey Pines, Eastgate, Genesee and Mesa Rim Substations and North City West Substation. All five (5) substations are at their maximum transformer configuration with a total average 90% high substation loading forecasted in 2012. In addition, future area growth is forecasted to be 65 MW within the next 20 years. The area served has the largest concentration of commercial, wireless technology, biomedical and pharmaceutical companies in the SDG&E service territory based on distribution system loading.

2.2.2 Provide Improved Substation and Circuit Reliability with Added Tie Capacity

Installation of a new substation provides an increased number of substation transformer banks and circuits that will provide for an increased number of circuit ties. Reliability improves with balanced circuit loading and increased number of circuits to transfer load in the event of a circuit or branch outage.

2.2.3 Utilize Existing SDG&E-Owned Land Previously Identified by Community Stakeholders and Condemned for the Purpose of Constructing a Substation

Nearly a decade ago, SDG&E initially identified a potential need to construct a new substation within the Sorrento Mesa area. SDG&E after meeting with community stakeholder groups (the San Diego Economic Development Corporation and the Mira Mesa Community Planning Group), was advised to select the Mira Sorrento Substation Site.

In February 2005, SDG&E secured the land rights for the Mira Sorrento Substation Site through condemnation. The property was originally condemned for the purpose of constructing a substation, and an application for a Permit to Construct was filed in 2003 but later withdrawn when load forecasts and economic conditions changed. SDG&E continues to own the property, which can be utilized for construction of the substation.

2.2.4 Reduce Area Substation Loading to Optimum Operating Conditions

The optimum maximum substation loading is 85% which allows transformer bank load transfer in the event of a transformer bank outage. Substation reliability improves with minimum outage time for the highly commercial area.

2.2.5 Meet Project Need While Minimizing Environmental Impacts

The Mira Sorrento Substation was chosen, in part, because it could be constructed with minimal impacts to the environment. Portions of the project site have been previously disturbed, and the project has been designed to avoid impacts to sensitive wetlands. The proposed substation site is located in an area that is surrounded by commercial office uses, and it located away from residences. The site is located adjacent to an existing transmission line, and no additional overhead lines are required.

2.3 Conclusion

The Proposed Project would result in the construction of a new substation. The proposed Mira Sorrento Substation would be a 120MVA 69/12 kilovolt (kV) substation to serve the Sorrento Mesa region. After evaluating other options, SDG&E selected the Proposed Project because it would provide a robust and reliable distribution system, well into the future. In addition, the Proposed Project meets all of the stated objectives, including minimizing environmental impacts.

CHAPTER 3: PROJECT DESCRIPTION

3.0 Project Location

The proposed Mira Sorrento Substation Project (Proposed Project) is located in the northwestern portion of the City of San Diego, California. The site is located within the community of Mira Mesa, in the northwesterly portion of San Diego County; refer to Figure 3-1, *Regional Map*; Figure 3-2, *Vicinity Map*; and Figure 3-3, *Aerial Photograph*. The Proposed Project site is situated approximately nine miles north of Downtown San Diego.

For the purposes of this document and to better describe the location, the Proposed Project is divided into the following primary components:

- 120MVA 69/12 kilovolt (kV) Mira Sorrento Substation
- 69kV Transmission Tie Line 665 (TL665) Loop-in

3.0.1 Mira Sorrento Substation

The Project site is located on the northeast corner of the intersection of Vista Sorrento Parkway and Mira Sorrento Place, just northeast of Interstate 805 (I-805). The Project site is approximately 3.7 acres and consists of undeveloped land. Access to the site will be from Mira Sorrento Place; refer to Figure 3-2, *Vicinity Map*. The Mira Sorrento Substation will be located entirely on land owned by SDG&E.

Figure 3-3, *Aerial Photograph*, shows the existing conditions of the Project site and surrounding area. The aerial photograph highlights those adjacent within 300 feet of the Project site. The site is bordered by Vista Sorrento Parkway to the south, Mira Sorrento Place to the west and north, and an undeveloped area to the east with a drainage channel that trends from northwest to southeast. Other surrounding land uses include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the northeast across the drainage. Commercial office complexes are located uphill from the Project site to the west and across Mira Mesa Boulevard to the east within 300 feet of the Project boundary.

Adjacent to the northeast side of the property is an existing 200-foot SDG&E utility corridor easement containing overhead electric transmission lines (TL 13810 and TL 23013); a 12kV overhead distribution line (Circuit 748); a 30-inch high pressure gas transmission line

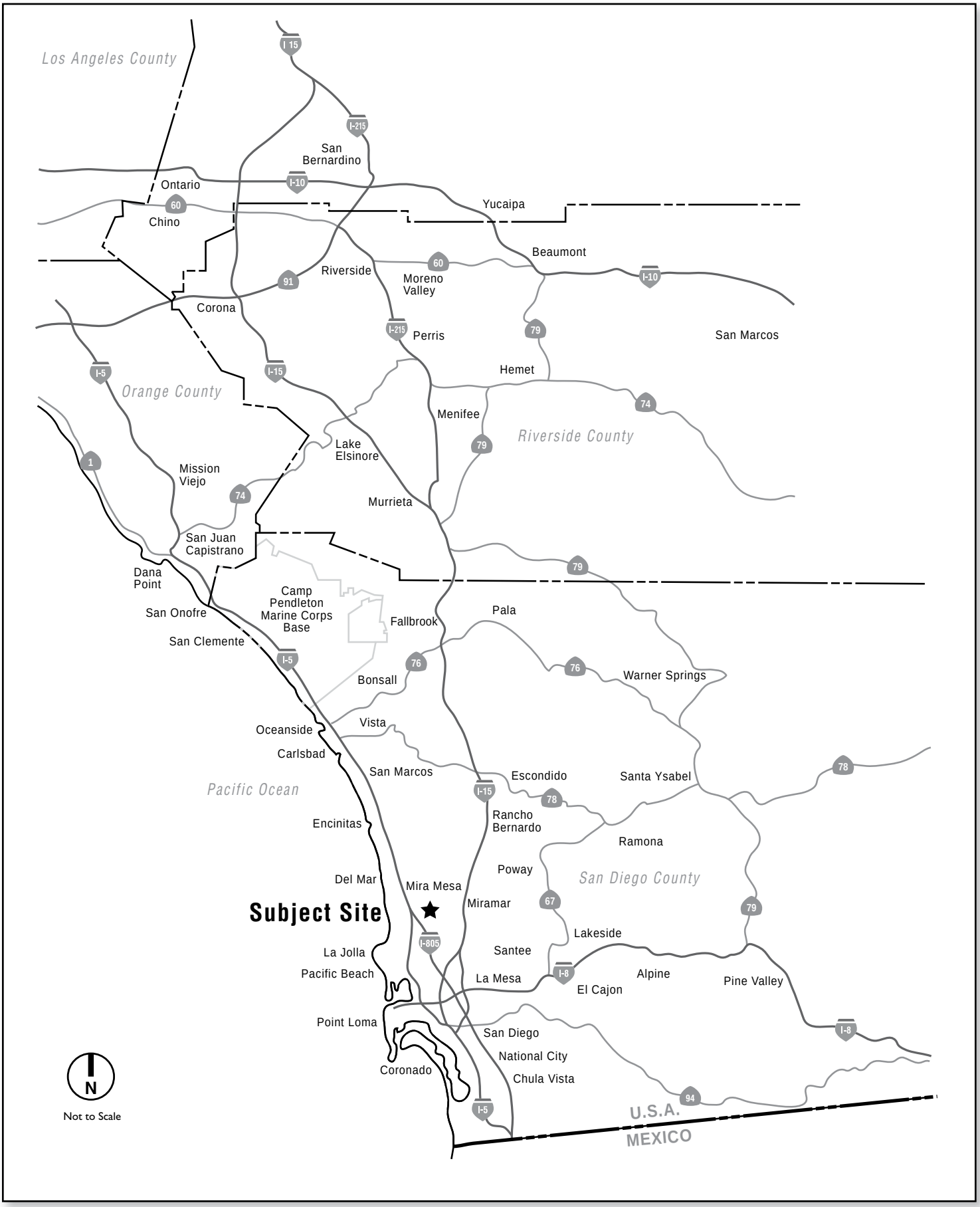
(SDG&E Line 3010) and two Kinder Morgan fuel pipelines (10-inch and 16-inch). An unimproved (dirt) access road provides operational and maintenance activities to the SDG&E facilities located within the easements adjacent to the Proposed P│xroject. The existing easements on the property are shown on Figure 3-4, *Existing Easements*.

3.0.2 TL665 Loop-In

TL665 is an existing 69kV circuit with terminal points at Peñasquitos and Genesee Substations. As part of the Proposed Project, TL665 will split and proceed underground via two new parallel trench alignments along Vista Sorrento Parkway to the proposed Mira Sorrento Substation for a distance of approximately 600 feet each of single circuit 69kV duct package infrastructure. These new trench alignments will be established from an interception point from the existing underground duct package (TL665). This new underground alignment will proceed south along Vista Sorrento Parkway then cross Mira Sorrento Place to the new Mira Sorrento Substation. TL665 will then be re-configured as TL6959 (Penasquitos-Mira Sorrento) and TL665 (Mira Sorrento-Genessee). Refer to Figure 3-5, *Schematic Transmission Line Configuration*. An SDG&E fiber optic cable will be installed in the new transmission conduit from Mira Sorrento substation to the existing cable pole.

3.1 Existing Transmission System

Currently, TL665 proceeds northward on existing overhead facilities from Genesee Substation and transitions underground on a cable pole located along Vista Sorrento Place. The existing underground segment then progresses southward along Vista Sorrento Place for approximately 2,100 feet before transitioning back overhead on another cable pole located near the business park just north Mira Sorrento Parkway. TL665 then continues northward on existing overhead facilities and terminates at Peñasquitos Substation.



SDGE

Mira Sorrento Substation
Proponent's Environmental Assessment

REGIONAL MAP

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Figure 3-1

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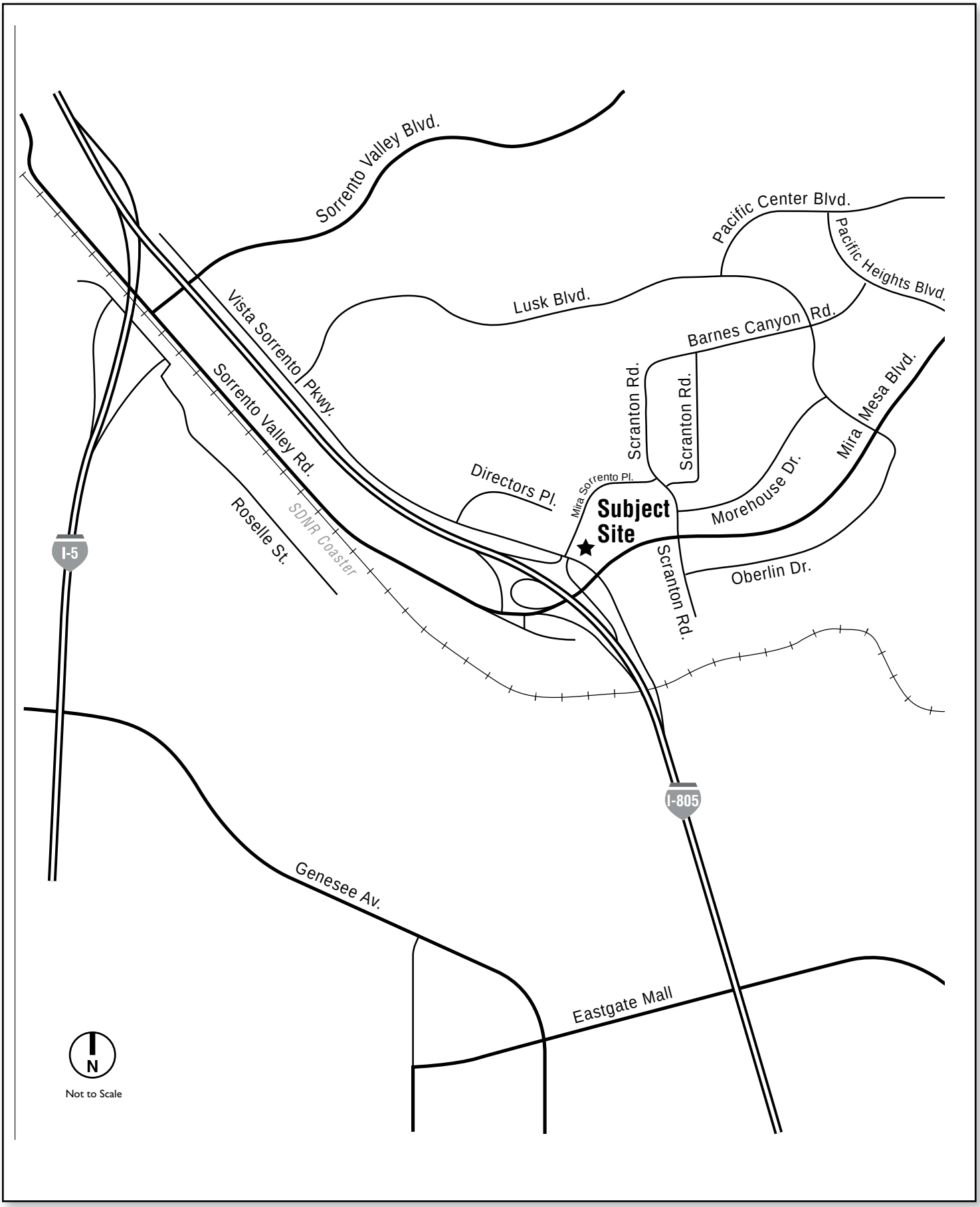

Mira Sorrento Substation
Proponent's Environmental Assessment

VICINITY MAP

Figure 3-2

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Scale 1:300
Source: Google Earth 2011

SDGE

Mira Sorrento Substation
Proponent's Environmental Assessment

AERIAL PHOTOGRAPH

SD Mac: 25103691EIRLetterPortrait.indd

Figure 3-3

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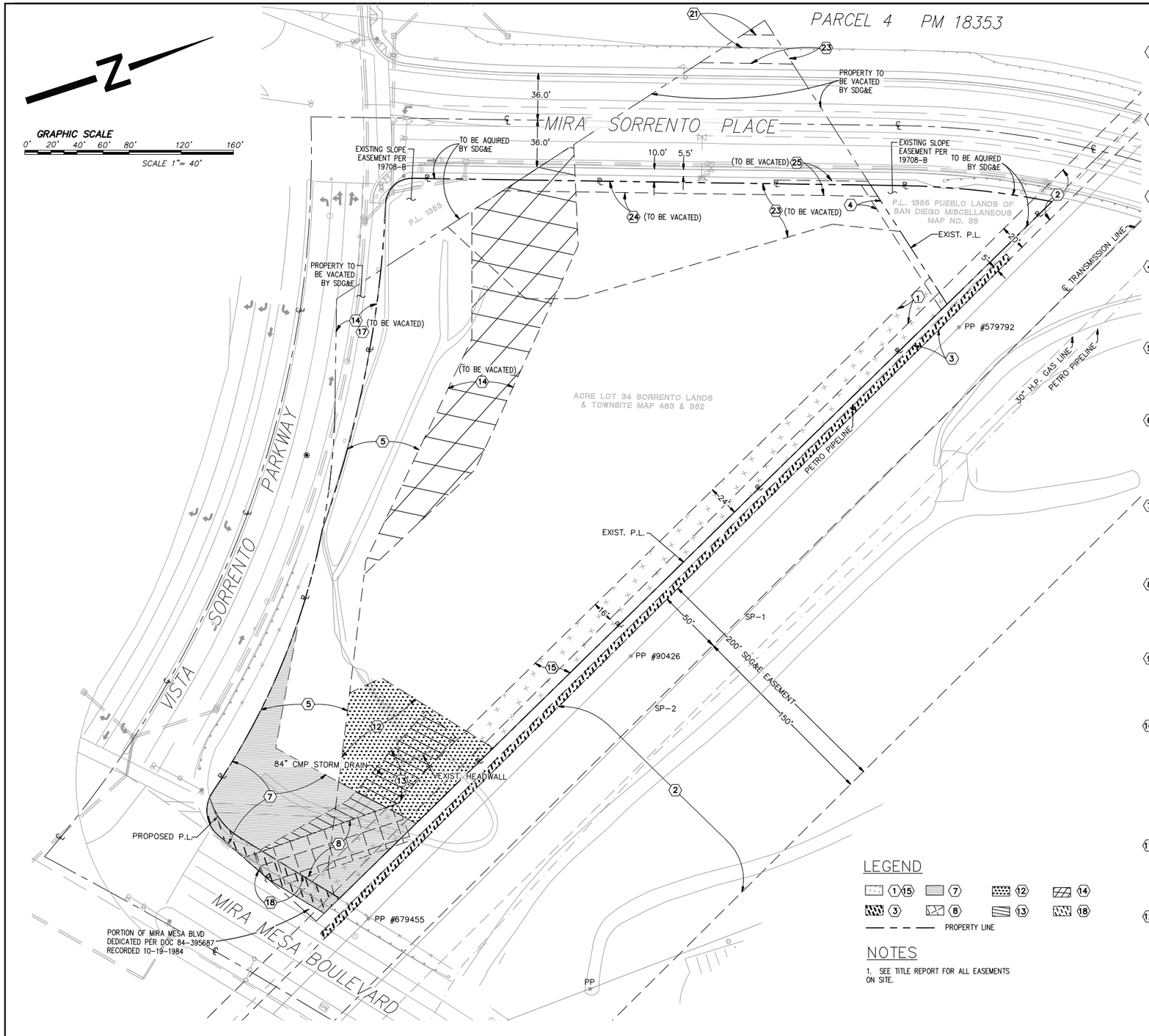

EASEMENTS

(1) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: SAN DIEGO GAS & ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS, AND EGRESS
RECORDED: AUGUST 30, 1917 IN BOOK 740, PAGE 445, OF DEEDS

(2) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: SAN DIEGO GAS & ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS, AND EGRESS
RECORDED: NOVEMBER 26, 1957 IN BOOK 6847, PAGE 544, OF O.R.
RE-RECORDED: JANUARY 3, 1958 IN BOOK 6890, PAGE 422, OF O.R.

(3) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: SAN DIEGO PIPE LINE COMPANY
PURPOSE: PIPE LINE PURPOSES
RECORDED: SEPTEMBER 30, 1964, AS FILE NO. 178916, OF O.R.

(4) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: SAN DIEGO GAS & ELECTRIC COMPANY DOC #71957
PURPOSE: PUBLIC UTILITIES
RECORDED: MAY 11, 1970, AS FILE NO. 80907, OF O.R.
WIDTH: 6.00 FEET

(5) THE FACT THAT THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET OR HIGHWAY, ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN SEVERED FROM SAID LAND BY THE DOCUMENT
RECORDED: NOVEMBER 29, 1972, AS FILE NO. 72-318551, OF O.R.

(6) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: THE CITY OF SAN DIEGO
PURPOSE: THE RIGHT TO EXCAVATE AND TO EXTEND DRAINAGE STRUCTURES AND EMBANKMENT SLOPES
RECORDED: NOVEMBER 29, 1972, AS FILE NO. 72-318551, OF O.R.
AFFECTS: UNABLE TO PLOT FROM RECORD

(7) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: THE CITY OF SAN DIEGO
PURPOSE: THE RIGHT TO EXCAVATE AND TO EXTEND DRAINAGE STRUCTURES AND EMBANKMENT SLOPES
RECORDED: OCTOBER 19, 1984, AS FILE NO. 84-395687, OF O.R.

(8) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: A STORM DRAIN OR DRAINS
RECORDED: OCTOBER 19, 1984, AS FILE NO. 84-395687, OF O.R.
WIDTH: 30 FEET

(9) THE FACT THAT THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET OR HIGHWAY KNOWN AS MIRA MESA BLVD., ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN SEVERED FROM SAID LAND BY THE DOCUMENT
RECORDED: OCTOBER 19, 1984, AS FILE NO. 84-395687, OF O.R.

(10) A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED
ENTITLED TO: AGREEMENT FOR JOINT USE
DATED: DECEMBER 16, 1981
EXECUTED BY: THE CITY OF SAN DIEGO, A MUNICIPAL CORPORATION AND SAN DIEGO GAS AND ELECTRIC COMPANY, A PUBLIC UTILITY CORPORATION
RECORDED: DECEMBER 5, 1985, AS FILE NO. 85-458700, OF O.R.
UNABLE TO PLOT FROM RECORD
REFERENCE IS MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

(11) THE FACT THAT THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET OR HIGHWAY KNOWN AS MIRA MESA BLVD., ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN SEVERED FROM SAID LAND BY THE DOCUMENT
RECORDED: JULY 11, 1991, AS FILE NO. 1991-0340935, OF O.R.

(12) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: THE CITY OF SAN DIEGO
PURPOSE: THE RIGHT TO EXCAVATE AND TO EXTEND DRAINAGE STRUCTURES AND EMBANKMENT SLOPES
RECORDED: JULY 11, 1991, AS FILE NO. 1991-0340936, OF O.R.

EASEMENTS

(13) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: DRAINAGE FACILITIES
RECORDED: JULY 11, 1991, AS FILE NO. 1991-0340937, OF O.R.

(14) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: THE CITY OF SAN DIEGO
PURPOSE: THE RIGHT TO EXCAVATE AND TO EXTEND DRAINAGE STRUCTURES AND EMBANKMENT SLOPES
RECORDED: JULY 11, 1991, AS FILE NO. 1991-0340938, OF O.R.

(15) A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS, AND CONDITIONS THEREIN CONTAINED
ENTITLED: "JOINT USE AGREEMENT"
DATED: MARCH 22, 1991
EXECUTED BY: SAN DIEGO GAS & ELECTRIC COMPANY AND THE CITY OF SAN DIEGO
RECORDED: FEBRUARY 13, 1992, AS FILE NO. 1992-0080540, OF O.R.

(16) A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS, AND CONDITIONS THEREIN CONTAINED
ENTITLED: "COMMON USE AGREEMENT"
DATED: MARCH 22, 1991
EXECUTED BY: SFPP AND THE THE CITY OF SAN DIEGO
RECORDED: FEBRUARY 13, 1992, AS FILE NO. 1992-0080541, OF O.R.
REFERENCE IS MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

(17) (20) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: PUBLIC STREET
RECORDED: MARCH 31, 1992, AS FILE NO. 1992-0183141, OF O.R.

(18) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: PUBLIC STREET
RECORDED: JUNE 25, 1992, AS FILE NO. 1992-0395157, OF O.R.

(21) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: DRAINAGE FACILITIES
RECORDED: SEPTEMBER 22, 2003 AS FILE NO. 2003-1162337 OF O.R.
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(22) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: CONSTRUCT, RECONSTRUCT, MAINTAIN, OPERATE AND REPAIR SLOPES
RECORDED: SEPTEMBER 22, 2003 AS FILE NO. 2003-1162338 OF O.R.

(23) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: CONSTRUCT, RECONSTRUCT, MAINTAIN, OPERATE AND REPAIR SLOPES
RECORDED: SEPTEMBER 22, 2003 AS FILE NO. 2003-1162339 OF O.R.

(24) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: CONSTRUCT, RECONSTRUCT, MAINTAIN, OPERATE AND REPAIR DRAINAGE FACILITIES
RECORDED: SEPTEMBER 22, 2003 AS FILE NO. 2003-1162340 OF O.R.
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(25) AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT
GRANTED TO: CITY OF SAN DIEGO
PURPOSE: CONSTRUCT, RECONSTRUCT, MAINTAIN, OPERATE AND REPAIR DRAINAGE FACILITIES
RECORDED: SEPTEMBER 22, 2003 AS FILE NO. 2003-1162341 OF O.R.
WIDTH: 2.90 FEET

LEGEND

(1)(15) (7) (12) (14) (3) (8) (13) (18) PROPERTY LINE

NOTES

1. SEE TITLE REPORT FOR ALL EASEMENTS ON SITE.

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Mira Sorrento Substation
Proponent's Environmental Assessment

EXISTING EASEMENTS

Figure 3-4

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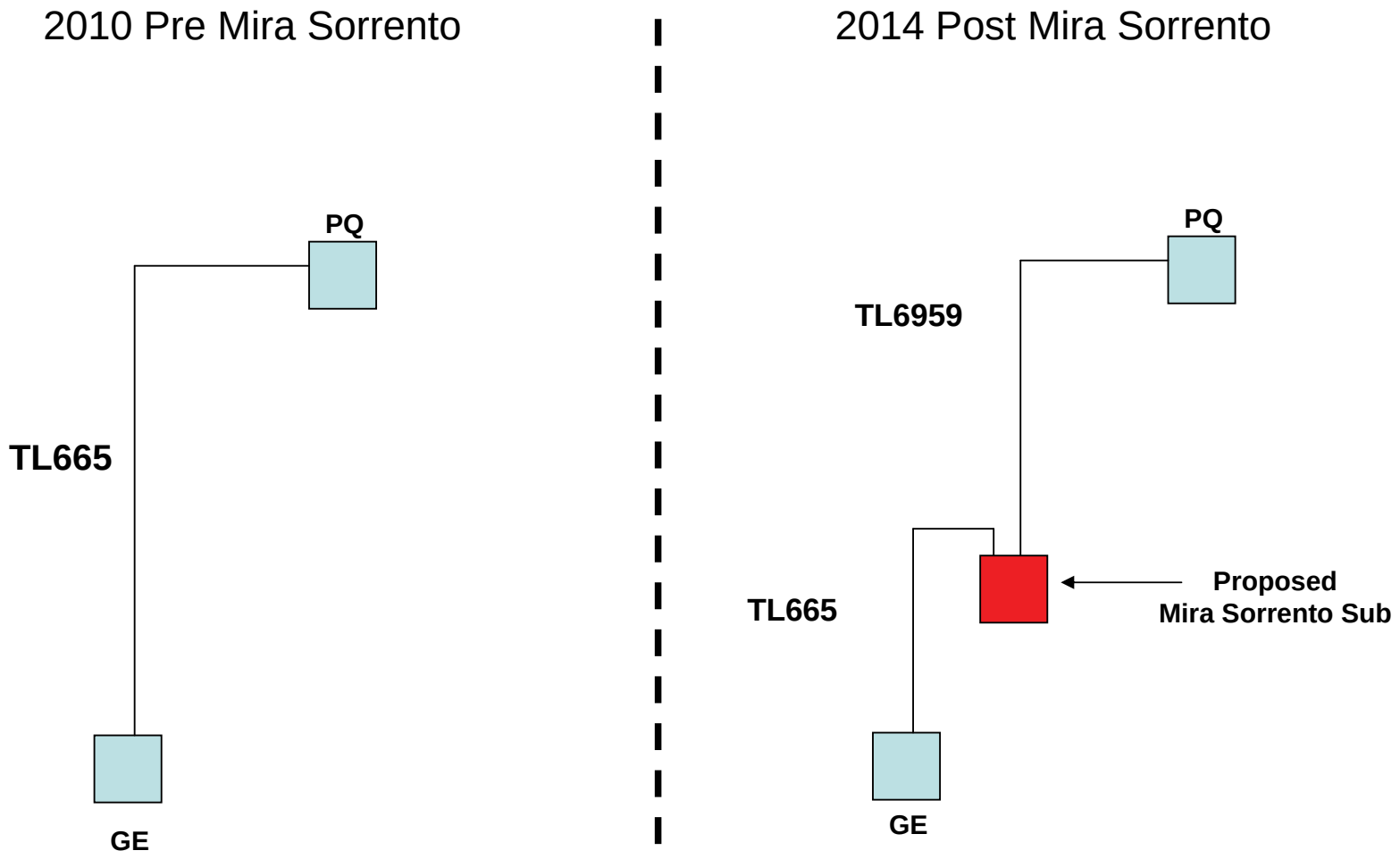

PQ – Penasquitos Substation

GE – Genesee Substation

Mira Sorrento Substation
Proponent's Environmental Assessment

SCHEMATIC TRANSMISSION LINE CONFIGURATION

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Figure 3-5

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3.2 Project Objectives

The Proposed Project is being proposed to meet several objectives identified by SDG&E. The primary objective of the Proposed Project is to construct a new substation and associated TL655 tie-in, designed to provide additional capacity to serve existing area load as well as forecasted customer-driven electrical load growth and to prevent potential long outages or disruption of service to existing customers in the SDG&E Sorrento Mesa service territory.

Basic objectives of the Proposed Project include the following:

- Meet the area's long-term electric distribution capacity needs by constructing a new substation near planned load growth thereby maximizing system efficiency;
- Provide substation and circuit tie capacity that will provide additional reliability for existing and future system needs;
- Reduce area substation loading to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the Sorrento Mesa service territory;

Additional project objectives include:

- Utilize existing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation; and,
- Meet project need while minimizing environmental impacts.

Refer also to Chapter 2.0, *Project Purpose and Need,* for additional discussion of the Proposed Project's various components and objectives.

3.3 Proposed Project

The Proposed Project includes the following main components:

- Construction of a new 120MVA 69/12kV distribution substation (Mira Sorrento Substation);
- Loop-in of the existing 69kV electrical transmission line (TL665) into the new Substation which will require installation of underground transmission facilities offsite of the substation site within franchise positions; and,
- 12kV electrical distribution, telecomm fiber, and telephone duct package infrastructure.

These components are described in greater detail in Section 3.5, *Project Components*, and are shown in Figure 3-6, *Mira Sorrento Substation Layout*.

3.4 Connected Actions

There are no connected actions associated with this Project. No other transmission, distribution, or substation work is required as a component of this Project.

3.5 Project Components

3.5.1 Mira Sorrento Substation

The Project is the construction of a new substation. Ultimately, the Substation walls will enclose an area approximately 62,420 square feet (1.43 acres). The layout of the proposed substation is shown in Figure 3-7, *Site Plan*.

The total disturbed area needed for construction of the substation is approximately 2.7 acres which includes both temporary and permanent disturbed area. Site development of the new Substation will consist of construction work including site clearing and grubbing, remedial grading, dewatering (if necessary), mass grading, retaining walls, storm water system, electrical underground conduits, finish grading, perimeter screen wall, entry gates and paving of internal and external operational and maintenance driveways. The retaining walls along the northeast side of the substation will be composed of two tiered mechanically stabilized earth (MSE) walls which at their maximum height will be approximately 32 feet and 20 feet. The MSE walls will be constructed in accordance with the project Geotechnical Report and Recommendations, and in accordance with standard construction practices. The landscaping and irrigation system will be installed in conjunction with the Substation construction and after the site development construction activities are complete. Refer to Figure 3–8, *Mira Sorrento Substation Temporary and Permanent Impact Areas*; Figure 3-9, *Preliminary Grading and Drainage Plan*; Figure 3-10, *Conceptual Landscape Plan*; and, Figure 3-11, *Mira Sorrento Substation Profile Drawing*.

The electrical facilities to be installed include 69/12kV air-insulated electrical buses, steel support structures, transformers, capacitors, reactors, circuit breakers, disconnect switches, communication equipment, control equipment, and protective relays. More specifically, the initial arrangement of the Substation will consist of:

- Two 69/12kV 30MVA substation banks
- Six 12kV distribution circuits
- Two 69kV TLs
- Five 69kV circuit breakers
- Four bays of standard steel rack approximately 30 feet tall consisting of the 69kV bus, 69kV potential transformer
- Two one-quarter sections of 12kV switchgear

- Two 12kV metal enclosed capacitors
- One 40-foot long x 20-foot wide masonry block control shelter

Additional facilities located inside the control shelter will include metering, Supervisory Control and Data Acquisition (SCADA), security, and communications equipment. The Substation equipment will be fully contained within the walled area and is depicted in Figure 3–6, *Mira Sorrento Substation Layout*.

In its ultimate configuration, the 120 MVA 69/12kV distribution Substation will be designed for the following total number of components:

- Four standard profile, low sound 30MVA transformers
- Four one-quarter sections of switchgear
- Sixteen 12kV circuits
- Four 12kV metal enclosed capacitors
- Four 69kV transmission lines entering the substation underground
- Nine 69kV circuit breakers
- Four bays of standard steel rack approximately 30 feet tall consisting of the 69kV bus, 69kV potential transformer
- One 40-foot long x 20-foot wide masonry block control shelter

The maximum amount of oil required for the transformers at the Mira Sorrento Substation will be approximately 5,500 to 9,400 gallons per transformer.

The tallest structure on the above finished grade site will be the 30-feet high standard steel rack.

Substation lighting will follow SDG&E lighting standards which is to provide enough light for a safe entry and exit from the substation, allow for safe driving around busses/racks, corners, and roadways, and allow for a preliminary visual inspection of the substation. Lights are not for security and are not to be left on at night except in the case of the gate entry light (always on), required night time work and/or an emergency.

A mixture of high pressure Sodium (normally used for gate entry light) and metal halide lights may be used. One light will be installed at the main gate, one light will be installed on each side of the control shelter, and a minimum of two lights will be installed on each wall. Lights may also be installed on the end of the steel rack if required.

All lights will be shielded and pointed down to minimize glare onto surrounding property and habitat.

A 10-foot-tall perimeter screen wall will enclose the entire Substation site. Two 8-foot tall chain link gates will provide access to the substation from Mira Sorrento Place. The gates will be locked and monitored remotely to limit access to only qualified personnel. Warning signs will be posted in accordance with SDG&E guidelines. The screen wall and gates will be designed to be consistent with SDG&E's operational and safety guidelines; refer to Figure 3-7, *Site Plan*.

To provide a building pad sufficient in size for the proposed Substation, retaining walls will be constructed on the southerly and easterly sides. The retaining walls will range from approximately four feet along Mira Sorrento Place to a maximum of approximately 52 feet, which will be composed of two retaining walls (30 feet & 22 feet), along the southeast side. The design of the retaining walls includes staggered tiers to provide areas of landscaping and safe access for maintenance purposes. The retaining walls will be constructed of concrete MSE blocks to give the walls an articulated surface which will increase the visual quality.

Access to the Substation will be provided via two driveways along Mira Sorrento Place. The two concrete driveways will be approximately 60 feet and 25 feet respectively in length and 30 feet in width. Internal driveways will be approximately 20 feet wide and will be paved with asphalt concrete paving. A detailed construction drawing depicting the Substation layout and access roads is included as Figure 3-7, *Site Plan*.

3.5.1.1 Construction Practices

During clearing, grading, earth moving, or excavation operations, control excessive fugitive dust emissions by regular watering or other dust preventive measures using the following procedures:

- Spray unpaved construction areas with water, approved dust-control agents, or soil stabilizers to reduce particulates; water material excavated or graded sufficiently.
- Sweep, vacuum, and/or remove dirt or debris spilled onto paved surface to reduce re-suspension of particulate matter caused by vehicle movement.
- Haul trucks moving soil to or from the site will either be covered or maintain two feet minimum freeboard.
- On-site stockpiles will be covered, watered, or bermed if left inactive for more than 24 hours.
- Tracking-control measures in accordance with SDG&E BMP Manual Measure 1-7 will be implemented.

Prevent visible dust from the project from emanating beyond the property line, to the maximum extent feasible.

To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.

3.5.2 Distribution

Five-inch distribution conduit duct packages for the 12kV circuits and telecommunications will be installed on Mira Sorrento Place. The conduit duct packages will continue and intercept existing conduit in Vista Sorrento Parkway. Two new manholes, 20 feet long by 14 feet wide by 10 feet deep will be installed on the Substation setback area behind the sidewalk along Mira Sorrento Place. All distribution circuits will be installed underground outside of the Substation within franchise position. Refer to Figure 3-12, *Typical 12kV Underground Manhole*.

Initially, six 12kV underground distribution circuits will be constructed. All six underground circuits will be routed to Mira Sorrento Place and will extend northeast and southwest to tie into the existing underground system serving the area. Circuit ties will be constructed to provide distribution reliability.

Six initial distribution circuits (C1442, C1443, C1444, C1445, C1446 and C1447) will be installed within two trench and conduit systems from the Mira Sorrento Substation to Mira Sorrento Place.

The first circuit, C1442, will be routed from the first manhole outside the Substation underground northerly along Mira Sorrento Place to an existing underground switch located between Scranton Road and Morehouse Drive. C1442 will ultimately connect to existing C967.

The second circuit, C1443, will be routed from the first manhole outside the Substation underground northerly on Mira Sorrento Place to Scranton Road where it will ultimately connect to existing C969.

The third circuit, C1444, will be routed from the second manhole outside the Substation underground westerly on Vista Sorrento Parkway to existing overhead pole located between Directors Place and Vista Sorrento Parkway. New overhead conductor will be installed on

existing poles crossing the I-805 freeway, which will then continue north along Sorrento Valley Road and ultimately connect to existing C529.

The fourth circuit, C1445, will be routed from the second manhole outside of the Substation underground southerly along Vista Sorrento Parkway and east along Mira Mesa Boulevard to an existing switch. C1445 will ultimately be connected to existing C748.

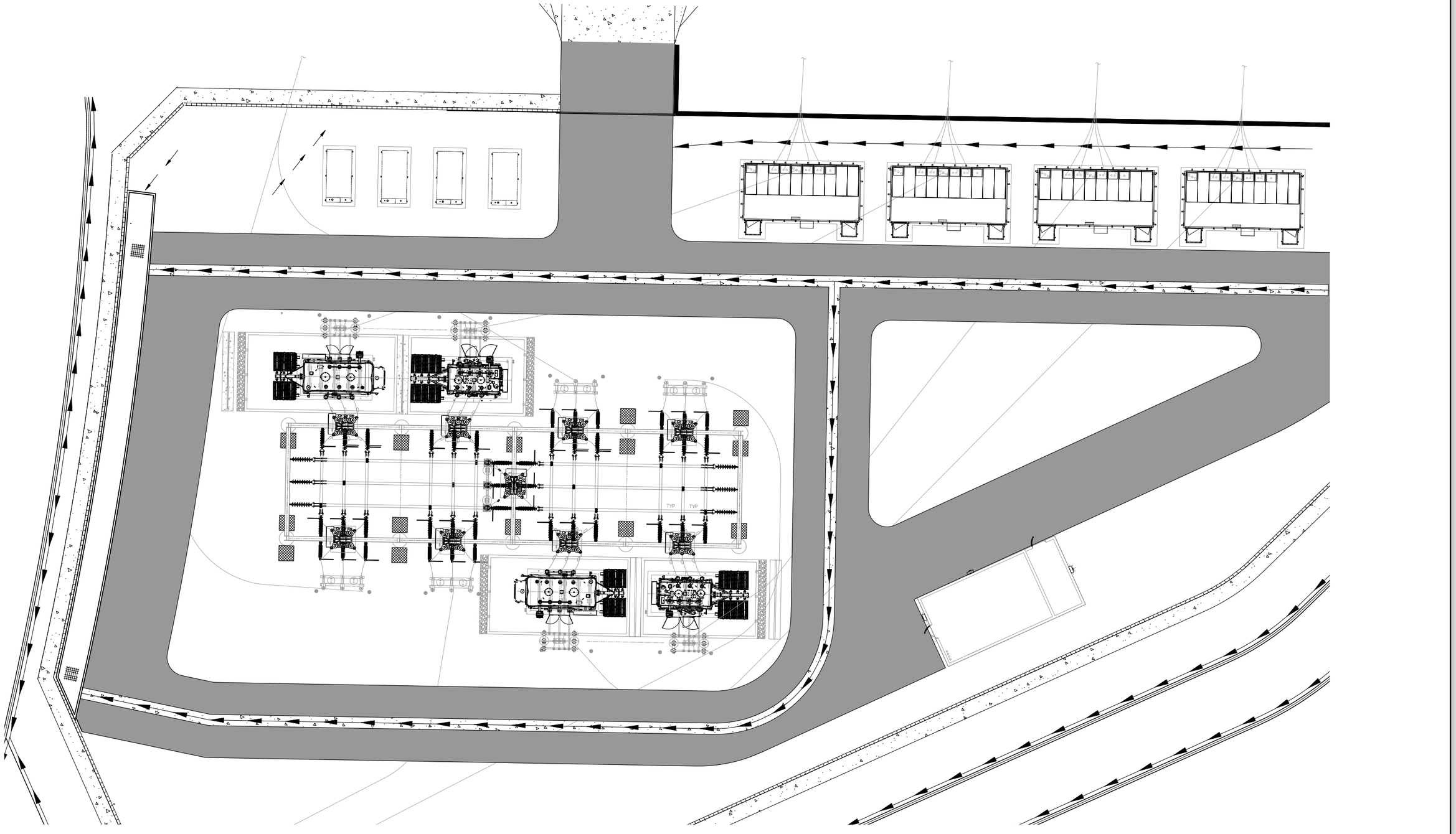
The fifth circuit, C1446, will be routed from the second manhole outside the Substation underground southerly on Vista Sorrento Parkway to existing overhead pole. New circuit C1446 will be routed underground to an existing pole and tie in with extended circuit C266.

The sixth circuit, C1447, will be routed from the first manhole outside of the Substation underground northerly along Mira Sorrento Place to an existing underground switch located on Scranton Road, north of Mira Sorrento Place. C1447 will ultimately be connected to existing C956.

3.5.3 Transmission Line (TL) 665 Loop-In

Loop-in is the process of connecting the proposed Substation with the nearest transmission line. The Proposed Project will loop-in TL665 into the proposed 69kV/12kV Mira Sorrento Substation. TL665 is an existing 69kV circuit with terminal points at Peñasquitos and Genesee Substations. Currently, TL665 proceeds northward on existing overhead facilities from Genesee Substation and transitions underground on an existing 69kV cable pole located along Vista Sorrento Place. The existing underground segment then progresses southward along Vista Sorrento Place for approximately 2,100 feet before transitioning back overhead on another existing 69kV cable pole located near a business park just north Mira Sorrento Parkway. TL665 then continues northward on existing overhead facilities and terminates at Peñasquitos Substation.

As part of the Proposed Project, TL665 will split and proceed underground via two new parallel trench alignments along Vista Sorrento Place to the proposed Mira Sorrento Substation for a distance of approximately 600 feet each of single circuit 69kV duct package infrastructure. Trench installation will total approximately 1,200 feet for the two parallel trench alignments. The 69kV duct package will have a standard depth of approximately six feet below grade to bottom of package. These new trench alignments will be established from an interception point at an existing duct package (TL665) and proceed south along Vista Sorrento to the new Mira Sorrento Substation. In addition, installation of approximately two 69kV vaults along this trench alignment will be required, as well as associated vault racking, installation of approximately 4,000 circuit-feet of 69kV 3000KCMIL CU underground cable, telecommunications cable, 69kV cable joints, and terminations. TL665 will then be reconfigured as TL6959 (Peñasquitos - Mira Sorrento) and TL665 (Mira Sorrento - Genessee). Telecommunications will enter into the Substation via the 69kV underground duct package. The fiber optic cable will be installed in the new transmission conduit from Mira Sorrento Substation to the existing cable pole.



SDGE

Not to Scale
Source: SDG&E, May 2011

SD Mac: 25103691EIRTabloidLandscape.indd

Mira Sorrento Substation
Proponent's Environmental Assessment

MIRA SORRENTO SUBSTATION LAYOUT

Figure 3-6

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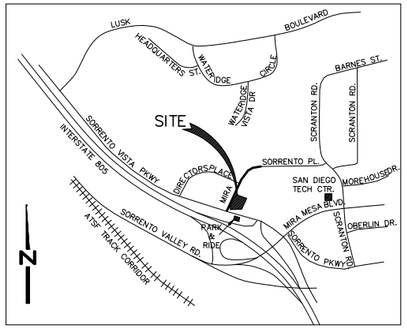


VICINITY MAP
NO SCALE

SITE SUMMARY

APN: 340-090-65, 340-090-67
PORTION OF 304-090-64

GROSS AREA: 3.74 AC

SUBSTATION AREA: 1.43 AC
(WITHIN SCREEN WALL)

PRESENT USE: VACANT

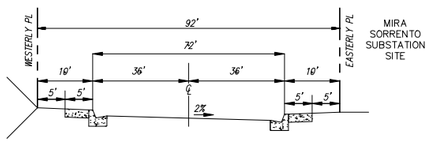
EXISTING ZONING: IP-1-1

FOR EASEMENTS AND PROPERTY LINE DATA, SEE: MTO-S-905

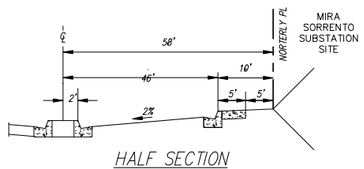
FOR DETAILED GRADING & DRAINAGE, SEE: MTO-S-901

NOTE: ALL PROPERTY LINE AND AREA DATA TO BE VERIFIED BY BOUNDARY SURVEY.

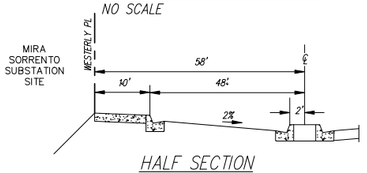
TYPICAL SECTIONS:



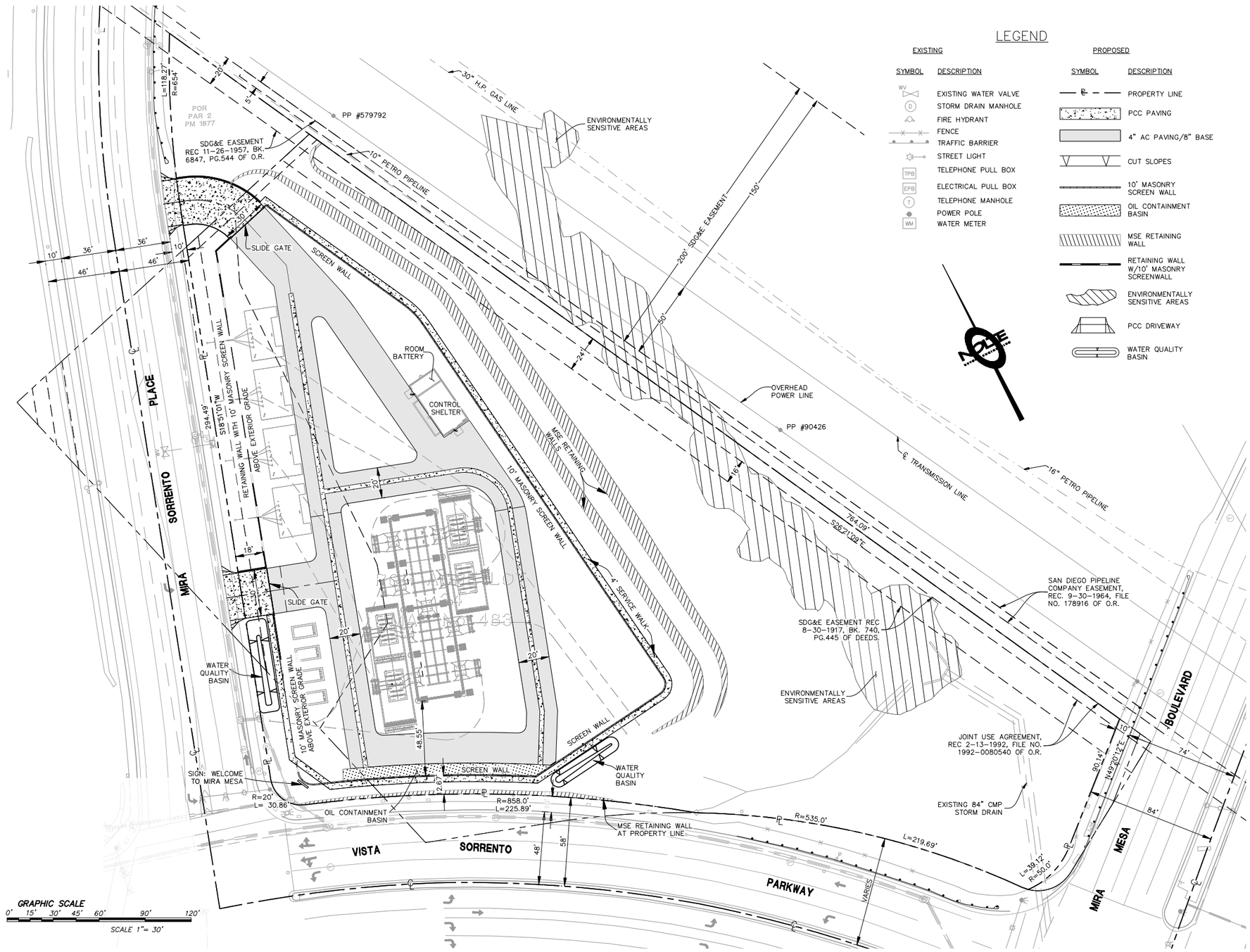
MIRA SORRENTO PLACE
NO SCALE



HALF SECTION
VISTA SORRENTO PARKWAY
NO SCALE



HALF SECTION
MIRA MESA BOULEVARD
NO SCALE



Source: Nolte Engineering, 2011

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Mira Sorrento Substation
Proponent's Environmental Assessment

SITE PLAN

Figure 3-7

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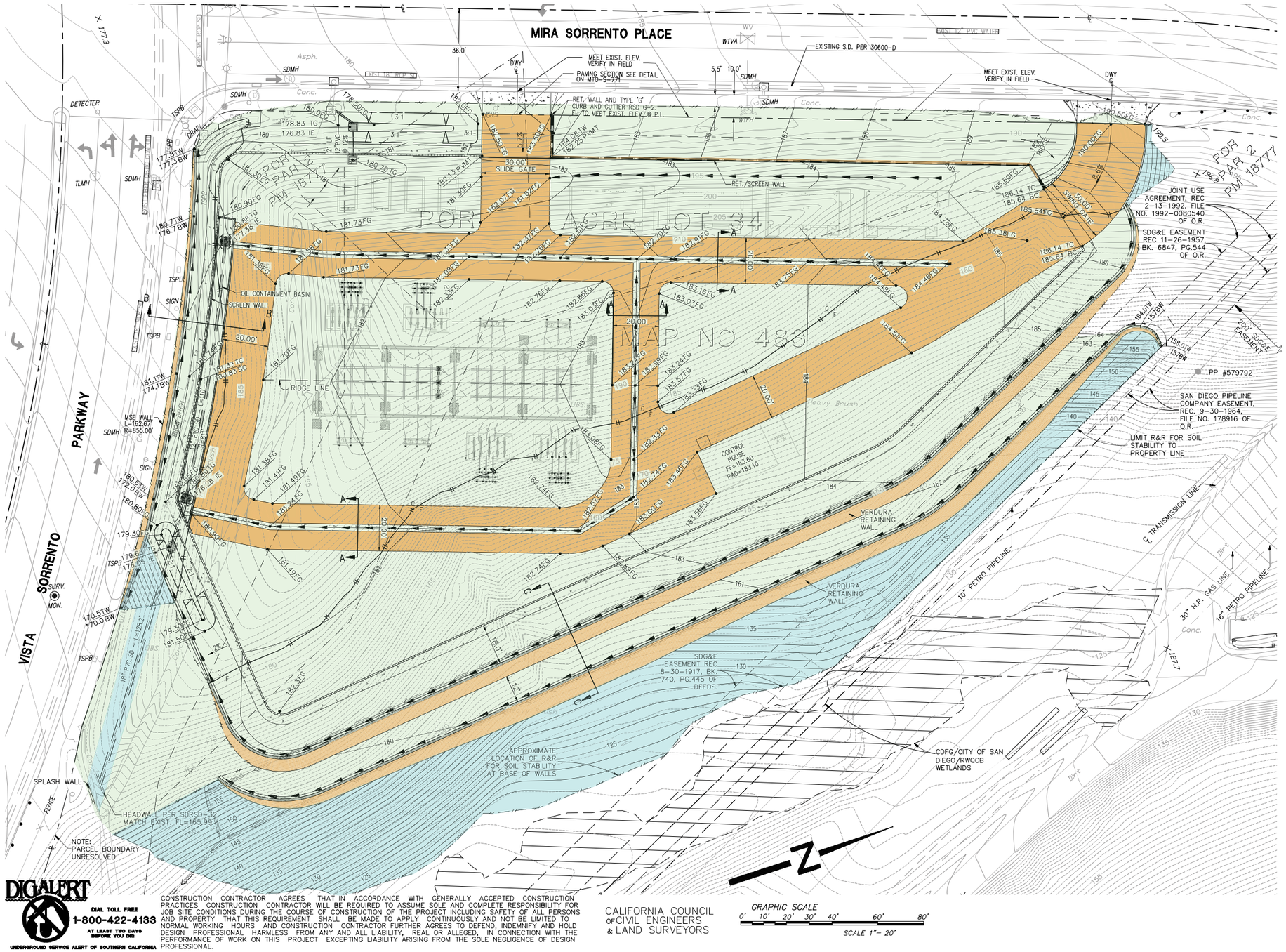

Source: Nolte Engineering, 2011

SD Mac: 25103691EIRTabloidLandscape.indd

Mira Sorrento Substation
Proponent's Environmental Assessment

MIRA SORRENTO SUBSTATION TEMPORARY AND PERMANENT IMPACT AREAS

Figure 3-8

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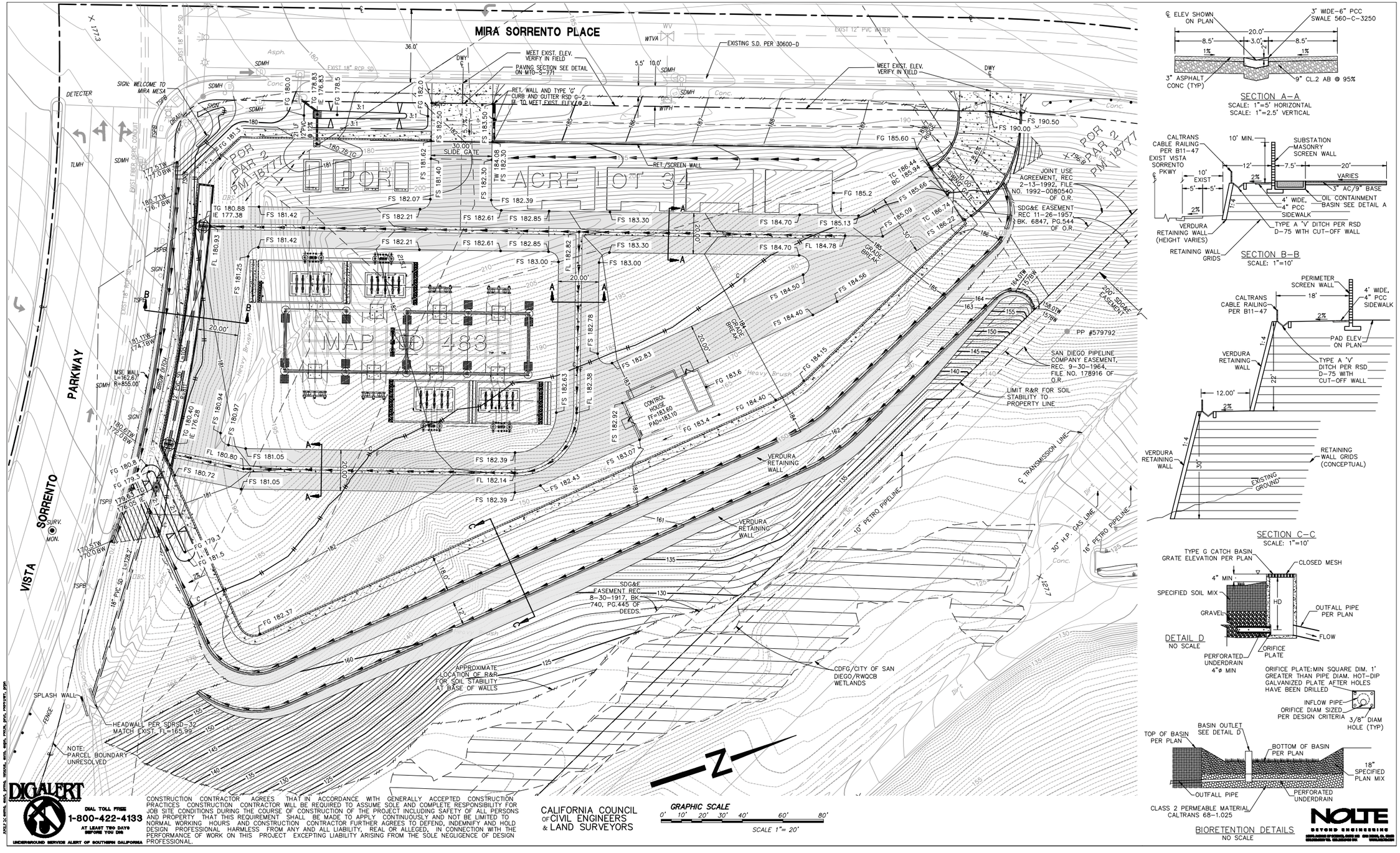

Source: Nolte Engineering, 2011

SD Mac: 25103691EIRTabloidLandscape.indd

Mira Sorrento Substation
Proponent's Environmental Assessment

PRELIMINARY GRADING AND DRAINAGE PLAN

Figure 3-9

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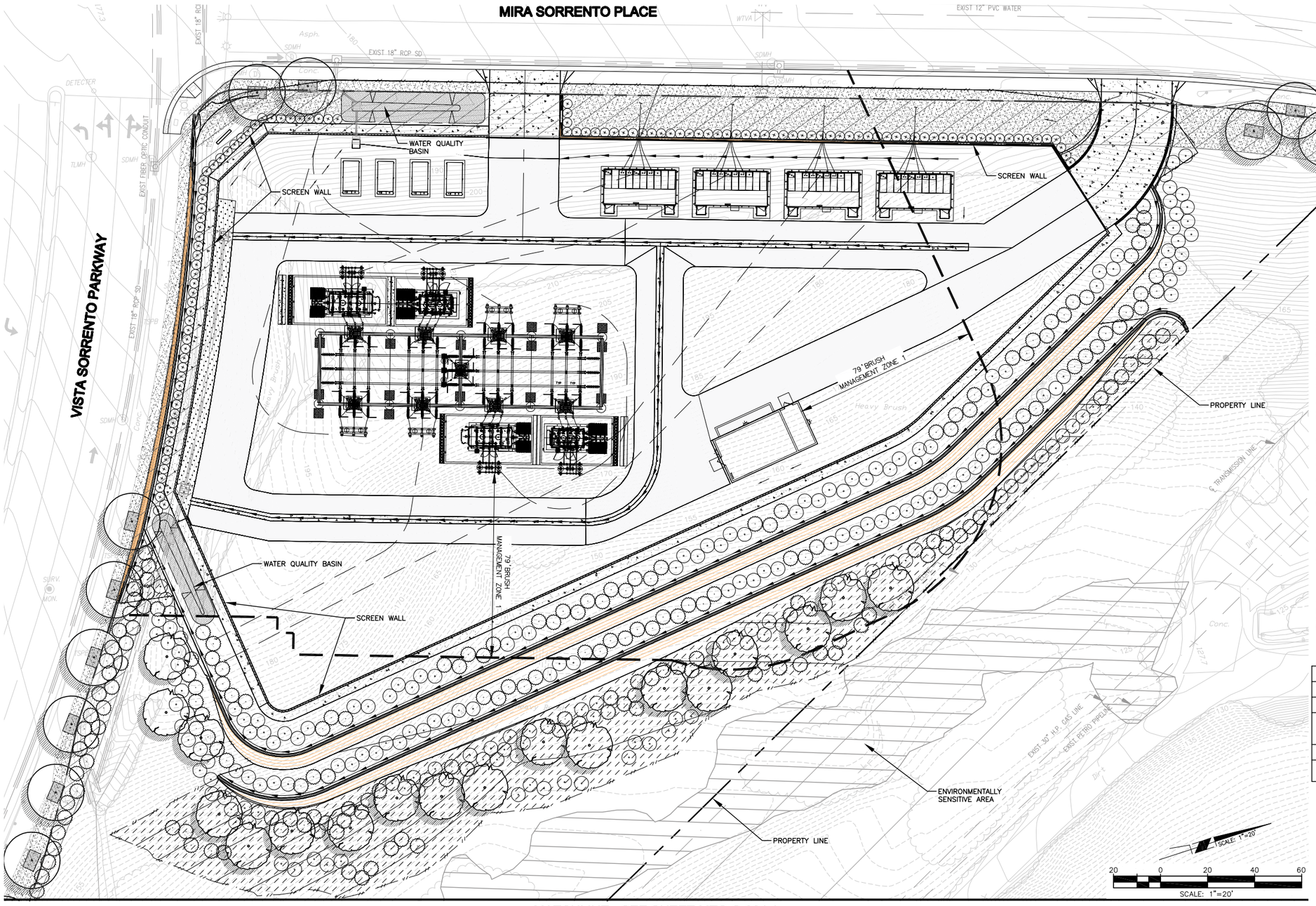

LANDSCAPE DESIGN STATEMENT

THE INTENT OF THE LANDSCAPE DESIGN IS TO BLEND THE PROJECT LANDSCAPING WITH THE SURROUNDING, NATURAL VEGETATION AND SCREEN THE PERIMETER WALLS AND RETAINING WALLS.

PLANTING NOTES

1. ALL LANDSCAPED AREAS AND IRRIGATION WILL CONFORM TO THE STANDARDS OF THE CITY-WIDE LANDSCAPE REGULATIONS, THE CITY OF SAN DIEGO LAND DEVELOPMENT MANUAL LANDSCAPE STANDARDS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), THE CITY OF SAN DIEGO SUPPLEMENTAL AMENDMENTS, AND OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS.

2. THE EXISTING PLANT HABITAT OF THE SURROUNDING VEGETATION GENERALLY CONSISTS OF COASTAL SAGE SCRUB BRUSH ON STEEP SLOPES AND VALLEYS.

3. CONTAINER STOCK PLANT MATERIAL AND HYDROSEED MAY BE INSTALLED AT ANY TIME DURING THE YEAR UNDER THE CONDITIONS OUTLINED IN THE GREENBOOK.

4. ALL PLANTING AREAS, EXCLUDING SLOPES, SHALL BE COVERED WITH BARK MULCH TO A 2" DEPTH.

5. ALL PLANT MATERIAL SHALL BE ESTABLISHED FOR A MINIMUM OF 90 CALENDAR DAYS.

6. TREE ROOT BARRIERS SHALL BE INSTALLED WHERE TREES ARE PLACED WITHIN 5 FEET OF PUBLIC IMPROVEMENTS INCLUDING WALKS, CURBS, OR STREET PAVEMENT. ROOT BARRIERS WILL NOT BE WRAPPED AROUND THE ROOTBALL.

IRRIGATION NOTE

1. THE IRRIGATION SHALL BE A FULLY AUTOMATIC, ELECTRICALLY CONTROLLED SYSTEM THAT USES A COMBINATION OF OVERHEAD SPRAY AND BUBBLERS. LOW PRECIPITATION RATE SPRAY AND BUBBLER HEADS, ACCURATELY PROGRAMMABLE CONTROLLERS, AND A RAIN SENSING DEVICE WILL BE UTILIZED TO PROMOTE CONSERVATIVE WATER USE.

MAINTENANCE NOTE

1. ALL LANDSCAPED AREAS SHALL BE MAINTAINED BY SAN DIEGO GAS & ELECTRIC IN A HEALTHY AND VIGOROUS CONDITION. THE MAINTENANCE SHALL INCLUDE A PROGRAM OF REGULAR IRRIGATION, FERTILIZATION, PRUNING, WEEDING, AND LITTER REMOVAL.

MINIMUM TREE SEPARATION DISTANCE

IMPROVEMENT	MINIMUM DISTANCE TO STREET TREE
TRAFFIC SIGNAL, STOP SIGN	20 FEET
UNDERGROUND UTILITY LINES	5 FEET (SEWER 10 FEET)
ABOVE GROUND UTILITY STRUCTURES (TRANSFORMERS, HYDRANTS, UTILITY POLES, ETC.)	10 FEET
DRIVEWAYS	10 FEET
INTERSECTIONS (INTERSECTING CURB LINES OF TWO STREETS)	25 FEET

WATER BUDGET CALCULATION

WATER BUDGET = 47(0.62)(0.7)(40,600)
= 828,159 GAL/YR

REGISTERED LANDSCAPE ARCHITECT
JEREMY FRANCINI LIC. NO. 4574
SIGNATURE
JUNE 30, 2011
RENEWAL DATE
STATE OF CALIFORNIA

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
14725 ALTON PARKWAY
IRVINE, CALIFORNIA 92618-2027
949.472.3505 • FAX 949.472.8373 • www.RBF.com

SDGE

Source: RBF Consulting, 2011.

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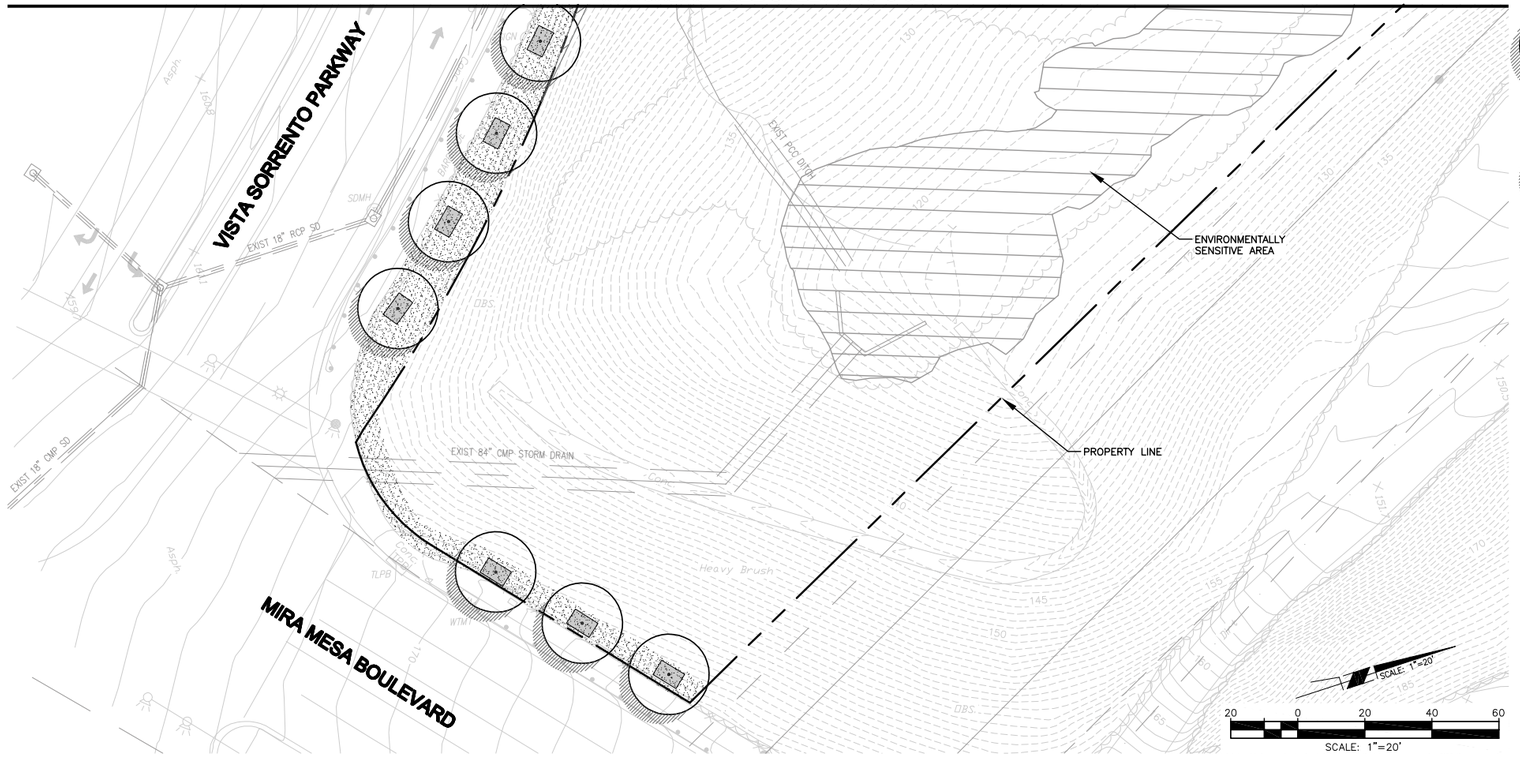
Mira Sorrento Substation
Proponent's Environmental Assessment

CONCEPTUAL LANDSCAPE PLAN (SHEET 1 OF 2)

Figure 3-10



BRUSH MANAGEMENT PROGRAM

BRUSH MANAGEMENT IS A COMPREHENSIVE PROGRAM THAT REDUCES FIRE HAZARDS AROUND STRUCTURES BY PROVIDING AN EFFECTIVE FIRE BREAK BETWEEN ALL STRUCTURES AND CONTIGUOUS AREAS OF NATIVE OR NATURALIZED VEGETATION. THIS FIRE BREAK SHALL CONSIST OF TWO DISTINCT BRUSH MANAGEMENT AREAS CALLED "ZONE ONE" AND "ZONE TWO".

BRUSH MANAGEMENT ZONE ONE IS THE AREA ADJACENT TO THE STRUCTURE, SHALL BE LEAST FLAMMABLE, AND SHALL TYPICALLY CONSIST OF PAVEMENT AND PERMANENTLY IRRIGATED ORNAMENTAL PLANTING. BRUSH MANAGEMENT ZONE TWO IS THE AREA BETWEEN ZONE ONE AND ANY AREA OF NATIVE OR NATURALIZED VEGETATION AND TYPICALLY CONSISTS OF THINNED, NATIVE OR NATURALIZED NON-IRRIGATED VEGETATION.

ZONE ONE REQUIREMENTS

(1) THE REQUIRED ZONE ONE WIDTH SHALL BE PROVIDED BETWEEN NATIVE OR NATURALIZED VEGETATION AND ANY STRUCTURE AND SHALL BE MEASURED FROM THE EXTERIOR OF THE STRUCTURE TO THE VEGETATION.

(2) ZONE ONE SHALL CONTAIN NO HABITABLE STRUCTURES, STRUCTURES THAT ARE DIRECTLY ATTACHED TO HABITABLE STRUCTURES, OR OTHER COMBUSTIBLE CONSTRUCTION THAT PROVIDES A MEANS FOR TRANSMITTING FIRE TO THE HABITABLE STRUCTURES. STRUCTURES SUCH AS FENCES, WALLS, PALAPAS, PLAY STRUCTURES, AND NONHABITABLE GAZEBOS THAT ARE LOCATED WITHIN BRUSH MANAGEMENT ZONE ONE SHALL BE OF NONCOMBUSTIBLE CONSTRUCTION.

(3) PLANTS WITHIN ZONE ONE SHALL BE PRIMARILY LOW-GROWING AND LESS THAN 4 FEET IN HEIGHT WITH THE EXCEPTION OF TREES. PLANTS SHALL BE LOW-FUEL AND FIRE-RESISTIVE.

(4) TREES WITHIN ZONE ONE SHALL BE LOCATED AWAY FROM STRUCTURES TO A MINIMUM DISTANCE OF 10 FEET AS MEASURED FROM THE STRUCTURES TO THE DRIP LINE OF THE TREE AT MATURITY IN ACCORDANCE WITH THE LANDSCAPE STANDARDS OF THE LAND DEVELOPMENT MANUAL.

(5) PERMANENT IRRIGATION IS REQUIRED FOR ALL PLANTING AREAS WITHIN ZONE ONE EXCEPT AS FOLLOWS:

(A) WHEN PLANTING AREAS CONTAIN ONLY SPECIES THAT DO NOT GROW TALLER THAN 24 INCHES IN HEIGHT, OR
(B) WHEN PLANTING AREAS CONTAIN ONLY NATIVE OR NATURALIZED SPECIES THAT ARE NOT SUMMER-DORMANT AND HAVE A MAXIMUM HEIGHT AT PLANT MATURITY OF LESS THAN 24 INCHES.

(6) ZONE ONE IRRIGATION OVERSPRAY AND RUNOFF SHALL NOT BE ALLOWED INTO ADJACENT AREAS OF NATIVE OR NATURALIZED VEGETATION THROUGH THE USE RADIUS CONTROL NOZZLES AND IRRIGATION CHECK VALVES.

(7) ZONE ONE SHALL BE MAINTAINED ON A REGULAR BASIS BY PRUNING AND THINNING PLANTS, CONTROLLING WEEDS, AND MAINTAINING IRRIGATION SYSTEMS.

ZONE TWO REQUIREMENTS

(1) THE REQUIRED ZONE TWO WIDTH SHALL BE PROVIDED BETWEEN ZONE ONE AND THE UNDISTURBED, NATIVE OR NATURALIZED VEGETATION, AND SHALL BE MEASURED FROM THE EDGE OF ZONE ONE THAT IS FARTHEST FROM THE HABITABLE STRUCTURE, TO THE EDGE OF UNDISTURBED VEGETATION.

(2) NO STRUCTURES SHALL BE CONSTRUCTED IN ZONE TWO.

(3) WITHIN ZONE TWO, 50 PERCENT OF THE PLANTS OVER 24 INCHES IN HEIGHT SHALL BE CUT AND CLEARED TO A HEIGHT OF 6 INCHES.

(4) WITHIN ZONE TWO, ALL PLANTS REMAINING AFTER 50 PERCENT ARE REDUCED IN HEIGHT, SHALL BE PRUNED TO REDUCE FUEL LOADING IN ACCORDANCE WITH THE LANDSCAPE STANDARDS IN THE LAND DEVELOPMENT MANUAL. NON-NATIVE PLANTS SHALL BE PRUNED BEFORE NATIVE PLANTS ARE PRUNED.

BRUSH MANAGEMENT PROGRAM CONTINUED

(5) ZONE TWO SHALL BE MAINTAINED ON A REGULAR BASIS BY PRUNING AND THINNING PLANTS, REMOVING INVASIVE SPECIES, AND CONTROLLING WEEDS.

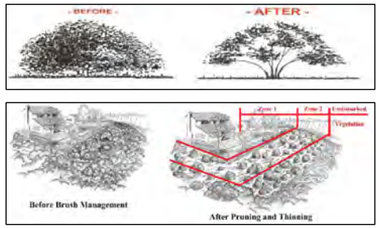
(A) SEASONAL MAINTENANCE IN THIS ZONE SHOULD INCLUDE REMOVAL OF DEAD WOODY PLANTS, ERADICATION OF WEEDY SPECIES, AND PERIODIC PRUNING AND THINNING OF TREES AND SHRUBS. REMOVAL OF WEEDS SHOULD NOT BE DONE WITH HAND TOOLS SUCH AS HOES, AS THIS REMOVES VALUABLE SOIL. THE USE OF WEED TRIMMERS OR OTHER TOOLS WHICH RETAIN SHORT STUBBLE THAT PROTECTS THE SOIL IS RECOMMENDED. NATIVE SHRUBS SHOULD BE PRUNED IN THE SUMMER AFTER THE MAJOR PLANT GROWTH OCCURS. WELL PRUNED, HEALTHY SHRUBS SHOULD TYPICALLY REQUIRE SEVERAL YEARS TO BUILD UP EXCESSIVE LIVE AND DEAD FUEL.

(B) ON SLOPES, ALL DRAINAGE DEVICES MUST BE KEPT CLEAR. RE-INSPECT AFTER EACH MAJOR STORM SINCE MINOR SOIL SLIPS CAN BLOCK DRAINS. VARIOUS GROUNDCOVERS SHOULD BE PERIODICALLY SHEARED AND THATCH REMOVED. DISEASED AND DEAD WOOD SHOULD BE PRUNED FROM TREES. FERTILIZING TREES AND SHRUBS IS NOT TYPICALLY RECOMMENDED AS THIS MAY STIMULATE EXCESSIVE GROWTH.

BRUSH MANAGEMENT ZONE WIDTH

CRITERIA	ZONE WIDTH
ZONE ONE WIDTH	35 FEET
ZONE TWO WIDTH	65 FEET

BRUSH MANAGEMENT MAINTENANCE DIAGRAMS



PLANT LEGEND

SYMBOL — CATEGORY/DESCRIPTION

TREES – ROUND HEADED CANOPY, EVERGREEN STREET TREES WITH AUTOMATIC, BELOW GRADE, PERMANENT IRRIGATION

BOTANICAL NAME	COMMON NAME	MATURE HT. & SP. 100% TO BE 24" BOX
GELIERA PARVIFLORA	AUSTRALIAN WILLOW	25' X 20'
MAGNOLIA GRANDIFLORA 'MAJESTIC BEAUTY'	MAJESTIC BEAUTY SOUTHERN MAGNOLIA	35' X 20'
METROSIDEROS EXCELSUS	NEW ZEALAND CHRISTMAS TREE	30' X 25'
PRUNUS ILICIFOLIA	HOLLYLEAF CHERRY	20' X 20'
RHUS LANCEA	AFRICAN SUMAC	25' X 25'
STENOCARPUS SINUATUS	FIREWHEEL TREE	30' X 15'

NOTE: ALL TREES SHALL BE PROVIDED WITH A 40 SQ. FT. ROOT ZONE AND PLANTED IN AN AIR AND WATER PERMEABLE LANDSCAPE AREA. THE MINIMUM DIMENSION (WIDTH) SHALL BE 5 FEET.

TREES – SLOPE EROSION CONTROL TREES TREES WITH AUTOMATIC, BELOW GRADE, PERMAENT IRRIGATION

BOTANICAL NAME	COMMON NAME	MATURE HT. & SP. 100% TO BE 15 GAL
CERCIS OCCIDENTALIS	WESTERN REDBUD	15' X 10'
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	10' X 10'
PRUNUS ILICIFOLIA	HOLLYLEAF CHERRY	20' X 20'
QUERCUS AGRIFOLIA	COAST LIVE OAK	40' X 50'
RHUS LANCEA	AFRICAN SUMAC	25' X 25'
RHUS LAURINA	LAUREL SUMAC	15' X 15'

SHRUBS – SCREENING FOR PERIMETER WALL WITH AUTOMATIC, BELOW GRADE, PERMANENT IRRIGATION

BOTANICAL NAME	COMMON NAME	MATURE HT. & SP. 100% TO BE 5 GAL
ESCALLONIA FRADESII	ESCALLONIA	6' X 6'
GREVILLEA 'NOELLII'	GREVILLEA	4' X 5'
MYRTUS COMMUNIS 'COMPACTA'	DWARF MYRTLE	4' X 5'
RHAMNUS CALIFORNICA 'EVE CASE'	EVE CASE COFFEEBERRY	6' X 6'
RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	4' X 4'
ROSMARINUS OFFICINALIS	ROSEMARY	5' X 5'
WESTRINGIA FRUTICOSA	COAST ROSEMARY	4' X 5'

SHRUBS – SCREENING FOR RETAINING WALLS WITH AUTOMATIC, BELOW GRADE, PERMANENT IRRIGATION

BOTANICAL NAME	COMMON NAME	MATURE HT. & SP. 100% TO BE 5 GAL
BACCAHRIS SALICIFOLIA	MULEFAT	8' X 12'
CEANOTHUS SPECIES	WILD LILAC	8' X 12'
HETEROMELES ARBUTIFOLIA	TOYON	8' X 10'
LAVATERA ASSURGENTIFLORA	TREE MALLOW	12' X 12'
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	10' X 10'
RHAMNUS CALIFORNICA	COFFEEBERRY	12' X 8'
RHAMNUS CROCEA	REDBERRY	3' X 6'
RHUS INTEGRIFOLIA	LEMONADE BERRY	10' X 10'

SMALL SHRUBS AND GROUNDCOVERS – STREET FRONTAGE WITH AUTOMATIC, BELOW GRADE, PERMANENT IRRIGATION

BOTANICAL NAME	COMMON NAME	MATURE HT. & SP. 100% TO BE 1 GAL @ APPROX. 30" O.C.
AGAVE SHAWII	SHAW AGAVE	2' X 2'
BACCHARIS PILULARIS 'TWIN PEAKS'	TWIN PEAKS COYOTE BRUSH	2' X 8'
COTONEASTER DAMMERI	BEARBERRY COTONEASTER	1' X 6'
CISTUS PURPUREUS	ORCHID ROCKROSE	4' X 4'
LANTANA SPECIES	LANTANA	3' X 6'
MUHLENBERGIA RIGENS	DEER GRASS	3' X 3'
MYOPORUM 'PACIFICUM'	PACIFIC MYOPORUM	2' X 15'
PYRACANTHA COCCINEA 'LOW BOY'	LOW BOY FIRETHORN	3' X 6'
SALVIA SPECIES	SAGE	4' X 4'
SENECIO MANDRALISCAE	BLUE CHALK STICKS	1' X 3'

NATIVE GRASSES/RUSHES/SEDGES – WATER QUALITY BASIN WITH AUTOMATIC, BELOW GRADE, PERMANENT IRRIGATION

BOTANICAL NAME	COMMON NAME	MATURE HT. & SP. 100% TO BE 1 GAL @24" O.C.
CAREX SPISSA	SAN DIEGO SEDGE	3' X 4'
FESTUCA CALIFORNICA	CALIFORNIA FESCUE	3' X 3'
JUNCUS PATENS	CALIFORNIA GREY RUSH	2' X 3'
LEYMUS CONDENSATUS	GIANT WILD RYE	3' X 5'
LEYMUS TRITICOIDES	CREEPING WILD RYE	2' X 3'

HYDROSEED – EROSION CONTROL FOR GRADED SLOPES WITH AUTOMATIC, ABOVE GRADE PERMANENT IRRIGATION

BOTANICAL NAME	COMMON NAME	PURE LIVE SEED LBS/ACRE
CASTILLEJA EXSERTA	PURPLE OWL	0.50
DICHELOSTEMMA CAPITATUM	BLUE DICKS	0.50
ENCELIA CALIFORNICA	BUSH SUNFLOWER	1.00
ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	1.00
ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	1.50
ISOCOMA MENZIESII	COAST GOLDENBUSH	1.00
IVA HAYESIANA	SAN DIEGO POVERTY WEED	0.20
LASTHENIA CALIFORNICA	DWARF GOLDFIELDS	0.50
LOTOS SCOPARIUS SCOPARIUS	DEERWEED	4.00
LUPINUS TRUNCATUS	NUTTALL	1.00
MELICA IMPERFECTA	COAST RANGE MELIC	1.00
MIMULUS AURANTIACUS PUNICEUS	STICKY MONKEYFLOWER	0.10
MUHLENBERGIA MICROSPERMA	LITTLESEED MUHLY	2.00
NASSELLA PULCHRA	PURPLE NEEDLEGRASS	6.00
VULPIA MICROSTACHYS	SMALL FESCUE	8.00
		28.3

*NOTE PURE LIVE SEED = PURITY X GERMINATION

LANDSCAPE CALCULATIONS

STREET YARD

PLANTING AREA REQUIRED	PLANTING AREA PROVIDED	EXCESS AREA PROVIDED
12,680 SQ. FT. X 25% = 3,170 SQ. FT.	7,200 SQ. FT.	4,030 SQ. FT.
PLANT POINTS REQUIRED	**PLANT POINTS PROVIDED**	**EXCESS POINTS PROVIDED**
12,680 SQ. FT. X 0.05 = 634 POINTS	1,452 POINTS	818 POINTS

PERIMETER PLANTING AREA (WITHIN STREET YARD)

NOT APPLICABLE – CORNER LOT ADJACENT TO UNDEVELOPED LAND ZONED AS AR-1-1

FACADE PLANTING AREA (ALTERNATE COMPLIANCE 142.0405 (D)(2)(A)

PLANT POINTS REQUIRED	PLANT POINTS PROVIDED	EXCESS POINTS PROVIDED
12,680 SQ. FT. X 0.1 = 1,268 POINTS	1,452 POINTS	184 POINTS

REMAINING YARD

NOT APPLICABLE – CORNER LOT ADJACENT TO UNDEVELOPED LAND ZONED AS AR-1-1

REGISTERED LANDSCAPE ARCHITECT — JEREMY TRANTINI — L/C NO. 4514 — SIGNATURE — JUNE 30, 2011 — RENEWAL DATE — STATE OF CALIFORNIA

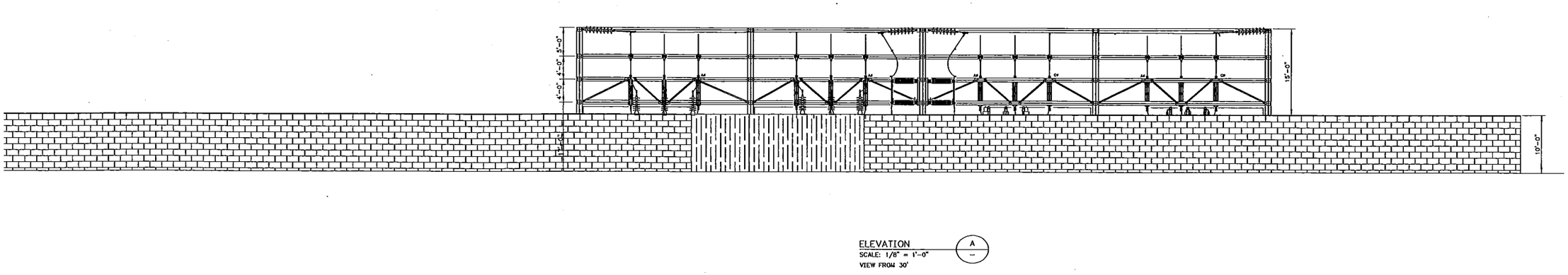
RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
14725 ALTON PARKWAY
IRVINE, CALIFORNIA 92618-2027
949.472.3505 • FAX 949.472.8373 • www.RBF.com

SDGE

Source: RBF Consulting, 2011.

CONCEPTUAL LANDSCAPE PLAN (SHEET 2 OF 2)

Figure 3-10A



ELEVATION A
SCALE: 1/8" = 1'-0"
VIEW FROM 30'

Not to Scale
Source: SDG&E, May 2011

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Mira Sorrento Substation
Proponent's Environmental Assessment

MIRA SORRENTO SUBSTATION PROFILE DRAWING

Figure 3-11

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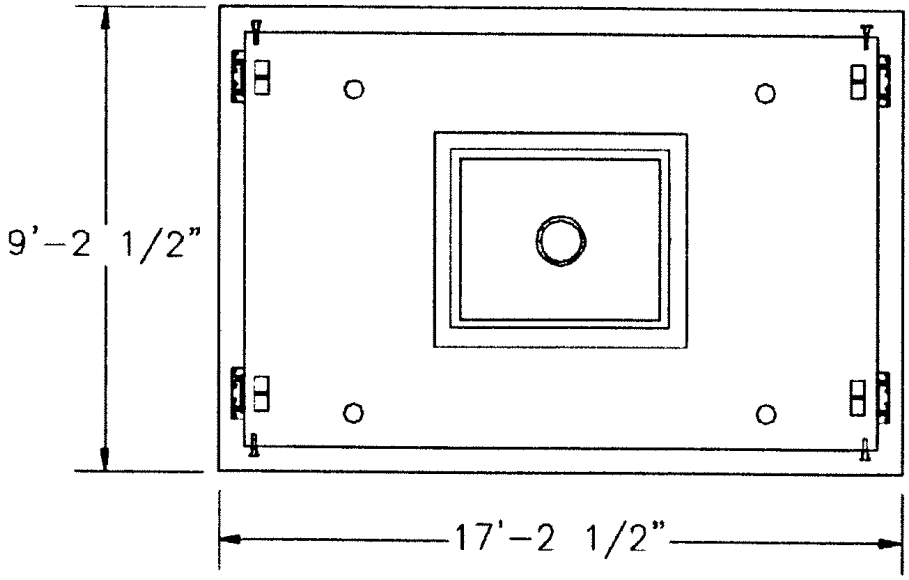
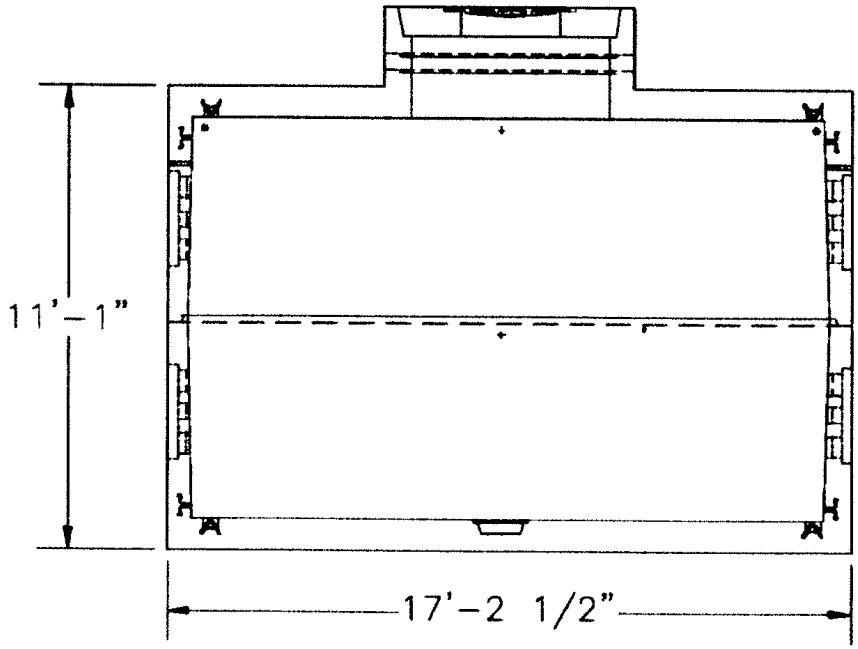


PLAN



ELEVATION

Source: San Diego Gas & Electric

Mira Sorrento Substation
Proponent's Environmental Assessment

TYPICAL 69KV UNDERGROUND MANHOLE

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Figure 3-12

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3.6 Permanent Land/Right-of-Way Requirements

The following discussion describes the land and ROW requirements for the Proposed Project. These requirements are also summarized in Table 3-1, *New Permanent Land Requirements*.

Table 3-1: New Permanent Land Requirements

Project Component		Approximate Dimensions	Area (acres)
Mira Sorrento Substation	120 MVA 69/12kV Yard	Owned by SDG&E	3.74
TL665 Loop-In ROW		6 feet by 600 feet	0.09

3.6.1 Mira Sorrento Substation

SDG&E currently owns the majority of the property needed for the Proposed Project. SDG&E will acquire through exchange approximately 0.25 acres for two smaller parcels needed for construction and operation of the Mira Sorrento substation. The total area for construction of the Substation, two access driveways, and retaining and screening walls will occupy approximately 2.7 acres.

The two smaller parcels are owned by the City of San Diego. The City's Real Estate Assets Department has determined that these parcels are unusable for City needs due to their size, location, access and topography. The City's Real Estate Assets Department has provided an "Executive Summary Sheet" to present to the City Council recommending transfer of these two excess parcels to SDG&E. City Council consideration of this transfer is anticipated to occur soon.

3.6.2 TL665 Loop-In

Looping of TL665 into the Mira Sorrento Substation will require approximately 0.09 acres of land, approximately 6 feet wide and 600 feet long in total for both trench alignments, for permanent ROW within SDG&E franchise easements.

3.7 Construction

3.7.1 Access

Mira Sorrento Substation

Access to the Substation site during construction will be provided by two graded driveways, approximately 30 feet in width, along Mira Sorrento Place. This is the same location as the permanent driveway access points. The access roads are shown in Figure 3-7, *Site Plan*.

TL665 Loop-In

As the TL665 loop-in will occur within existing ROW and Franchise areas, no new access roads would be required. The proposed underground alignment will occur along Vista Sorrento Parkway then cross Mira Sorrento Place for a total distance of approximately 600 feet per circuit to the proposed Substation.

3.7.2 Workspace

Temporary workspace will be required for construction of the Project components. These anticipated workspace requirements are described below and summarized in Table 3-2, *Temporary Workspace Requirements*.

Table 3-2: Temporary Workspace Requirements

Project Component	Workspace Description	Required Improvements	Approximate Dimensions (feet)	Total Acreage
Mira Sorrento Substation	Completed Substation Pad	Walls and Fencing; Substation Construction	410 feet by 270 feet[1]	1.43
TL665 Loop-In	Work Areas	Clearing, Grading, and Excavation	30 feet x 150 feet	0.10
Distribution	Duct Banks, Telecom	Trenching	6 feet deep x 7 feet wide for as long as needed (not to exceed 500 feet)	0.25

[1]The Project site is an irregular shape. These dimensions represent the approximate length of the widest portions of the Project.

3.7.2.1 Staging Areas

Mira Sorrento Substation

The majority of construction equipment, vehicles, personnel, and material staging areas will be accommodated within the property lines of the proposed Substation site. Equipment staging will also occur at existing SDG&E storage and operations yards, including Kearny, Miguel, Peñasquitos Substation, and Clairemont storage facilities – these sites are all previously disturbed and require no grading. Temporary parking of some vehicles along Mira Sorrento Place may be required depending on the construction activities being accomplished at the time. Access to the Project site during construction will be along Mira Sorrento Place.

The Mira Sorrento Substation pad will be utilized for staging materials and equipment used in the construction of the Substation facilities. Most staging for the Substation would occur within the permanent footprint of the Substation except for equipment being stored in facilities listed above. The site development construction to provide the Substation pad for the Mira Sorrento Substation will require impacts to approximately 2.7 acres, which will allow for the lay-down yard and the remedial grading of the site. Grading and clearing of

vegetation will be required to allow for the lay-down yard. The lay-down yard will include adequate space for equipment, materials, temporary office trailers, and most if not all vehicle parking.

Staging for the TL665 loop-in component would occur at the existing SDG&E-owned Peñasquitos Substation. This staging area would be used primarily for the storage of transmission material and related construction equipment. The footprint of the existing staging site at Peñasquitos Substation would occupy approximately 0.60 acre. This site is considered as previously disturbed, and therefore no grading and/or slope stabilization is anticipated. The Peñasquitos Substation site is presently enclosed by an eight-foot high chain link security fence. Access to this site will be gated and locked for security purposes. Refer to Figure 3-13, *Transmission Laydown Site*.

3.7.2.2 Construction Work Areas

TL665 Loop-In

Additional work areas will be required at each new vault structure location and along the proposed TL665 loop-in underground trench alignment to support construction activities. Trenching installation construction work areas shall occupy approximately 20 to 30 feet in width (10 to 15 feet from centerline of trench) or shall stay within designated work areas specified by the traffic control permits to maintain traffic flow through construction areas. The vault installation shall stay within the same work space footprint as the trench work and traffic control permits designated work areas. All trenching and vault installations will be within city streets and public areas. Site preparation for underground trench work will involve a survey mark out with offsets of the proposed trench alignment as well as the setting up of traffic control prior to construction. During the cable installation process, work areas of approximately 25 feet wide by 150 feet in length shall encompass each 69kV vault (from center-line) along the trench alignment. These work areas will support all cable installation activities as well as associated construction equipment to perform the work.

Traffic Control

Traffic control plans will be developed and approved by the City of San Diego in the required timeframe prior to the start of construction. The permits shall maintain at least one lane open at all times and provide full access to all public and private business, residences and any other public or private spaces needing access.

Helicopter Fly Yards

The use of helicopters is not anticipated with the Proposed Project. As such, the establishment of fly yards is not required to allow for take-off and landings, refueling, equipment storage and assembly, and other related activities.

3.7.3 Methods

The following section describes construction methods for the components of the Proposed Project. Section 4.6, *Hazards and Hazardous Materials*, provides additional discussion pertaining to the handling and disposal of contaminated materials.

3.7.4 Mira Sorrento Substation

3.7.4.1 Site Development

The site development work will be completed in stages; the clearing and grading of the site, construction of the retaining walls, access roads and initial foundation work. Upon completion of all foundation work, erection of the remaining structures will commence.

Prior to construction, the permanent removal of approximately 2.7 acres of habitat, largely consisting of ruderal, non-native, and coastal sage scrub habitat will be required. Clearing activities will require the use of mowers, excavators, front-end loaders, and/or bulldozers. Additional information regarding Project impacts on existing vegetation and habitat communities as the result of Project clearing activities are discussed in Section 5.4, *Biological Resources*. Construction equipment and usage for each stage of construction is detailed in Attachment 3A.

Construction equipment will include bulldozers, excavators, loaders, graders, scrapers and trucks for excavating, compacting, and hauling. A complete list of the construction equipment and usage for each stage of construction is detailed in Attachment 3A. Earthwork is estimated at 65,500 cubic yards of cut and 67,000 cubic yards of fill for the Substation. This includes material for the rough grading, retaining wall back-cut, and retaining wall backfill. During construction of the MSE retaining walls, dewatering is not anticipated. However, in the event that groundwater is encountered, it would occur during the back-cut and remedial grading for the retaining wall foundation. Should dewatering be necessary, the procedures n Section 3.7.5.5 of this Chapter would be used as a guide.

Construction of the screen walls will begin once the site grading is complete. Also at this time, a 12-inch layer of Class II aggregate base will be installed over the building pad area for the finished surface.

Below Grade Construction

Following site development, below grade work will begin. Below grade work includes structure and equipment foundations, underground ducts, ground grid, and construction of the control shelter. The construction of the distribution circuits and transmission tie lines surrounding the project will start while the substation is under construction. Concrete trucks, backhoes, ditch-witches, and skid steer loaders will be used for the foundation and below grade work.

Above Grade Construction

Once the grading activities and below grade foundation construction is complete, major equipment and structures would be installed and anchored on their respective foundation. The following steps would be taken to install the above grade equipment:

- The 69 kV rack would be erected.
- The 69 kV circuit breakers would be installed on their foundations.
- The control shelter would be constructed and relay panels, controls, battery, and station light and power would be installed.
- The ground grid, control, communication, and power ducts would be installed and wiring of the equipment controls and protection devices would follow.
- Two 69/12kV transformers would be installed on their foundations, assembled, and filled with oil.
- 12kV switchgear and capacitors will be installed on their foundations.

Transmission lines and distribution circuits will be completed and connected inside the substation following final installation of the substation structures and equipment. An AT&T telephone line will be connected inside the control shelter via one underground four-inch duct coming from their existing facilities in Vista Sorrento Place. This four-inch duct will connect to their existing underground facilities and continue in an underground trench into the substation. Control and protection wiring is done in parallel with these construction activities. Testing will be performed on all equipment after the equipment is installed and wired, and before placing it in service. Equipment will be placed in service once individual transmission lines and 12kV circuits are ready to be energized and are tested outside the substation.

Portable cranes and heavy hauling trucks will be employed to bring in the 69/12kV transformers. Substation crew, assist vehicles, forklifts, man lifts, and boom trucks will be used to construct the Substation. Oil processing equipment and vacuum pumps will be used to fill transformers with oil Pick-up trucks and vans will be used for the wiring and control testing of the Substation equipment. Line trucks, assist vehicles, and cable dolly trailers will be used for construction of the transmission and distribution circuits.

A temporary tap to an existing distribution line may be installed to provide electrical service to the Mira Sorrento Substation staging area 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 temporary tap would require up to three wood pole (approximately 30 feet in height) to connect a distribution line from the existing distribution line to the project site.

If a temporary tap is not installed, up to two to three 200KW diesel generators will be utilized to provide power during construction. In addition, one 100KW generator will be utilized to support the office construction trailer. It is anticipated that these generators will be in operation an estimated 12 hours a day, six days per week.

3.7.4.2 Clean Up and Post-Construction Restoration

All areas that are temporarily disturbed during construction activities will be restored to preconstruction conditions, to the extent practicable, once construction of the Substation is complete. Restoration efforts will include removal of all construction debris for recycling and/or disposal offsite. All areas disturbed during grading will be restored to their original contours, and reseeding of disturbed slopes will occur, consistent with SDG&E's Landscape Plan.

3.7.5 TL665 Loop-In

3.7.5.1 Trenching

Prior to trenching, SDG&E will notify other utility companies to locate and mark existing underground utilities along the proposed underground alignment. SDG&E will also conduct exploratory excavations (potholing) to verify the locations of existing facilities in the right-of-way. SDG&E will coordinate with the City of San Diego to secure encroachment permits for trenching in city rights of way, as required. Although the Proposed Project will not result in any road closures, some roads may be limited to one-way traffic at times. In these cases, one-way traffic controls will be implemented as required by the traffic control plans.

Trenching operations will be staged in intervals so that only a maximum of 300 to 500 feet of trench will be left open on each street at any one time or as allowed by permit requirements. This will generate approximately 400 cubic yards per day of excavated material which will be exported to an SDG&E approved disposal site. At any one time, open trench lengths will not exceed that required to facilitate the installation of the duct bank. Steel plating will be placed over the trenches to maintain vehicular and pedestrian traffic across areas that are not under active construction. Refer to Figure 3-14, *Typical Underground Construction Process Within Roadway*.

The majority of the duct bank will be installed using open-cut trenching techniques. Most of the duct bank will have a single circuit duct bank vertical configuration as shown in SDG&E Transmission Standard Drawing 33009 "Underground Trench Single Circuit In Conduit (Vertical)." Transitions to a flat configuration may be required in certain areas to clear substructures in highly congested areas, or to fan out to termination structures at the transition area; refer to SDG&E Transmission Standard Drawing 33001 "Underground Trench Single Circuit In Conduit (Horizontal)." Cross-sections of the proposed trenches are shown in Figure 3-15, *Underground Trench Single Circuit in Conduit (Vertical)*; and Figure 3-16, *Underground Trench Single Circuit in Conduit (Horizontal) with Telecommunications*.

The typical trench dimensions for installation of a double duct bank will be approximately 3 to 6 feet deep and 3 to 7 feet wide depending on the circuit voltage class and duct bank configurations. Additionally, depth may vary depending on soil stability and the presence of existing substructures. The trench will be widened and shored where necessary to meet California Occupational Safety and Health Administration (OSHA) requirements. If trench water is encountered, trenches will be dewatered using a portable pump and disposed of in accordance with acquired permits.

Traffic controls will also be implemented to direct local traffic safely around work areas. SDG&E will coordinate provisions for emergency vehicle and local access with local jurisdictions as necessary.

3.7.5.2 Duct Bank Installation

As the trench for the underground 69kV duct banks are completed, SDG&E will install the cable conduits (separated by spacers) and pour concrete around the conduits to form the duct banks. The duct banks will typically consist of three 6-inch diameter PVC conduits, which house the electrical cables. The dimensions of the duct banks will be approximately 1.5 feet wide by three feet in height for vertical configuration or approximately 2.5 feet wide by 2 feet in height for horizontal configuration for each duct package. The duct package will consist of a single 69kV transmission circuit. The currently proposed cable design consists of copper conductor extruded dielectric cable for the loop-in of 69kV transmission circuit TL665. Additional ducts for communication cables used for system protection and communication purposes will also be installed within the same trench/duct package as the 69kV cables.

Once the PVC conduits are installed, engineered slurry backfill will be imported, placed, and compacted. A road base backfill or slurry concrete cap will be installed and the disturbed road surface will be restored in compliance with local permits. While the completed trench sections are being restored, additional trenchline will be opened farther down the street. This process will continue until the entire transmission line is in place. Each duct bank will have a minimum of 36 inches of cover. Larger trenches will be excavated where vaults are installed; refer to discussion regarding Vault Installation, below.

If engineered fill is required, a Flowable Thermal Backfill (FTB) slurry comprised of a specific mix ratio of concrete slurry and fly ash for purposes of improving thermal resistivity would be used. The backfill would typically be placed over the concrete-encased duct bank for the total depth of the trench package, typically 3 feet in depth.

Where the electrical transmission duct bank would cross or run parallel to other substructures that operate at normal soil temperature (gas lines, telephone lines, water mains, storm drains, and sewer lines), a minimal radial clearance of 12 and 24 inches would be required, respectively. Ideal clearances would be 2 to 5 feet. Where the duct bank cross or run parallel to substructures that operate at temperatures significant exceeding normal soil temperature

(other underground transmission circuits, primary distribution cables, steam lines, and heated oil lines), additional radial clearance may be required. Clearances and depths would meet requirements set forth with Rule 33.4 of CPUC GO-128. Refer to Figure 3-15, *Typical Underground Construction Process within Roadway*.

3.7.5.3 Vault Installation

SDG&E will excavate and install pre-formed concrete splice vaults during trenching for the duct banks for the 69kV underground circuit along the new TL665 loop-in trench alignment. The proposed trench alignment is shown on Figure 3-17, *TL 665 Loop-In Trench Alignment*. Initially, the vaults will be used to pull cable through the conduits and splice the cables together during construction. During operation, the vaults will provide access to the underground cables for maintenance, inspections, and repairs.

Vaults will be constructed of prefabricated steel-reinforced concrete and designed to withstand the maximum credible earthquake in the area and heavy truck traffic loading. Installation of each vault will occur over a one-week period with excavation and shoring of the vault pit followed by delivery and installation of the vault, fill and compact the backfill, as well as repaving the excavated area where necessary.

3.7.5.4 Cable Pulling, Splicing and Termination

After installation of the conduit, SDG&E will install three cables per transmission line in the duct banks. Each cable segment will be pulled into the duct bank, spliced at each of the vaults along the route, and terminated at the proposed Mira Sorrento Substation. To pull the cable through the ducts, a cable reel is placed at one end of the section and a pulling rig is placed at the other end. A larger rope is then pulled into the duct using a pull line and is attached to the cable pulling eyes to pull the cable into the duct. A lubricant will be applied to the cable as it enters the duct to decrease friction during pulling.

The electric cables and the communication cable will be pulled through the individual ducts at the rate of two or three segments between vaults per day. A splice trailer will be positioned adjacent to the vault manhole openings to facilitate cable splicing at the vaults after the cables are pulled through the ducts. A mobile power generator will be located directly behind the trailer.

The vaults must be kept dry at all times to keep the unfinished splices dry and prevent other impurities from affecting the cables. Splicing typically takes 12 to 16 hours per day to complete. At each end of the underground segment, the cables will rise out of the ground and terminate on equipment within the substation.

Source: SDG&E Land Services GIS, March 2010

Mira Sorrento Substation
Proponent's Environmental Assessment

TRANSMISSION LAYDOWN SITE

Figure 3-13

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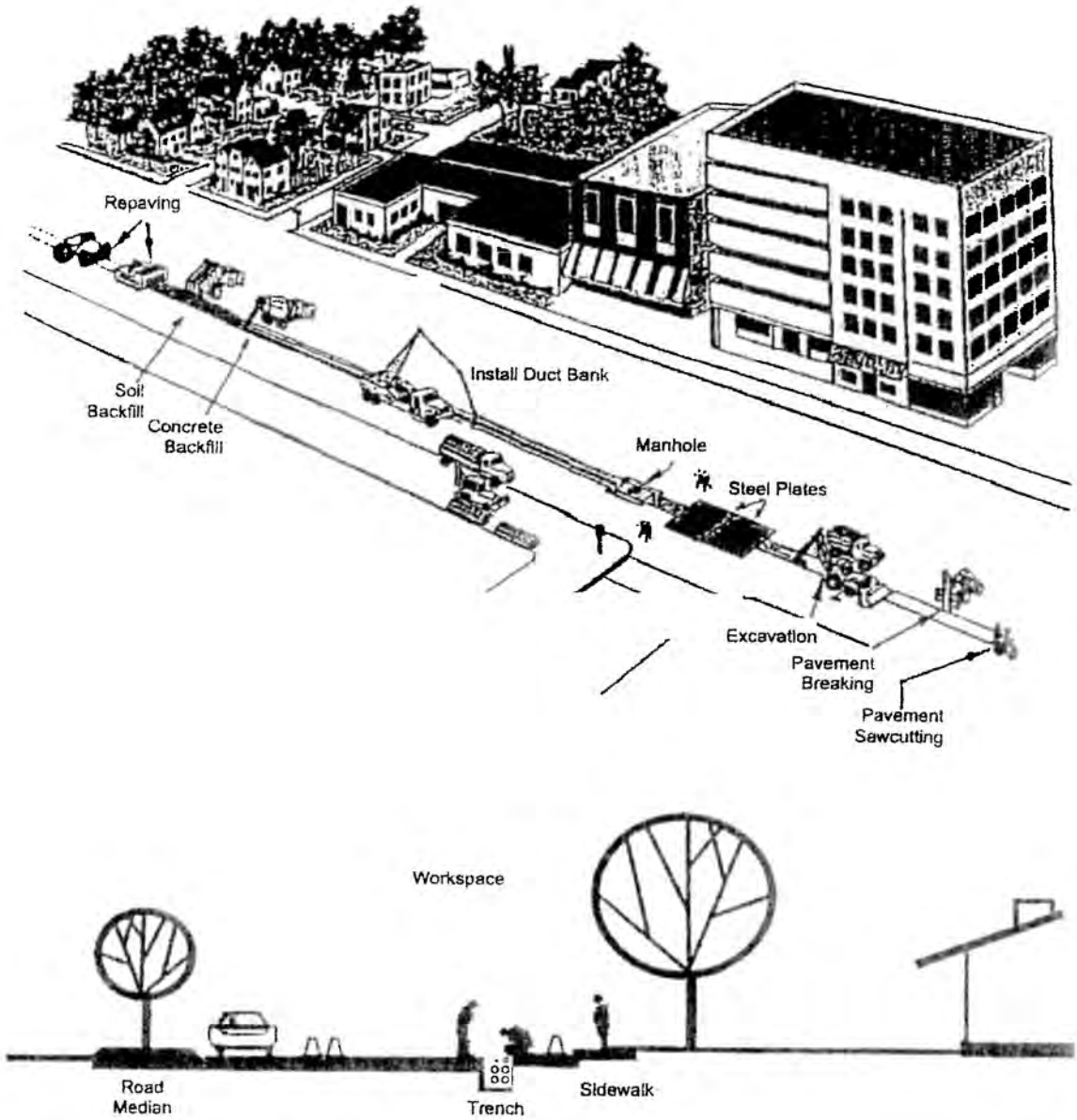

Not to Scale
Source: San Diego Gas & Electric

Mira Sorrento Substation
Proponent's Environmental Assessment

TYPICAL UNDERGROUND CONSTRUCTION PROCESS WITHIN ROADWAY

Figure 3-14

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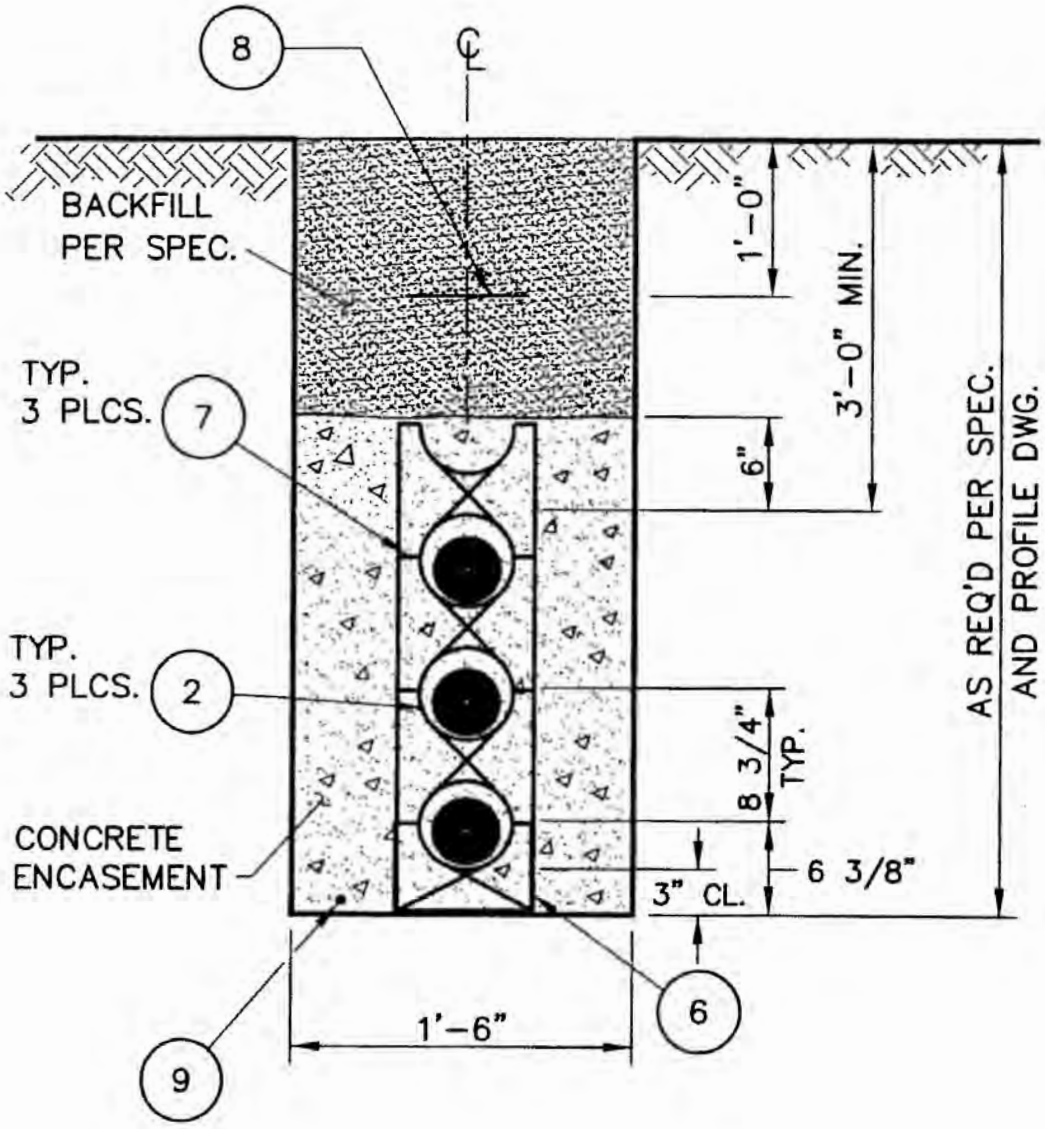

NOTES:

1. ALL WORK SHALL CONFORM TO SPECIFICATION TE-107 & DWG. NO. 31001.

Not to Scale
Source: San Diego Gas & Electric

Mira Sorrento Substation
Proponent's Environmental Assessment

UNDERGROUND TRENCH SINGLE CIRCUIT IN CONDUIT (VERTICAL)

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Figure 3-15

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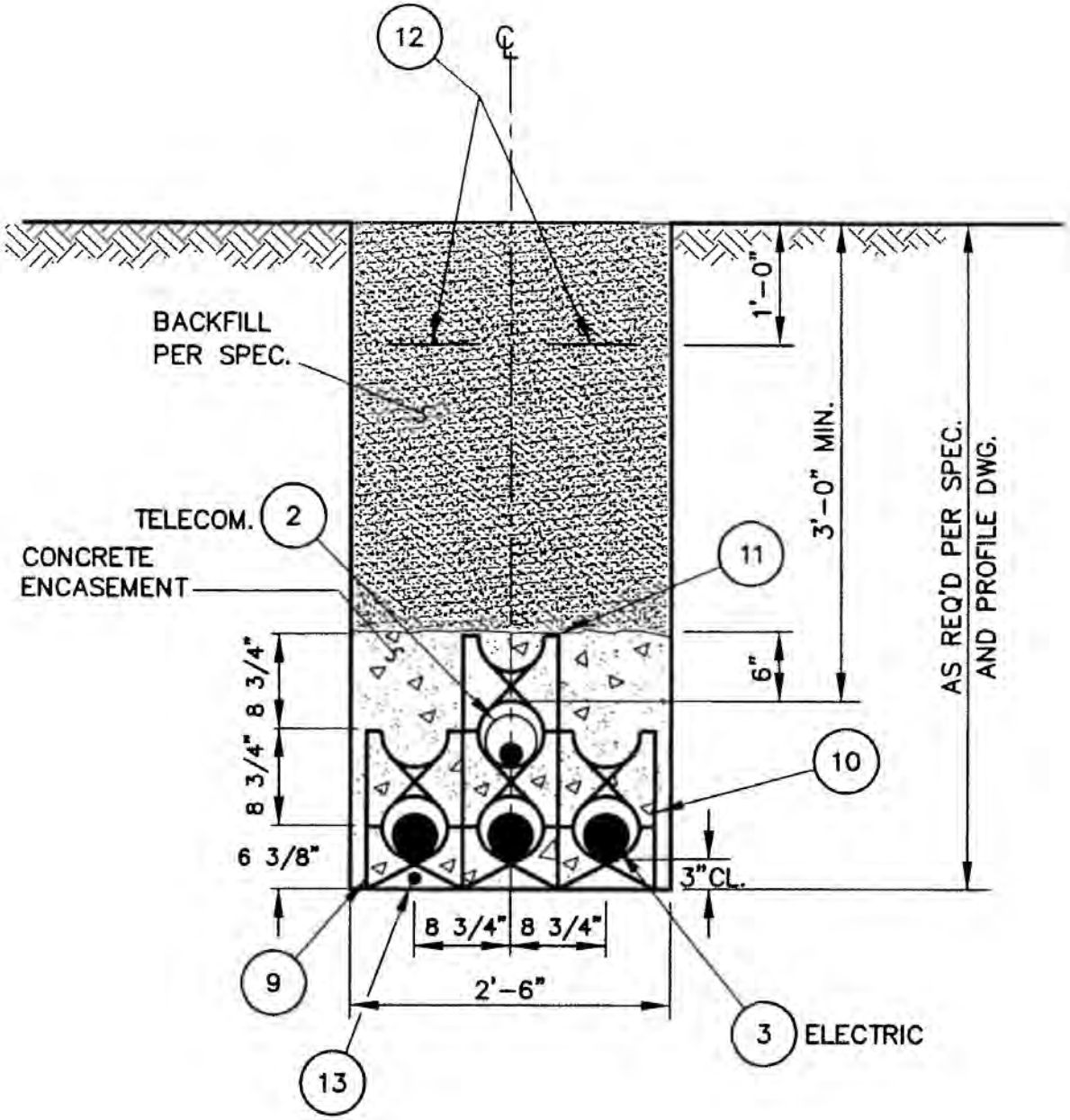

NOTE:

1. ALL WORK SHALL CONFORM TO SPECIFICATION TE-107 & DWG. 31001.

Not to Scale
Source: San Diego Gas & Electric

Mira Sorrento Substation
Proponent's Environmental Assessment

UNDERGROUND TRENCH SINGLE CIRCUIT IN CONDUIT (HORZ.) WITH TELECOMMUNICATIONS

Figure 3-16

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Not to Scale
Source: SDG&E, May 2011

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Mira Sorrento Substation
Proponent's Environmental Assessment

TL 665 LOOP-IN TRENCH ALIGNMENT

Figure 3-17

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3.7.5.5 Dewatering

No dewatering is anticipated during construction. However, in the event that groundwater is encountered, it would occur during construction of the duct bank and manhole installation for the new TL665 underground loop-in underground segment. Should dewatering be necessary, the following construction dewatering procedures will be implemented during construction:

- A submersible pump will be installed.
- Groundwater will be pumped to a desiltation tank (baker tank) at one end for sediment and filtering. Baffles will be installed in the tank to increase sedimentation. Water in the tank will be allowed to flow out from the opposite end.
- Water quality testing will be performed to ensure compliance with the Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) requirements. If water quality levels do not meet permit requirements, additional baker tanks or treatment or filtering may be required.
- Disposal of water shall be at an approved SDG&E disposal site.

3.7.5.6 Clean Up and Post-Construction Restoration

All areas that are temporarily disturbed during construction activities will be restored to preconstruction conditions, to the extent practicable, once the TL665 loop-in and associated trenching and duct installation are complete. Restoration efforts will include restoration of all removed curbs, gutters, and sidewalks; repaving of all removed or damaged paved surfaces; restoration of landscaping or vegetation as necessary; and, removal of all construction materials from the areas affected by Project construction.

Throughout trench excavation and installation of the duct bank and vaults, asphalt, concrete, and excavated materials will be hauled to a materials staging area. Excavated materials will be tested and may be used as backfill if the material is suitable as a thermal backfill. If unexpected soils and/or groundwater contamination is encountered during construction, soil will be tested, handled and disposed of in accordance with SDG&E standards and applicable environmental laws and regulations. Jackhammers will be used sparingly to break up sections of concrete that the saw-cutting and pavement-breaking machines cannot reach. Other miscellaneous equipment will include a concrete saw, various paving equipment, and pickup trucks.

3.7.6 Equipment

The equipment that will be used to construct each Proposed Project component, along with its approximate duration of use, is provided in Attachment 3-A, Typical Construction Equipment by Activity.

Transportation between the staging areas and Project site is expected to be limited as most of the equipment can be delivered to the substation site. During construction, delivery and maintenance trucks are anticipated to travel to and from the staging areas approximately 1-2 times per week during peak construction activities.

3.7.7 Schedule

Construction of the Proposed Project is anticipated to take approximately 18 to 24 months from initial site development through energization and testing. Table 3-3, *Proposed Construction Schedule*, identifies the estimated length of time anticipated to complete construction for each Project component.

Substation construction will generally take place during normal work hours Monday through Saturday 7:00 a.m. to 7:00 p.m.; however, some concrete pours may take place during an extended day depending on size of the pour. Transformer oil filling may require vacuum pulls and oil installation requiring continuous work 24 hours per day (three to five days per transformer). Transmission splicing may require extended work hours due to the time required for continuous splicing. Actual cutovers of the transmission and distribution circuits to the Substation will be dependent upon loading requirements and will be performed in a manner that maintains uninterrupted service to customers. This may require part or all of this work to be done after normal business hours or on the weekend and/or nights to minimize impacts to schedules and to facilitate cutover work, and as required by other property owners or agencies, such as the California Independent System Operator (CAISO), which may require outages of certain portions of the electric system to occur outside typical construction hours.

3.7.7.1 Mira Sorrento Substation

Construction of the Mira Sorrento Substation is anticipated to take approximately 18 to 24 months. Site development is proposed to begin as soon as the permits are received (expected July 2012), and energization in May 2014. See Table 3-3, *Proposed Construction Schedule*.

3.7.7.2 TL665 Loop-In

SDG&E anticipates that construction of the TL665 loop-in will take approximately two to four months. It is estimated that trench work will take four to six weeks, and cable installation will take an additional four to six weeks.

Table 3-3: Proposed Construction Schedule

Project Component	Activity	Approximate Number of Months	Anticipated Start Date
Mira Sorrento Substation	Site Development and Grading	6	August 2012
	Retaining Wall Construction	3	August 2012
	Below Grade Construction	6	February 2013
	Substation Equipment Construction	10	August 2013
TL665 Loop-In	Transmission Construction	2-4	March 2014
Energization	Testing and Commissioning	5	December 2013
	Energization	1	May 2014

3.7.8 Personnel

It is anticipated that approximately 15 to 35 workers would be employed during the different construction phases of the Proposed Project. Approximately 35 workers would be on for the site development phase of the Proposed Project. Ten to 25 workers could be onsite during the balance of the foundation and below grade work and the construction of the substation, transmission, and distribution facilities. Final testing and checkout will require approximately six to eight electricians and/or engineers.

Table 3-4, *Peak Construction Personnel*, shows the anticipated number of personnel during peak conditions for construction of each component of the Proposed Project. Each phase of the construction process will require varying numbers of construction personnel.

Table 3-4: Peak Construction Personnel

Project Component	Position	Number
Site Development: Verdura Retaining Wall Construction	Construction Manager	1
	Superintendent	1
	Operators	4
	Laborers	8
	Inspector	1
Site Development and Grading Construction	Construction Manager	1
	Superintendent	1
	Foremen	2
	Operators	15
	Laborers	10
	Inspectors	2
	Grade Checkers/Surveyors	2

Table 3-4: Peak Construction Personnel, cont'd

Project Component	Position	Number
CMU Retaining Wall, CMU Screen Wall, and Gate Construction	Construction Manager	1
	Superintendent	1
	Foreman	1
	Operators	2
	Laborers	15
	Inspectors	2
Substation: Below Grade – 6 Months	Foreman	1
	Laborers	4
	Concrete Finishers	2
	Equipment Operator	1
	Haul Truck Driver	1
	Concrete Truck Driver	1
	Water Truck Driver	1
	Standby Electrician	1
Substation: Construction – 13 Months	Crew Foremen	2
	Journeymen	8
	Apprentices	2
	Assistant	1
	Operators	2
	Wiring Foreman	1
	Wiremen	2
	Relay Inspectors	2
	Relay technicians	4
Transmission: Below Grade	Superintendent	1
	Foremen	2
	Laborers	8
	Equipment Operators	4
Transmission: Cable Work	General Foreman	1
	Foremen	2
	Linemen	6
	Equipment Operators	2

3.8 Operation and Maintenance

Once the Mira Sorrento Substation construction is complete, it will be unmanned. The Substation will be monitored and controlled by SDG&E's Remote Control Center, so no new full-time staff will be required for operation and/or maintenance of the facilities.

3.8.1 Mira Sorrento Substation

Ongoing maintenance will involve testing, monitoring and repair of the equipment, as well as emergency and routine procedures to enable efficient provision of SDG&E services. A perimeter wall will be provided around the Mira Sorrento Substation and all access gates will be locked to prevent the entry of unauthorized individuals. In addition, signage will be posted on the exterior and at the entryway to the Substation to restrict entry into the site to authorized SDG&E personnel.

Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. 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 to complete. Nighttime maintenance activities are not expected to occur more than once a year.

Landscape maintenance will occur on an as-needed basis for purposes of safety and/or access. Such activities will generally require the presence of one to two maintenance vehicles and one or more employees to clear and/or trim vegetation to ensure that an adequate working space is maintained around the Substation facilities.

3.8.2 TL665 Loop-In

It is anticipated that the transmission circuits that loop into the Substation will be inspected once per year. Non-emergency major maintenance may include the replacement of damaged insulators or other equipment. Maintenance crews may consist of as many as four people and may require a tool truck, an assist truck, and a large bucket lift truck. Insulators may require washing up to three times a year to prevent flashovers, equipment damage and outages.

Operations and maintenance activities for the TL665 loop-in will include routine inspection, maintenance, and repair activities. Both routine preventive maintenance and emergency procedures will occur in order to ensure that integrity of the system is maintained over the long-term. Inspections may occur through ground patrols visiting the facilities. At a minimum, such routine inspections will occur annually to identify potential corrosion, equipment misalignment, loose fittings, and/or other mechanical problems.

3.8.3 Site Landscaping

The removal of approximately 2.7 acres of onsite vegetation (mostly disturbed) would occur as the result of Project grading to allow for construction of the Mira Sorrento Substation. Refer also to Section 5.4, *Biological Resources*, for additional discussion. Figure 3-8, *Mira Sorrento Substation Temporary and Permanent Impact Areas*, shows the limits of disturbance for construction of the proposed Mira Sorrento Substation.

SDG&E conducts annual inspection of areas where trees exist within proximity to its electrical facilities. If necessary, tree trimming activities would be conducted utilizing a two-man crew, a one-man aerial lift truck, and a chipper trailer. Due to the urban nature of the area it is anticipated that vehicular access would be available. If vehicle access is not available, the crew will walk to the location where trimming is needed. It is anticipated that annual tree trimming activities can be completed in one day, if needed.

The use of herbicides may also be needed to prevent vegetation that is cleared during brushing activities from re-establishing itself. SDG&E typically applies one or more of 16 standard herbicides that have been recommended by the U.S. Fish and Wildlife Service (USFWS) specifically for use by SDG&E; refer to Attachment 3-D: Herbicides and Application Procedures. The application of herbicides generally involves one person in a pick-up truck and occurs over a period of a few minutes. It is anticipated that the person performing the work would walk to apply the herbicide from a parked vehicle.

3.8.4 Use of Helicopters

At this time, helicopter use is not anticipated for the Mira Sorrento Substation Project.

3.9 Anticipated Permits and Approvals

The CPUC is the lead California agency for this Proposed Project. SDG&E must comply with the CPUC's General Order No. 131-D Section III-B (GO 131-D), which contains the permitting requirements for the construction of the Proposed Project. This PEA is being prepared as part of an application to obtain a Permit to Construct (PTC) for the Proposed Project. In addition to the PTC, SDG&E may be required to obtain a number of other permits from Federal, State, and local agencies. Table 3-5, *Permit, Approval, and Consultation Requirements*, lists the permits, approvals, and licenses that SDG&E anticipates obtaining from jurisdictional agencies.

Table 3-5: Anticipated Permit, Approval, and Consultation Requirements

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
Federal Agencies		
Implementation of SDG&E's Subregional Natural Community Conservation Plan (NCCP)	USFWS	Activities within NCCP coverage areas that impact biological resources (required only for review of project, and no approval or permit is involved).
State Agencies		
Permit to Construct	California Public Utilities Commission	Overall Project approval and CEQA review.
National Pollutant Discharge Elimination System–Construction Storm Water Permit	California State Water Resources Control Board (SWRCB)	Storm water discharges associated with construction activities disturbing more than one acre of land.
Utility Vault Dewatering NPDES General Permit	SWRCB	Used to discharge water from utility vaults.
Implementation of SDG&E NCCP	CDFG	Activities within NCCP coverage areas (required only for review of project, no approval or permit is involved).
Local Agencies		
Encroachment Permit	City of San Diego	Construction within, under, or over city or county road ROW (ministerial).
Grading and Structural Wall Permits	City of San Diego	Onsite grading and wall construction activities (ministerial).

3.10 Applicant Proposed Measures

As part of the Proposed Project, SDG&E plans to incorporate the applicant-proposed measures (APMs) included in Table 3-6, *Applicant-Proposed Measures*, into the Proposed Project design to avoid or minimize potential impacts to sensitive resources. SDG&E will conduct the design, construction, operation, and maintenance of the Proposed Project in accordance with the APMs. All Proposed Project-related activities are subject to the APMs ultimately authorized by the CPUC. The various resource chapters detail how and when the APMs will be applied to avoid or minimize impacts to the less-than-significant level.

SDG&E established a Natural Community Conservation Plan (NCCP) in 1995, when it entered into an agreement with the USFWS and the California Department of Fish and Game (CDFG). The NCCP prescribes as "protocols" various protection, mitigation, and conservation measures that SDG&E must implement when utilizing the NCCP. The NCCP identifies 61 protocols that SDG&E routinely implements with every project to avoid and/or minimize impacts to sensitive areas. Many of these protocols were used in the development

of the Proposed Project APMs and will be implemented to avoid and/or minimize potential impacts to biological resources.

The APMs are intended to allow for design flexibility by avoiding or minimizing environmental impacts to the extent feasible. As defined in the CEQA, feasible means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors,"[1] while attaining the Proposed Project's basic objectives, purpose, and need.

3.11 Implementation of Applicant-Proposed Measures

SDG&E will be responsible for overseeing the assembly of construction and environmental teams that will implement and evaluate the Project APMs. SDG&E maintains an environmental compliance management program to allow for implementation of the APMs to be monitored, documented, and enforced during each project phase, as appropriate. All those contracted by SDG&E to perform this work will be contractually bound to properly implement the APMs to ensure their effectiveness in reducing potential environmental effects. Refer to Table 3-6, *Applicant Proposed Measures*, for a list of the Proposed Project APMs.

3.11.1 Environmental Compliance Management

Implementation of the proposed APMs will be the responsibility of the environmental compliance team. The team will include an environmental project manager, resource specialists, and environmental monitors. All APMs will be implemented consistent with applicable Federal, State, and local regulations. The environmental compliance team will be responsible for the daily inspection, documentation, and reporting of SDG&E compliance with all APMs as proposed. As needed, environmental specialists with expertise in water quality, hazardous materials, and natural resources will be retained by SDG&E to verify that all APMs are properly implemented during the construction phase. Implementation of the APMs will be monitored onsite on a daily basis and will be evaluated as to their status and effectiveness during regularly scheduled meetings.

3.11.2 Environmental Training

A Project-specific environmental training program will be developed by SDG&E. The program will include a multi-level approach that is commensurate to each worker's role on the Project. Supervisors, including construction foremen, will be required to actively participate in a training session to identify the specific requirements of each APM, review permit conditions, and/or mitigation measures and plans. SDG&E crews and other staff will

[1] California Environmental Quality Act Guidelines, California Code of Regulations, Title 14, Chapter 3, Section 15364.

also receive training and review of Project requirements. All personnel performing work within the affected ROW will be required to attend the SDG&E training program, prior to commencement of any grading or construction work.

3.11.3 Monitoring and Inspection

During construction, environmental monitors and contract administrators will be required to be present onsite to verify that the proposed APMs and other Project specifications are properly implemented. If conditions occur where construction may potentially adversely affect a known or previously unknown environmentally-sensitive resource, or if construction activities significantly deviate from Project requirements, SDG&E monitors and/or contract administrators will have the authority to halt construction activities, if needed, until an alternative method or approach can be identified. Any concerns that arise during implementation of the APMs will be communicated to the appropriate authority to determine if corrective action is required or addressed onsite, as applicable.

3.11.4 Reporting and Documentation

As the proposed APMs and SDG&E's Environmental Standards are implemented, environmental monitors from SDG&E will be responsible for the daily review and documentation of such activities. Field notes and digital photographs will be used to document and describe the status of APMs.

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Table 3-6
Applicant Proposed Measures

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
Aesthetics				
APM-AES-1	Figure 3-8: *Conceptual Landscape Plan*, provides the conceptual landscape mitigation plan for the Mira Sorrento Substation. The landscape plan would be implemented as part of the Proposed Project following construction of the Substation components. The conceptual landscape plan would provide partial screening of views of the Substation site from view locations to the west, south, and east. Landscaping would include plantings within the retaining walls and small, informal groupings of small shrubs and trees on the flatter areas created by the walls. Figure 3-8, *Conceptual Landscape Plan*, includes a list of recommended plant species. All suggested trees appear on the City of San Diego Street Tree Selection Guide. Drought-tolerant plants, including California native species, are suggested. Proposed Project landscaping would receive regular watering during the initial two years following installation in order to ensure the establishment of the plants. All planting would be consistent with SDG&E operational requirements for landscaping in proximity to electric transmission facilities.	The landscaping would partially screen views of the new facility and help integrate its appearance within the existing setting of office, commercial and industrial uses, thus reducing any visual impacts.	✓	✓
APM-AES-2	The color of the Substation perimeter wall would be chosen to blend with the existing site features (i.e., a dull grey, light brown, or dull green) in order to minimize visual contrast with the landscape setting.	Choosing a wall color that blends with existing site features would help to minimize visual contrast with the substation's surroundings.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
Air Quality				
APM-AQ-1	SDG&E would implement their existing sulfur hexafluoride (SF_6) mitigation strategies during the operation and maintenance of SF_6-containing equipment installed as part of the Proposed Project. These strategies include: ▪ Recording company-wide SF_6 purchases for use in reporting annual GHG emissions under the CCAR Power Utilities Protocol and as a member of the Environmental Protection Agency's EPA SF_6 Partnership ▪ Implementing SDG&E's SF_6 leak detection and repair program. This program includes monthly visual inspections of each GCB, which includes checking pressure levels within the breaker and recording these readings in SDG&E's Substation Management System. During the installation or major overhaul of any GCB, the unit is tested over a 24-hour period to ensure no leaks are present. Minor overhauls of each GCB are conducted every 36 to 40 months to check overall equipment health. This process includes checking gas pressure, moisture ingress, and SF_6 decomposition. If the GCB fails any of these checks, the unit is checked for leaks and repaired. In addition, all GCBs are equipped with a gas monitoring device and alarm that automatically alert SDG&E's Grid Operations Center. If gas pressure approaches minimum operating levels, an alarm is immediately reported to SDG&E's Substation Construction and Maintenance	This measure minimizes long-term SF6 emissions during operation activities to reduce air quality impacts.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
	Department. The GCB is usually inspected for leaks within 24 hours of such an alarm. SDG&E's leak detection practice includes the following three methodologies: o Spraying a leak-detection agent onto common leak points—including O-rings, gaskets, and fittings o Using a field-monitoring device (sniffer) to detect the presence of SF_6 gas o Using a laser-detection camera to detect the presence of SF_6 gas when the above two methods are unsuccessful in finding a leak ▪ Implementing a SF_6 recycling program ▪ Training employees on the safety and proper handling of SF_6 ▪ Continuing voluntary reporting of GHG emissions with the CCAR or The Climate Registry			
Biological Resources				
APM-BIO-1	SDG&E will conduct activities in accordance with NCCP Operational Protocols to avoid, minimize, or mitigate impacts to biological resources. See APM BIO-2.	The NCCP identifies 61 Operational Protocols designed to avoid and minimize potential impacts to sensitive species and their habitats, to provide appropriate mitigation where such impacts are unavoidable, and to ensure survivability and conservation of protected species and their habitat. This measure would ensure that the Operational Protocols are implemented and impacts to biological resources are minimized.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
APM-BIO-2	In accordance with the NCCP, SDG&E will conduct the following: ▪ Whenever practicable, all grading or brushing occurring within occupied CAGN habitat shall be conducted from September 1st through February 28th, which is outside of the CAGN breeding season. ▪ When conducting all other Project construction activities during the CAGN breeding season of March 1 through August 31 within habitat in which CAGN are known to or have a high potential to occur, the following avoidance measures shall apply: o A qualified biologist will conduct a preconstruction survey for CAGN within one week prior to initiating Project construction activities in an area. If CAGN are present but not nesting, a qualified biologist will survey for nesting CAGN approximately once per week in the vicinity of Project activities for the duration of the activity in that area. o If an active CAGN nest is located in the vicinity of Project activities, a biologist qualified for CAGN nest monitoring will monitor the nest daily until: (1) Project activities are no longer in the vicinity of the nest, or, (2) the fledglings become independent of their nest. ▪ If the CAGN nest monitor determines that the Project activities are disturbing or disrupting the nesting activities, the monitor will make practicable recommendations to reduce the	This measure ensures that potential impacts to CAGN are minimized by avoiding occupied CAGN habitat during the breeding season.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
	noise or disturbance in the vicinity. This may include recommendations such as (1) turning off vehicle engines and other equipment whenever possible to reduce noise, and (2) working in other areas until the young have fledged. With these avoidance and minimization measures in place, any incidental take of coastal California gnatcatcher is covered by the SDG&E NCCP.			
Cultural Resources				
APM-CUL-1	A qualified paleontologist shall attend preconstruction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a Master of Science or Doctor of Philosophy in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Southern California, and who has worked as a paleontological mitigation project supervisor in the region for at least one year. The requirements for paleontological monitoring shall be noted on the construction plans.	This measure would ensure that a qualified paleontologist is consulted so that the potential impacts to any paleontological resources can be avoided or discovered resources can be properly evaluated and recovered, if appropriate.	✓	✓
APM-CUL-2	A paleontological monitor shall work under the direction of the qualified Project paleontologist and shall be onsite to observe excavation operations that involve the original cutting of previously undisturbed deposits with high or moderate paleontological resource sensitivity. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.	This measure would ensure that a qualified paleontologist is consulted so that the potential impacts to any paleontological resources can be avoided or discovered resources can be properly evaluated and recovered, if appropriate.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
APM-CUL-3	In the event that fossils are encountered, the Project paleontologist shall have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The paleontologist shall 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 shall determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager shall concur with the evaluation procedures to be performed before construction activities are allowed to resume. Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation onsite. When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them along with pertinent stratigraphic data. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk-sedimentary-matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections.	This measure would ensure that fossil resources and remains encountered during excavation activities are properly recovered, evaluated, cataloged, stored, and documented, as appropriate, for preservation of the resource.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
Geology & Soils				
APM-GEO-1	SDG&E will consider the recommendations and findings of the final Geotechnical Investigation Reports prepared by Kleinfelder, Inc. and the contractor's Geotechnical Engineer in the final design of all Project components to ensure that the potential for landslides, expansive soils, and slope instability is compensated for in the final design and construction techniques. In addition, SDG&E will comply with all applicable codes and seismic standards, as appropriate, to minimize the potential for damage from a seismic event. The final Project design will be reviewed and approved by a Professional Engineer registered in the State of California, prior to commencement of construction.	This measure would ensure that site-specific conditions are considered in the final design of the Proposed Project and would require verification by a Professional Engineer that the Proposed Project design meets all applicable regulations and safety standards.	✓	✓
Hazards and Hazardous Materials				
APM-HAZ-1	SDG&E would prepare a Project-specific Hazardous Substance Management and Emergency Response Plan during the construction period to reduce or avoid potentially hazardous materials, for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials.	This measure would reduce the potential for an accidental release of hazardous materials, ensure proper cleanup and handling of spilled material, as well as reduce unnecessary exposure of hazardous materials in order to protect the health of workers and the public.	✓	✓
Hydrology and Water Quality				
APM-HYD-1	SDG&E will prepare a SWPPP under the State General Construction Permit, and implement BMPs from the SDG&E Water Quality Construction Best Management Practices Manual in order to avoid and minimize potential impacts to water quality.	This measure ensures that surface water runoff is detained and treated prior to being released into natural channels.	✓	✓

APM Number	Description	Justification	Proposed Project Component	
			Mira Sorrento Substation	TL665 Loop-In
Land Use and Planning				
No conflicts with applicable land use plans or policies would occur with implementation of the Proposed Project, and the Proposed Project would not divide an established community. As such, no avoidance or minimization measures are required or proposed.				
Noise				
The Proposed Project would not result in significant impacts with regard to noise; therefore, no avoidance or minimization measures are proposed.				
Population				
Because the Proposed Project's impacts on population and housing would be less than significant, no applicant-proposed measures are proposed.				
Public Services				
No potentially significant impacts relative to public service systems will result with the Proposed Project. As such, no APMs are proposed or required.				
Traffic				
The Proposed Project would not result in significant impacts with regard to traffic or transportation resources; therefore, no avoidance or minimization measures are proposed.				

ATTACHMENT 3A

Table 3-A
Proposed Construction Vehicle And Equipment Usage During Construction

Site Development and Grading Construction – Above Grade (approximately 6 months):

Total estimated vehicles used	Hours Operating @ Site/day*	Daily Worst Case Vehicle Usage
4 – Scrapers	7	4
2 – Front End Loader	6	2
25 – Dump Trucks (12 cubic-yard)	7	25
2 – Dozer (D6 or D8 or D9)	6	2
1 – Excavator	6	1
1 – Water Truck	7	1
2 – Compactor (824 or 834)	7	2
2 – Skid Steer Loader	3	2
2 – Back Hoe	6	2
1 – Ditch Witch	6	1
2 – Maintenance Truck	1	2
1 – Paver	6	1
8 – Asphalt Trucks	1	8
2 – Drum Roller Compactor	6	2
15 – Cars/Pickup Trucks	0	

Verdura Retaining Wall Construction (approximately 1½ months, concurrent with grading):
(Note: The Verdura retaining wall construction assumes a 13 man crew: 1 superintendent, 4 operators, 8 laborers)

Total estimated vehicles used	Hours Operating @ Site/day*	Daily Worst Case Vehicle Usage
3 – Front End Loader IT28	9	3
1 – Excavator	9	1
1 – Water truck	9	1
1 – Compactor 563 Ride-On	9	1
1 – Motor Grader (blade)	9	1
3 – Walk Behind Compactors	9	3
5 – Cars/pickup trucks	1	5
3 – Delivery trucks	1	3
1 – Maintenance Truck	3	1

CMU Retaining Wall, CMU Screen Wall, and Gate Construction (approx. 1½ months):

Total estimated vehicles used	Hours Operating @ Site/day*	Daily Worst Case Vehicle Usage
2 – Forklift	6	2
1 – Back Hoe	7	1
1 – Ditch Witch	6	1
2 – Delivery Truck	1	2
1 – Excavator	7	1
1 – Water Truck	4	1
2 – Walk Behind Compactors	4	2
2 – Mobile Cement Mixer	5	2
2 – Maintenance Truck	1	2
6 – Concrete Trucks	0.5	6
1 – Concrete Pump	4	1
1 – Mobile Generator	8	1
1 – Spray Pump (wall waterproof)	6	1
10 – Cars/Pickup Trucks	0	

SUBSTATION BELOW GRADE - 6 MONTHS

Total estimated vehicles used	Hours Operating @ Site/day*	Daily Worst Case Vehicle Usage
2 - Back Hoe	6	1
2 -Loader	6	2
2 - Truck (20 cubic-yard end dump)	3	2
2 – Skid Steer Loaders	4	1
1 – Water truck	3	1
15 – Concrete trucks	0.5 (2days/wk for 4months)	
1- ditch witch	6	
15 – cars/pickup trucks	0	

*per vehicle

SUBSTATION EQUIPMENT CONSTRUCTION - 13 MONTHS

Total estimated vehicles used	Hours Operating @ Site/day*	Daily Worst Case Vehicle Usage
5 – Substation Crew	0	4
2 –Boom truck	6	2
1- Manlift	6	1
4– Bucket trucks	5	2
8 – Pickup/vans/car	0	4
2 – Underground line	4	0
1 – Cable dolly (trailer)	0	1
2 – Stringing rigs (trailer)	0	2
1 – Oil Rig (trailer w/generator)	24 (10 days for xmfr setup)	
1 – Water truck	2	1

*per vehicle

*per vehicle/equipment

TOTAL TRANSMISSION CONSTRUCTION: 2-4 MONTHS

Total estimated vehicles used	Hours Operating @ Site/day*	Daily Worst Case Vehicle Usage
1 - Back Hoe	6	1
1 - Truck (20 cubic-yard end dump)	4	1
1 - Skid Steer Loaders	4	1
4 - Concrete trucks	1 (2days/wk for 1 month)	2
1- Ditch Witch	2	1
3 - cars/pickup trucks	N/A	3
2 - Underground Line Trucks	2	2
1 - Cable Reel Trailer	2	1
1- Crane	0.5	1
1- Drill Rig	0.5	1

*per vehicle

CHAPTER 4: ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY

Introduction

The following sections (4.1 through 4.12) provide an assessment of potential environmental impacts resulting from construction and operation of the San Diego Gas & Electric Company Mira Sorrento Substation Project (Proposed Project). The potential environmental impacts associated with these components are evaluated herein for the following resource areas, consistent with the requirements of the California Environmental Quality Act (CEQA):

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Mineral Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Transportation and Traffic

Sections 4.1 through 4.12 provide discussion of the existing conditions as they pertain to each resource area and identify potential impacts on such resources anticipated with Project implementation. A checklist is provided at the beginning of each section to summarize the level of impact (i.e., No Impact, Less-Than-Significant Impact, Less-Than-Significant Impact

with Mitigation Measures, and Potentially Significant Impact) to each resource area, according to the significance criteria used for analysis.

The Proposed Project will result in no impacts to Land Use and Planning and Public Services and less than significant impacts to Population and Housing, Transportation and Traffic, and Utilities and Service Systems. The Proposed Project would result in potentially significant impacts to the remaining eight resource areas. With implementation of applicant-proposed measures (APMs), these impacts would remain less-than-significant. The following potential impacts resulting from the Proposed Project would remain less than significant with the proposed APMs:

- Aesthetics – APM-AES-1, APM-AES-2
- Air Quality – APM-AQ-1
- Biological Resources – APM-BIO-1, APM-BIO-2
- Cultural Resources – APM-CUL-1, APM-CUL-2, APM-CUL-3
- Geology, Soils, and Mineral Resources – APM-GEO-1
- Hazards and Hazardous Materials – APM-HAZ-1
- Hydrology and Water Quality – APM-HYD-1

SDG&E would implement APMs to ensure that all potential impacts remain less-than significant. The APMs are discussed in their relevant sections and are summarized in Table 3-6, *Applicant Proposed Measures,* in Chapter 3.0 – *Project Description*.

4.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☒	☐

4.1.1 Introduction

Those natural and built elements of the landscape that are visible and that contribute to the public's experience and appreciation of the environment are considered to be visual or aesthetic resources. Impacts to visual or aesthetic resources are generally defined in terms of a project's physical characteristics, potential for visibility, and the extent to which its presence or absence would change the visual character or quality of the environment. The Proposed Project proposes the construction of a new Substation on a presently vacant site in a highly urbanized area within the City of San Diego. With implementation of the applicant-proposed measures (APMs), described in Section 4.1.5 below, visual impacts from the Proposed Project would be less than significant.

4.1.2 Methodology

The analysis of potential visual effects associated with the Proposed Project is based on observations made during the site reconnaissance. A site visit was conducted in April 2010 to identify existing visual conditions onsite and in the Proposed Project vicinity and to identify sensitive viewing locations from which the Proposed Project site would be visible.

In addition, the analysis included a review of available technical data, maps, aerial and ground-level photographs, and Project-specific technical drawings provided by SDG&E. A review of local planning documents applicable to the Project area was also conducted. Visual

simulations provided by SDG&E were also used in evaluating the potential visual effects on the existing environment.

The visual analysis conducted for the Proposed Project addressed the California Environmental Quality Act (CEQA) Guidelines for potential impacts on visual resources. The analysis was focused on the evaluation of public vantage points from which the Proposed Project site would be visible and utilized visual simulations which provide a "before" and "after" scenario to illustrate the potential visual changes that would occur with implementation of the Proposed Project. The visual impact assessment was therefore based on an evaluation of the anticipated changes to existing visual resources that would result from short-term construction and long-term operation of the Proposed Project.

This impact analysis describes changes to existing visual resources and assesses viewer response to that change. Central to this assessment is an evaluation of representative views from which the project would be visible to the public. To document the visual change that would occur, visual simulations show the Proposed Project from a subset of the visual character photographs, representing key viewpoints, shown as "before" and "after" images. The visual impact assessment is based on evaluation of the changes to the existing visual resources that would result from construction and operation of the Proposed Project. These changes were assessed, in part, by evaluating the computer-generated visual simulations showing visual conditions with the Proposed Project and comparing them to the corresponding existing view.

Viewing distance is a key factor that affects the potential degree of project visibility. For purposes of this visual analysis, the primary focus is considered this foreground viewshed area, where visual details are apparently, and up to approximately one mile from the Proposed Project, where change could be noticeable.

Viewer sensitivity, one of the criteria for evaluating visual impact significance, is generally divided into high, moderate, and low categories. Factors considered in assigning categories include viewer activity, view duration, viewing distance, adjacent land use and special management or planning designation.

Motorists represent the largest potentially affected view groups for the Proposed Project. Given the posted speed limits of up to 65 miles per hour, motorists' view duration is relatively short, estimated at less than a minute depending on traffic speed. Viewer sensitivity of motorists is considered low to moderate.

4.1.3 Existing Conditions

This section includes a description of the regulatory framework pertaining to the Proposed Project site and the existing visual setting. Visual conditions are described with regard to the physical landscape features that occur as visual and scenic resources both onsite and in the vicinity of the Proposed Project.

Regulatory Background

As previously stated, the California Public Utilities Commission (CPUC) has exclusive jurisdiction over the siting, design, and construction of the Proposed Project. Therefore, the Proposed Project is not subject to local discretionary land use or zoning regulations, and use permits are not required for construction or operation of the facilities; however, a review of local land use plans was conducted to identify any relevant local land use regulations relating to visual resources for informational purposes as part of the environmental review process. As summarized below, the construction and operation of the Proposed Project would not conflict with any environmental plans, policies, or regulations adopted by agencies with jurisdiction over local aesthetic regulations.

4.1.3.1 Regulatory Background

City of San Diego General Plan

The City of San Diego 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; however, no specific goals or policies pertaining to scenic resources were identified that would apply to the Proposed Project. The General Plan does not include a Scenic Highway Element.

The Urban Design Element of the General Plan includes the following policies relevant to protecting or enhancing the visual environment:

- UD-A.16. Minimize the visual and functional impact of utility systems and equipment on streets, sidewalks, and the public realm.
    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.

Mira Mesa Community Plan

The Mira Mesa Community Plan does not contain specific goals or policies pertaining to scenic resources in the area that would apply to the Proposed Project; however, the Industrial Land Use Element has a goal of "Improvement in the visual quality of industrial development in the community."

The Sensitive Resources and Open Space System Element addresses the importance of protecting sensitive habitat to prevent degradation of the visual quality of such resources. The Community Plan is intended to achieve a community open space system that achieves the following goals pertinent to visual resources:

- Preserves sensitive resources, including plant and animal habitats and wildlife linkages; and,
- Preserves natural drainage systems.

California Department of Transportation: Scenic Highway Program

The Scenic Highway Program in the State of California is aimed at the protection and long-term preservation of highway corridors of scenic value to ensure that 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 (DOT) 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.

There are no designated State scenic highways in the area; however, portions of Interstate 5 (I-5), located approximately 1.2 miles to the west of the proposed Project site, are identified as eligible as a State scenic highway; however, it is not a designated State scenic highway anywhere in the vicinity of the Proposed Project site. Additionally, neither I-5 nor Interstate 805 (I-805) is a County-designated scenic highway. Therefore, the Proposed Project site does not lie within the viewshed of any County- or State-designated scenic highway.

Project Visibility and Viewshed

Views of the Proposed Project site would generally occur from vantage points along I-805; Mira Sorrento Boulevard; Vista Sorrento Parkway; and, Mira Sorrento Place. The site is most visible to motorists traveling along Mira Sorrento Boulevard; Vista Sorrento Parkway; and, Mira Sorrento Place, due to their proximity to the Project site. Limited vegetation or trees are present in the area to diminish views from these roadways; however, due to the location of the proposed Substation on the northern portion of the property, views are generally limited to those traveling south along Vista Sorrento Parkway and I-805, as viewers would be

required to turn their heads and look northeasterly back to the site to experience views. In addition, elevational differences and distance from the site reduce potential views for those traveling north along I-805. The most visible views of the proposed Mira Sorrento Substation site occur along Vista Sorrento Parkway and Mira Mesa Boulevard looking north/northeast. Additional public views occur from the commercial center located to the east of the Proposed Project site looking west/northwest. Private views are not protected; nonetheless, the PEA looked at private views from the Sorrento Towers located to the north looking down (south) to the site, and concluded that there would be no impacts due to elevational differences between the two uses. In addition, private views to the site would occur from the existing office complex located to the south of the Proposed Project site, across Mira Mesa Boulevard, but those views would not be significantly impacted because the Proposed Project would substantially change the existing viewshed from the office tower. Views of existing prominent ridgelines would not be altered, and any structures onsite would be less than the height of existing streetlights and traffic signal poles. Additionally, the intervening hillside between the proposed Substation and Mira Mesa Boulevard would remain unchanged.

Visual Character of the Project Area

Mira Sorrento Substation

The Proposed Project site is located within the City of San Diego, on the northeast corner of the intersection of Vista Sorrento Parkway and Mira Mesa Boulevard, just east/northeast of I-805. The Project site is approximately 3.7 acres and consists of undeveloped land; the Mira Sorrento Substation would permanently occupy approximately 1.4 acres within the 3.7-acre parcel. Access to the site will be provided from Mira Sorrento Place; refer to Figure 3-2, *Vicinity Map*.

The Project site is presently undeveloped and features a small hilltop with steep, northwest- and southwest-facing manufactured slopes and a steep, east-facing slope of an isolated urban canyon. Onsite elevation generally ranges from approximately 115 feet to 220 feet above mean sea level (amsl), with the lowest elevation in the southernmost canyon bottom and the highest elevation atop the hill in the western portion of the site. The parcel is disturbed and currently unoccupied. The site is bordered by Vista Sorrento Parkway to the southwest, Mira Sorrento Place to the northwest, a 200-foot SDG&E utility easement to the north, and an undeveloped area to the east with a drainage channel that trends from northwest to southeast. Land uses in the immediate area are generally light industrial and commercial. Surrounding land uses include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the north/northeast across the drainage. The Marriott Courtyard and Water Ridge condominium complexes are located north of the site at distances of approximately 800 and 1,000 feet, respectively. Adjacent to the northeast side of the Substation site is an existing 200-foot SDG&E utility corridor easement containing TL 13810 and TL 23013 overhead lines. Within the easement, an unimproved (dirt) access road

supports operational and maintenance activities for the SDG&E facilities. Figure 3-3, *Aerial Photograph*, shows the existing conditions on the Project site and in the surrounding area.

TL665 Loop-In

The TL665 loop-in would be constructed in the same general location as the Mira Sorrento Substation. This new underground alignment would proceed south along Vista Sorrento Parkway then cross Mira Sorrento Place to the new Mira Sorrento Substation; refer to Figure 3-17, *TL 665 Loop-In Trench Alignment*. The loop-in would be located partially on the Project site and within SDG&E's existing right-of-way (ROW).

The TL665 loop-in would parallel the easterly side of Vista Sorrento Parkway, which presently supports limited vegetation, and would cross the existing paved roadway of Mira Sorrento Place (four lanes). As the TL665 loop-in site is in close proximity to the proposed Mira Sorrento Substation site, surrounding land uses are generally the same with the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the north/northeast, and Vista Sorrento Parkway and I-805 to the west.

4.1.4 Impacts

The following discussion describes the visual characteristics of the Proposed Project and the methods by which the visual simulations were created and the physical conditions assumed. The anticipated visual changes are illustrated in the "before" and "after" scenarios.

As discussed below, the Proposed Project would not result in a substantial adverse effect on existing views or landscape character in the area of the Proposed Project with implementation of the proposed APMs. Short-term construction and long-term operational activities for the Proposed Project would not conflict with any applicable environmental plans, policies, or regulations regarding aesthetics or visual resources.

4.1.4.1 Significance Criteria

The significance criteria for assessing the impacts to aesthetics are based on the CEQA Environmental Checklist. According to the CEQA checklist, a project would result in a potentially significant impact if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or,
- Create 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 visibility of the Proposed Project from sensitive public vantage points; the degree to which the Proposed Project would contrast with or be consistent with the existing landscape; the degree of change in the composition and character of the existing landscape; and, the number and sensitivity of viewers were taken into account were all considered. Conformance of the Proposed Project with applicable policies pertaining to visual quality was also considered.

Visual simulations were prepared using computer modeling and rendering techniques to illustrate the potential change to the existing visual environment resulting with the Proposed Project. Additional explanation of the methods used to produce the visual simulations is included below.

4.1.4.2 Impact Analysis

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 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. No scenic vistas occur onsite or within the vicinity of the Proposed Project site. Therefore, the Proposed Project would not have a substantial impact on a scenic vista. No impact would occur.

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

There are no State, County or City-designated State scenic highways in the area. I-5, located approximately 1.2 miles to the west of the Proposed Project site, contains portions that are identified as eligible as a State scenic highway, but it has not been so-designated and the eligible portions are not near the Proposed Project. I-805, located almost adjacent to the site, is not a State, County or City-designated scenic highway.

Therefore, the Proposed Project site does not lie within the viewshed of any County- or State-designated scenic highway. As such, none of the Proposed Project components would be visible from a designated State Scenic Highway. The Proposed Project would therefore not damage scenic resources within a State Scenic Highway. No impact would occur.

Question 4.1c – Visual Character Degradation – Less than Significant Impact

Construction – Less than Significant Impact

Construction-related visual impacts would potentially occur with the presence of equipment, materials, and work crews at the Substation site and in areas affected by the TL665 loop-in. Construction activities would be noticeable to motorists and those occupying the surrounding commercial and light industrial land uses.

Mira Sorrento Substation

Construction activities would be visible from nearby viewing locations along Mira Mesa Boulevard, Vista Sorrento Parkway, and Mira Sorrento Place, with limited views occurring from I-805 due to distance from the site, viewing angle, and travel speed. No residential uses are located within the surrounding area, and therefore, would not be affected. It is expected that construction would be most noticeable to travelers on nearby roadways. Construction activities would take place over 18-24 months.

Construction activities would involve substantial grading and heavy machinery use. Short-term, construction-related visual impacts at the Mira Sorrento Substation would occur as the result of grading and ground disturbance activities required for site development. In addition, erection of the structures would also contribute to short-term visual impacts, as the use of tall cranes or similar construction equipment may be necessary for these activities. Potential impacts are considered to be less than significant because the Proposed Project is located in an urban setting where commercial and industrial uses currently exist. Furthermore, given the relatively small size of the Project footprint (2.7 acres), there will not be substantial numbers of heavy construction equipment or large stockpiles of dirt or staging of other construction supplies. For these reasons, the viewer response to the construction activity would be low. These activities would be short-term and would cease upon completion, impacts to visual resources as the result of construction are considered to be less than significant.

TL665 Loop-In

Improvements required to construct the TL665 loop-in would be visible from Vista Sorrento Parkway and Mira Sorrento Place, with lesser views occurring from Mira Mesa Boulevard, due to distance from the area of improvements and the scale.

Construction activities would involve the use of heavy machinery use on land acquired for the new Substation and within SDG&E's existing right of way (ROW) adjacent to Vista Sorrento Parkway and Mira Sorrento Place. As TL665 will split and proceed underground via two new parallel trench alignments along Vista Sorrento Parkway to the proposed Mira Sorrento Substation for a distance of approximately 600 feet, construction activities and ground disturbance would be required for installation of the alignment. These new trench alignments would be established from an interception point from the existing underground duct package (TL665). This new underground alignment would proceed south along Vista Sorrento Parkway then cross Mira Sorrento Place to the new Mira Sorrento Substation; The trenching for the TL665 loop-in would be located in the street below the ground surface. The trenching would be visible to those motorists travelling immediately adjacent to the trench. The presence of construction equipment in an urban setting would not create an adverse contrast to the existing landscape. For these reasons, the viewer response would be low. Construction of the TL665 loop-in would be short-term and would cease upon completion,

impacts to visual resources as the result of construction are considered to be less than significant.

Operation – Less than Significant Impact

As noted previously, the area surrounding the proposed Mira Sorrento Substation site supports commercial and light industrial uses, as well as existing SDG&E transmission-related structures. The surrounding visual landscape does not include any unique or highly scenic features that would make it a valuable visual resource in the area. The site is located adjacent to other property that has been previously disturbed from previous commercial and roadway development.

The simulations illustrate visual change associated with the proposed Substation development. Figure 4.1-1, *Visual Simulation: View 1,* shows the view of the Substation from the I-805 northbound off-ramp. As the proposed Mira Sorrento Substation site is currently undeveloped, the visual appearance of the property would change to developed with Project implementation; however, the site is surrounded by heavily traveled roadways and is located in a highly urbanized setting, so its surroundings also are of developed uses. Adjacent uses include commercial and office uses, which are less sensitive to changes in the visual environment than would be residential uses. Views of the proposed Substation from this vantage point would be reduced due to distance from the site, and motorists' views would be reduced due to their travel speed and views of intervening traffic. The upper portions of the Substation and the retaining wall would be visible to passengers in cars traveling along the off-ramp. As the Substation components are not of great bulk or scale, and since they would be partially screened by the perimeter wall that would be constructed of natural-colored concrete block to blend it into the surrounding setting, the existing visual character of the site or its surroundings would not be substantially degraded with implementation of the Proposed Project. This view also shows that the Proposed Project would create a flat development pad in the same fashion as the existing pads used for parking and office building to the northwest of the Project site. This view also demonstrates the Proposed Project will not substantially alter the ridgeline or hillside located across Mira Sorrento Place from the site. None of the proposed Substation equipment would be higher than the existing streetlights located adjacent to the site. Therefore, viewer response is low.

Figure 4.1-2, *Visual Simulation: View 2*, shows what the Proposed Project would look like looking southwest to the site from Mira Sorrento Place. Travelers along the roadway would see the upper portions of the Substation components and perimeter wall, as well as the retaining wall along the slope. As the retaining wall would be constructed of tan concrete block, the wall would respect the surrounding natural environment along the slope. With the incorporation of APM AES-1, landscaping would be provided to further blend the wall into the surrounding setting. Views from this angle will not substantially change the existing landscape, the existing hills to the south, or the large hill in the background. Views of similar retaining walls along slopes adjacent to Mira Sorrento Place to the northwest would also be

visible from this vantage point, and therefore, the proposed retaining wall represents a similar visual element. As such, the Proposed Project would not substantially degrade the existing visual character of the site or it surroundings from this vantage point and viewer response is considered low.

The Proposed Project includes a several design features and landscape measures to screen and soften the visual appearance of the Substation. The Project design includes a screen wall as around the perimeter of the Substation. The screening wall will shield most of the interior Substation equipment from view. Additionally, the Project site includes retaining walls to minimize the amount of landform alternation required to develop the site, and to avoid sensitive wetland areas. The Proposed Project includes a landscape plan, Figure 3-10, that includes landscaping around the perimeter of the screening wall and the retaining walls. The landscaping includes ground cover and shrubs adjacent to the screen wall which will provide variation in the appearance of the wall with a mixture of plant heights, colors, and depth along the wall surface. Additionally, street trees are proposed along a portion of the project frontage of Vista Sorrento Parkway and the corners of the Substation on Mira Sorrento Place. The trees have been placed in areas adjacent to the screening wall where they will not conflict with SDG&E Substation safety and security requirements. The street trees will provide additional visual relief to the Substation from offsite locations as well as add an ornamental landscaping element to the site. The trees located at the corner of Mira Sorrento Place and Vista Sorrento Parkway will enhance the Mira Mesa community entry monument proposed at the same corner because the trees will variations provide vegetative cover and an additional ornamental feature to the corner area.

In a similar fashion, the proposed landscaping adjacent to the retaining walls will provide some screening of the walls as well as some visual relief from variations in height, color and depth along the terraces at the foot of the retaining walls. The retaining walls have been split into two walls with a terrace in the middle to provide a break in wall have have two separate walls visible rather than one large contiguous wall. The walls will be constructed with a keystone block design, which will result in an articulated surface that will minimize the appearance of a large, flat form. The upper terraces will provide shrubs along the wall that will reduce the bull and scale of the walls. The shrubs will be of a sufficient size that still meet SDG&E safety requirements for landscape personnel maintaining the landscape on the upper terraces. At the base on the lowest wall, larger shrubs and native ground cover will be planted to blend with the existing vegetation surrounding the Substation. While the walls will still be visible, the landscaping will provide visual breaks in the appearance of the walls through variations of height and color along the wall.

Figure 4.1-3, *Visual Simulation: View 3*, shows the proposed Mira Sorrento Substation from Vista Sorrento Parkway looking northwest to the site. This roadway would provide direct views to the site, and the upper portions of the Substation components and the retaining wall would be visible to travelers along this roadway; however, as previously mentioned, the

proposed flat pad for the Substation is the same character of development as the flat pads utilized by the existing office buildings in the background. The proposed Substation does not substantially alter the existing hillside located in the background. Although the proposed retaining wall would be visible from this location, similar existing retaining walls to the north of Mira Sorrento Place would also be visible from this vantage point; refer to Figure 4.1-3. As such, the proposed retaining wall would reflect existing elements within the visual landscape. The scale of the wall does not represent a significant visual component within the existing setting, and the earth-tone color of the materials used would help to blend it into the surrounding landscape. Incorporation of APM AES-1 would provide landscaping along the retaining walls to help screen the areas disturbed by grading. For the above reasons, the Proposed Project would not substantially degrade the existing visual character of the site or its surroundings from this vantage point. For these reasons, viewer response is considered low.

Figure 4.1-4: *Visual Simulation: View 4*, shows views to the site from southbound Vista Sorrento Parkway looking northeast to the site. Views from this location would largely consist of the perimeter wall and the upper portions of the Substation components, with existing commercial retail and office uses in the background. The existing hillside shown in the background will remain, and no changes to the ridgeline will occur. The simulation shows that the proposed Substation structure will not extend higher than the existing streetlights. Additionally, the proposed Substation racks will not be a solid structure and some visibility through the equipment will occur. As such, the equipment does not create a solid massing, such as a building, that would completely screen the hillside in the background. High volumes of traffic along this roadway, combined with travel speed, would help to reduce the length of time and the extent to which views to the site from this roadway would occur. Additionally, the perimeter wall would be constructed of tan concrete block and does not represent an element that would visually conflict with the existing visual environment. Implementation of APM AES-1 would provide landscaping along the edge of right-of-way on Mira Sorrento Place adjacent to the wall to enhance views of the wall from viewers along adjacent roadways. For the above reasons, the Proposed Project would not have a substantial, adverse effect on existing views from this location or substantially degrade the existing site or its surroundings from this vantage point and viewer response is considered low.

Although Project components would be visible to the public from certain public vantage points, visual effects associated with the Substation are considered to be less than significant.

TL655 Loop-In

Once constructed, the TL665 loop in components would be underground and therefore, not visible from surrounding public vantage points. As such, the TL665 loop-in would not significantly degrade existing views of the site or its surroundings, and no significant visual impacts would occur.

Consistency with Applicable Plans and Policies

To further evaluate potential for the Project to substantially degrade the existing character or quality of the site or its surroundings, the following discussion is included to demonstrate Project consistency with applicable land use plans and policies aimed at minimizing or avoiding potential impacts on visual conditions or resources.

City of San Diego General Plan

The Urban Design Element of the General Plan includes the following policies relevant to protecting or enhancing the visual environment:

- UD-A.16. Minimize the visual and functional impact of utility systems and equipment on streets, sidewalks, and the public realm.

    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.

The Proposed Project would be consistent with these policies in that it would underground the portion of TL665 affected by the proposed improvements, rather than bringing the line to the proposed Substation overhead where it would be highly visible. In addition, with the Proposed Project, TL665 would be split and would proceed underground via two new parallel trench alignments along Vista Sorrento Parkway to the proposed Mira Sorrento Substation at a distance of approximately 600 feet each of single circuit 69kV duct package infrastructure. These new trench alignments would be established from an interception point from an existing underground duct package (TL665). This new underground alignment would proceed south along Vista Sorrento Parkway then cross Mira Sorrento Place to the new Mira Sorrento Substation. As such, the TL665 improvements proposed with the Project would be installed underground, thereby reducing the potential to affect the existing visual environment. Impacts would be less than significant.

Mira Mesa Community Plan

The Industrial Land Use Element of the Mira Mesa Community Plan provides a goal of "Improvement in the visual quality of industrial development in the community." The Proposed Project has included design features to minimize the footprint of the proposed Substation, minimize the amount of Substation equipment that is visible, and provide landscaping that will screen portions of the Substation walls and provide a visual buffer between the Substation and public right of way.

As a result of the Proposed Project Design and Landscape APM, described above, the proposed project is consistent with the goal of the Mira Mesa Community Plan Industrial Land Use Element and no conflicts have been identified.

The Sensitive Resources and Open Space System Element addresses the importance of protecting sensitive habitat to prevent degradation of the visual quality of such resources. The Community Plan is intended to achieve a community open space system that achieves the following goals pertinent to visual resources:

- Preserves sensitive resources, including plant and animal habitats and wildlife linkages; and,
- Preserves natural drainage systems.

The Proposed Project would be constructed on an approximately 1.4-acre building pad, within the larger 3.7-acre property. The larger property has been previously disturbed as it supports an existing utility easement through which utility poles have been installed and are routinely maintained. The Proposed Project has been designed to avoid and minimize impacts to onsite sensitive habitat and to avoid wetland impacts. Additional measures would be taken during long-term maintenance activities to ensure that any impacts to the drainage and/or sensitive habitat are limited to the construction phase and properly addressed, as appropriate. As such, the Proposed Project would be consistent with the goals of the Community Plan and would preserve sensitive onsite resources and natural drainage systems to the extent feasible. Impacts would be less than significant with incorporation of SDG&E APMs.

Question 4.1d – New Light or Glare

Construction – Less than Significant Impact

As some construction activities may occur at night, nighttime lighting may be required. No sensitive residential viewers are located within the immediate vicinity of the Proposed Project site. In addition, nighttime lighting is present in the area, due to the surrounding commercial and light industrial land uses, as well as from vehicles traveling on I-805, Mira Mesa Drive, and Vista Sorrento Parkway during nighttime hours. Although limited views of construction lighting may occur from area roadways, all such lighting would occur in

conformance with applicable City of San Diego lighting ordinances and regulations. In addition, all such lighting would be temporary and shielded and directed downward to avoid spillover onto adjacent properties. All such lighting would be removed when construction was completed. As this impact would be temporary, and the affected views would be brief in duration, such effects would be considered less than significant.

Operations and Maintenance – Less than Significant Impact

Outdoor lighting for the Mira Sorrento Substation would be restricted to utilization of a high pressure sodium light at the entry gate. The light would be pole-mounted and would have an approximate height of eight feet. Other lighting would be utilized within the limits of the Substation and would be used during emergencies only to allow for inspection and repairs. Lighting will follow SDG&E lighting standards to provide safe entry and exit and to allow for safe driving within the Substation. As such, the Proposed Project would not create a substantial new source of light or glare.

No new permanent lighting is planned for the proposed TL665 loop-in components. Existing lighting along Vista Sorrento Parkway and Mira Sorrento Place would remain in its present state.

Therefore, it is anticipated that maintenance and operation activities associated with the Proposed Project would not result in significant impacts due to creation of a new source of substantial light or glare that would adversely affect day or nighttime views in the area. As a result, impacts would be less than significant.

4.1.5 Applicant Proposed Measures

Implementation of the following APMs would ensure that potential visual effects remain less than significant:

- APM AES-1: Figure 3-8: *Conceptual Landscape Plan*, provides the conceptual landscape mitigation plan for the Mira Sorrento Substation. The landscape plan would be implemented as part of the Proposed Project following construction of the Substation components. The conceptual landscape plan would provide partial screening of views of the Substation site from view locations to the west, south, and east. Landscaping would include plantings within the retaining walls and small, informal groupings of small shrubs and trees on the flatter areas created by the walls.

  Figure 3-8, *Conceptual Landscape Plan*, includes a list of recommended plant species. All suggested trees appear on the City of San Diego Street Tree Selection Guide.

  Drought-tolerant plants, including California native species, are suggested. Proposed Project landscaping would receive regular watering during the initial

two years following installation in order to ensure the establishment of the plants. All planting would be consistent with SDG&E operational requirements for landscaping in proximity to electric transmission facilities.

- APM AES-2: The color of the Substation perimeter wall would be chosen to blend with the existing site features (i.e., a dull grey, light brown, or dull green) in order to minimize visual contrast with the landscape setting.

4.1.6 References

California Department of Transportation. Online:
http://www.dot.ca.gov/hq/LandArch/scenic_highways/. Site visited on July 28, 2010.

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

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City of San Diego Municipal Code. Chapter 13 of the Municipal Code. Online.
http://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni.shtml.
Site Accessed July 24, 2010.

CPUC. Memorandum. Applicants Filing Proponent's Environmental Assessment.
November 24, 2008.

Google. Google Earth Version 5.0. Software.

Mira Mesa Community Plan. Adopted December 1994. Last Amended June 2001.

Visual Simulations prepared by SDG&E. March 2011.

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EXISTING

PROPOSED

View Looking Northwest from I-805 Northbound Off-Ramp

SDGE

Source: San Diego Gas and Electric, 2011

Mira Sorrento Substation
Proponent's Environmental Assessment

VISUAL SIMULATION: VIEW 1

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Figure 4.1-1

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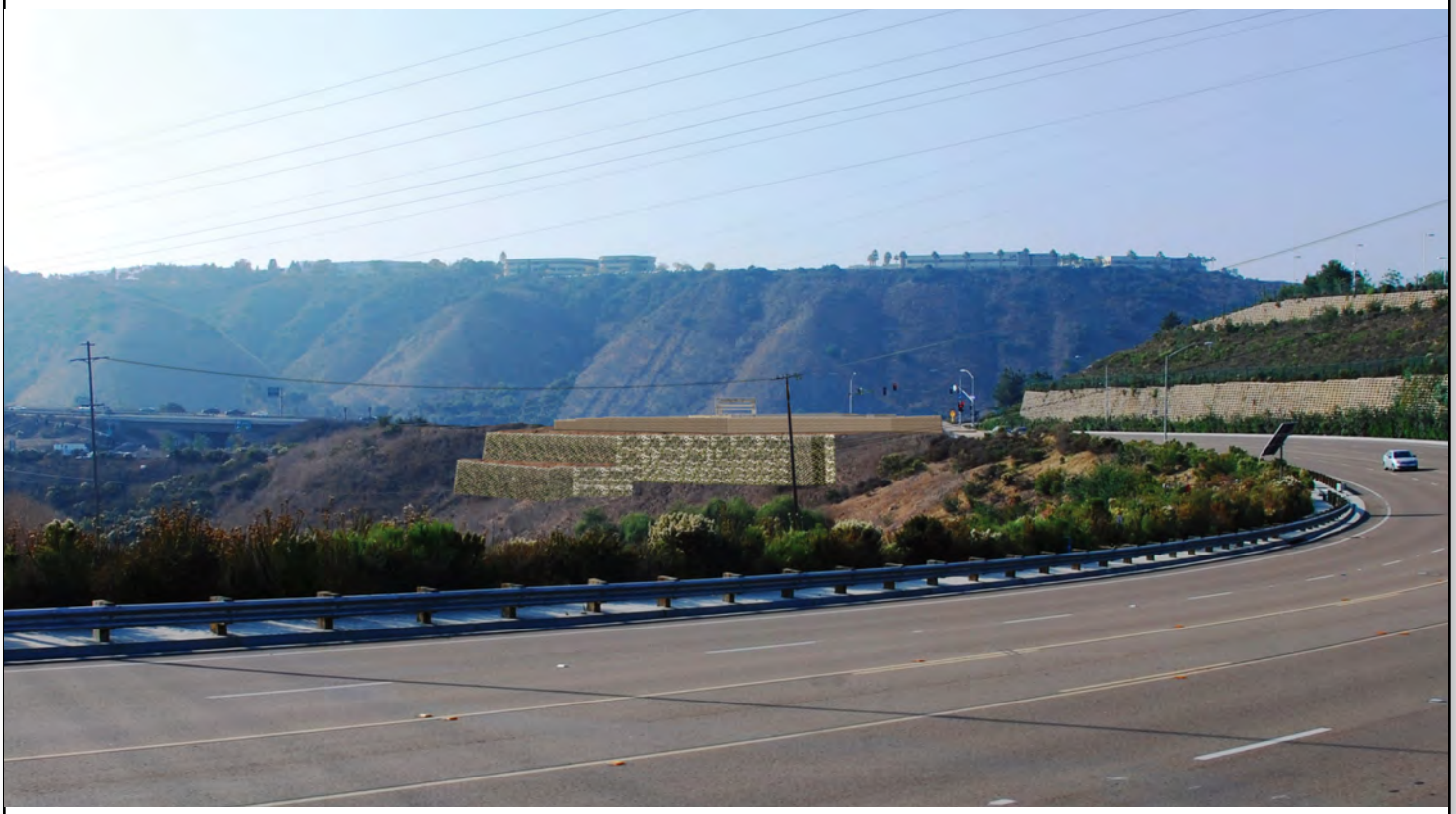

PROPOSED

View Looking Southwest from Mira Sorrento Place

Source: San Diego Gas and Electric, 2011

Mira Sorrento Substation
Proponent's Environmental Assessment

VISUAL SIMULATION: VIEW 2

Figure 4.1-2

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EXISTING

PROPOSED

View Looking Northwest from Vista Sorrento Parkway

Source: San Diego Gas and Electric, 2011

Mira Sorrento Substation
Proponent's Environmental Assessment

VISUAL SIMULATION: VIEW 3

Figure 4.1-3

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EXISTING

PROPOSED

View Looking Northeast from Southbound Vista Sorrento Parkway

Source: San Diego Gas and Electric, 2011

Mira Sorrento Substation
Proponent's Environmental Assessment

VISUAL SIMULATION: VIEW 4

Figure 4.1-4

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4.2 Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant 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 which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

4.2.1 Introduction

The purpose of this Chapter is to document existing air quality resources in the area proposed for location of the San Diego Gas and Electric Company (SDG&E) proposed Mira Sorrento Substation and to assess air quality impacts that may potentially occur as a result of Project implementation, particularly with regards to short-term construction activities (fugitive dust) and long-term operation. In addition, this Chapter is intended to evaluate the Proposed Project for potential air quality impacts resulting from inconsistency with applicable air quality plans or violation of ambient air quality standards (AAQS).

Construction and operation of the proposed Mira Sorrento Substation on the proposed site would not expose sensitive receptors to substantial pollutant concentrations, conflict with air quality plans or standards, or otherwise significantly affect air quality. None of the proposed improvements would result in significant impacts on air quality by contributing substantially to an existing or projected air quality violation, exposing sensitive receptors to substantial pollutant concentrations, or by creating objectionable odors affecting a substantial amount of people. With implementation of SDG&E's Applicant Proposed Measures (APMs) (refer to

Section 4.2.5), impacts on air quality as the result of construction, operation and maintenance, would be less than significant. Refer to Appendix B, *Air Quality Assessment*.

4.2.2 Methodology

Federal, state, and regional regulations and policies were consulted to determine the Proposed Project's level of compliance with and impact, if any, to applicable air quality plans and/or standards. Information for this Chapter was obtained from Internet searches of federal, state, and local websites. Refer also to Appendix B, *Air Quality Assessment*, for additional discussion of the methods used to predict air quality impacts resulting from the Proposed Project.

This analysis of air quality impacts used the emission factors from URBEMIS 2007 for the construction (short-term) and operational (long-term) analyses. URBEMIS 2007 operational emissions address emissions from two separate sources: stationary area sources (e.g., emissions from space heating, lawn mowers) and mobile (vehicle) sources. These emissions are calculated for the project buildout period and take into account future vehicle fleet mixes and emission controls.

URBEMIS 2007 was developed to provide meaningful analysis of both short- and long-term impacts, and to encourage early development of mitigation measures during project planning. Discrete URBEMIS 2007 analysis is limited to annual periods. URBEMIS 2007 uses a simplified set of emission factors to estimate impacts separately for predetermined construction periods and for operational periods as independent events, and does not factor in small discrete periods of project overlap, incremental periods smaller than one year, individual buildout rates for each particular element of construction, scheduled utilization of individual pieces of construction equipment, pro-ration of occupancy, retrofit technology over the life of equipment, pollutant reactivity, or pollutant transport.

The analysis of greenhouse gas emissions incorporates the air emissions from the air quality analysis and evaluates the Proposed Project's potential to generate greenhouse gas emissions, including both construction and operational phases of the Proposed Project. Greenhouse gas emissions are calculated with the intent of identifying the biggest contributors of greenhouse gases. APMs are added to the calculations to demonstrate a reduction in greenhouse gas emissions over Business as Usual (BAU) practices.

4.2.3 Existing Conditions

This section describes the regulations and regulatory agencies that have jurisdiction over the Proposed Project, regional climate and meteorology, and existing air quality conditions in the area.

4.2.3.1 Regulatory Background

Federal

National air quality policies are regulated through the Federal Clean Air Act (FCAA) of 1970 and its 1977 and 1990 amendments. Pursuant to the FCAA, the United States Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for criteria air pollutants: The criteria pollutants are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2, which is a form of nitrogen oxides [NO_X]), sulfur dioxide (SO_2, which is a form of sulfur oxides [SO_x]), particulate matter less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead (Pb). These pollutants are referred to as criteria pollutants because numerical criteria have been established for each pollutant, which define acceptable levels of exposure. The EPA has revised the NAAQS several times since their original implementation and would continue to do so as the health effects of exposure to air pollution are better understood.

Under the 1977 amendments to the FCAA, states with air quality that did not achieve the NAAQS were required to develop and maintain state implementation plans (SIPs). These plans constitute a federally enforceable definition of the states approach (or ―plan") and schedule for the attainment of the NAAQS. Air quality management areas were designated as attainment, non-attainment or unclassified for individual pollutants depending on whether or not they achieve the applicable NAAQS and CAAQS for each pollutant. In addition, California can designate areas as transitional. It is important to note that because the NAAQS and CAAQS differ in many cases, it is possible for an area to be designated attainment by the EPA (meets NAAQS) and non-attainment by California (does not meet CAAQS) for the same pollutant.

Areas that were designated as non-attainment in the past, but have since achieved the NAAQS, are further classified as attainment-maintenance. The maintenance classification remains in effect for 20 years from the date that the area is determined by the EPA to meet the NAAQS. There are numerous classifications of the non-attainment designation, depending on the severity of non-attainment. The ozone non-attainment designation has seven subclasses: transitional, marginal, moderate, serious, severe-15, severe-17, and extreme. Areas that lack monitoring data are designated as unclassified areas. Unclassified areas are treated as attainment areas for regulatory purposes.

There are currently no federal regulations limiting GHG emissions. On December 29, 2009, the EPA's Final Rule for the Mandatory Reporting of Greenhouse Gas took effect, which mandates annual GHG emissions reporting to the EPA for suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit more than 25,000 metric tons or more per year.

State

The California Air Resources Board (CARB), a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. Its responsibility lies with ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the FCAA requirements, and regulating pollutant emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish CAAQS and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as does the FCAA, but also include sulfate, visibility, hydrogen sulfide, and vinyl chloride.

San Diego Air Pollution Control District

The California Air Resources Board has designated San Diego County as a discrete air basin under the jurisdiction of the San Diego Air Pollution Control District (APCD). In addressing its planning role with respect to National Ambient Air Quality Standards, the San Diego Air Pollution Control District has most recently developed an Ozone Redesignation Request and Maintenance Plan, which served as the basis for the Environmental Protection Agency redesignating the Basin as an attainment zone for the one-hour ozone standard on July 28, 2003. The basis for that request was the demonstration that over a three-year period, the Basin had fewer than four instances of one-hour ozone concentrations exceeding the 0.09 parts per million threshold at any single monitoring station.

The Regional Air Quality Strategy was established by the San Diego Air Pollution Control District in 1991 to address state air quality planning requirements (focusing on ozone). The latest revision was published in April 22, 2009. The San Diego Air Pollution Control District is responsible for the overall development and implementation of the Regional Air Quality Strategy. The Regional Air Quality Strategy control measures focus on emission sources under the San Diego Air Pollution Control District‘s authority, specifically, stationary emission sources and some area-wide sources; however, the emission inventories and emission projections in the Regional Air Quality Strategy reflect the impact of all emission sources and all control measures, including those under the jurisdiction of the California Air Resources Board (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and the Environmental Protection Agency (e.g., aircraft, ships, trains, and pre- empted off-road equipment). Thus, while legal authority to control different pollution sources is separated, the San Diego Air Pollution Control District is responsible for reflecting Federal, State, and local measures in a single plan to achieve ambient air quality standards in San Diego County.

Each local air quality management or air pollution control district establishes criteria to assess a project's impacts on air quality. The San Diego Air Pollution Control District has established annual significance thresholds for oxides of nitrogen and reactive organic gases for stationary sources; however, the District has not established rules for characterizing impacts from construction. Absent formal California Environmental Quality Act guidelines on construction thresholds from the San Diego Air Pollution Control District, the San Diego Air Pollution Control District informally recommends quantifying construction emissions and comparing them to significance thresholds found in the San Diego Air Pollution Control District regulations for stationary sources (pursuant to Rule 20.1, et seq.) and shown in Table 4.2-1, *Air Pollution Control District's Screening Level Thresholds*. If construction-phase emissions exceed these thresholds for a stationary source air quality impact analysis, then construction has the potential to violate air quality standards or to contribute substantially to existing violations. The significance thresholds are shown in Table 4.2-1. While these thresholds are a guide, the Proposed Project emissions were also analyzed to determine if there was other substantial evidence in light of the whole record that would show that the Proposed Project could have a significant air quality impact, including proximity of sensitive receptors.

Table 4.2-1
Air Pollution Control District's Screening Level Thresholds

Pollutant	Pounds/Day	Tons/Year
Carbon Monoxide (CO)	550	100
Oxides of Sulfur (SO_X)	250	40
Volatile Organic Compounds (VOCs)	75	40
Oxides of Nitrogen (NO_X)	250	40
Particulate Matter (PM_{10})	100	15
Particulate Matter ($PM_{2.5}$)[1]	55	Not Applicable

1. The San Diego Air Pollution Control District does not have thresholds of significant for $PM_{2.5}$. As Such, the $PM_{2.5}$ Threshold from the South Coast Air Quality Management District (SCAQMD) was utilized[1]

Source: San Diego Air Pollution Control District Rule 1501, 20.2(d)(2), 1995.

Climate Change Policies and Regulations

Executive Order S-3-05

In June 2005, Governor Schwarzenegger established California's greenhouse gas emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: greenhouse gas emissions should be reduced to 2000 levels by 2010; greenhouse gas emissions should be reduced to 1990 levels by 2020; and greenhouse gas emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of the California

[1] Phone conversation with Carl Selnick, Air Quality Specialist, from the San Diego Air Pollution Control District (SDAPCD) on July 17, 2009.

Environmental Protection Agency (the Secretary) is required to coordinate efforts of various agencies in order to collectively and efficiently reduce greenhouse gases. Some of the agencies involved in the greenhouse gas reduction plan include Secretary of Business, Transportation, and Housing Agency, Secretary of Department of Food and Agriculture, Secretary of Resources Agency, Chairperson of the California Air Resources Board, Chairperson of the Energy Commission, and the President of the Public Utilities Commission. The Secretary is required to submit a biannual progress report to the Governor and State Legislature disclosing the progress made toward greenhouse gas emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California‘s water supply, public health, agriculture, and the coastline and forestry, and reporting possible mitigation and adaptation plans to combat these impacts.

Executive Order S-1-07

On January 18, 2007, California further solidified its dedication to reducing greenhouse gases by setting a new Low Carbon Fuel Standard for transportation fuels sold within the State. Executive Order S-1-07 sets a declining standard for greenhouse gas emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least ten percent by 2020. The Low Carbon Fuel Standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the ―fuel cycle” using the most economically feasible methods. The Executive Order requires the Secretary of the California Environmental Protection Agency to coordinate with actions of the California Energy Commission, California Air Resources Board, the University of California, and other agencies to develop a protocol to measure the ―life cycle carbon intensity” of transportation fuels.

Executive Order S-13-08

Issued on November 14, 2008, Executive Order S-13-08 intends to enhance the State's management of climate impacts from sea level rise, increased temperatures, shifting precipitation, and extreme weather events. There are four key actions in this Executive Order, including: (1) initiate California's first state-wide climate change adaptation strategy that assesses the State's expected climate change impacts, identifies where California is most vulnerable, and recommends climate adaptation policies; (2) request the National Academy of Science establish an expert panel to report on sea level rise impacts in California to inform State planning and development efforts; (3) issue interim guidance to State agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects; and (4)

initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

Executive Order S-13-08 aims to facilitate California's first comprehensive climate adaptation strategy. This effort improves coordination within State government and adapts the way State agencies work so that better planning can more effectively address climate impacts to human health, the environment, the State's water supply, and the economy. Additionally, this effort provides consistency and clarity to State agencies on how to address sea level rise in current planning efforts, reducing time and resources unnecessarily spent on developing different policies using different scientific information. In response to Executive Order S-13-08, the California Natural Resources Agency prepared the 2009 California Adaptation Strategy in December 2009.

Assembly Bill 1493

In response to the transportation sector accounting for more than half of California‘s carbon dioxide emissions, Assembly Bill 1493 (AB 1493, Pavley) was enacted on July 22, 2002. Assembly Bill 1493 required the California Air Resources Board to set greenhouse gas emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is noncommercial personal transportation in the State. The bill required that the California Air Resources Board set the greenhouse gas emission standards for motor vehicles manufactured in 2009 and all subsequent model years. In setting these standards, the California Air Resources Board must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The California Air Resources Board adopted the standards in September 2004. These standards are intended to reduce emissions of carbon dioxide and other greenhouse gases (e.g., nitrous oxide and methane).

Assembly Bill 32

The Legislature enacted Assembly Bill 32 (AB 32, Nuñez), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006 to further the goals of Executive Order S-3-05. Assembly Bill 32 represents the first enforceable state-wide program to limit greenhouse gas emissions from all major industries, with penalties for noncompliance. The California Air Resources Board has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of Assembly Bill 32. The foremost objective of the California Air Resources Board is to adopt regulations that require the reporting and verification of state-wide greenhouse gas emissions. This program would be used to monitor and enforce compliance with the established standards. The first greenhouse gas emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020. The California Air Resources Board is also required to adopt rules and

regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions. Assembly Bill 32 allows the California Air Resources Board to adopt market-based compliance mechanisms to meet the specified requirements. Finally, the California Air Resources Board is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted. In order to advise the California Air Resources Board, it must convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee. In December 2008, the California Air Resources Board adopted a scoping plan to achieve reductions in greenhouse gas emissions in California. The plan indicates how reductions in significant greenhouse gas sources would be achieved through regulations, market mechanisms, and other actions.

AB 32 – Early Action C17, 2-8: Reduce Sulfur Hexafluoride from Electrical Generation

The primary user of SF_6 is the electric power industry. As the Proposed Project's main emission of GHGs is SF_6, this Early Action Strategy is directly applicable to the operational improvements and equipment upgrades associated with the Proposed Project. The most cost effective way to implement this strategy and reduce SF_6 emissions, as reported by the EPA, is leak detection and repair, the use of recycling equipment, and employee education and training. Although CARB staff has not yet determined the total emission reduction potential of Early Action C17, 2-8, U.S. EPA has determined that the SF_6 emissions can be reduce by approximately 10 percent by using recycled equipment and 20 percent through leak detection and repair.

Senate Bill 97

Senate Bill 97 of 2007 requires the California Office of Planning and Research to develop California Environmental Quality Act guidelines for analysis and, if necessary, the mitigation of effects of greenhouse emissions to the Resources Agency. These guidelines for analysis and mitigation must address, but are not limited to, greenhouse gas emissions effects associated with transportation or energy consumption. On December 30, 2009, the Natural Resources Agency adopted the California Environmental Quality Act Guidelines Amendments prepared by the California Office of Planning and Research, as directed by Senate Bill 97. On February 16, 2010, the Office of Administration Law approved the California Environmental Quality Act Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The California Environmental Quality Act Guidelines Amendments became effective on March 18, 2010. These new guidelines require a survey of existing climate change analyses performed by various lead agencies under the California Environmental Quality Act. In his signing statement, Governor Arnold Schwarzenegger noted:

Current uncertainty as to what type of analysis of greenhouse gas emissions is required under the California Environmental Quality Act has led to legal claims being asserted, which would stop these important infrastructure projects. Litigation under California Environmental Quality Act is not the best approach to reduce greenhouse gas emissions and maintain a sound and vibrant economy. To achieve these goals, we need a coordinated policy, not a piecemeal approach dictated by litigation.

Senate Bill 375

Senate Bill 375 requires metropolitan planning organizations to include Sustainable Community Strategies in their regional transportation plans. The purpose of Senate Bill 375 is to reduce greenhouse gas emissions from automobiles and light trucks, require the California Air Resources Board to provide greenhouse gas emission reduction targets from the automobile and light truck sector for 2020 and 2035, and update the regional targets until 2050. Senate Bill 375 would require certain transportation planning and programming activities to be consistent with the sustainable communities strategies contained in the regional transportation plan. The bill also requires affected regional agencies to prepare an alternative planning strategy to the Sustainable Communities Strategies if the Sustainable Communities Strategy is unable to achieve the greenhouse gas emissions reduction targets. Governor Schwarzenegger signed and approved Senate Bill 375 on September 30, 2008.

Senator Steinberg, author of Senate Bill 375, is also making efforts to clean up the bill. Steinberg authored the new Senate Bill 575 as the clean-up bill for Senate Bill 375. The clean-up efforts include California Environmental Quality Act streamlining changes for projects that are consistent with the Sustainable Communities Strategies. Currently, Senate Bill 375 applies those streamlining provisions to residential and mixed-use projects. The Governor and many interest groups are also lobbying to extend those provisions to Proposition 1B Transportation projects, State highway projects, and infrastructure, retail, and commercial development. A timetable to eliminate schedule conflicts with the new eight-year housing element and the four-year Regional Transportation Plans is also being considered. In addition to Senate Bill 575, there will continue to be ongoing discussions with the California Air Resources Board to coordinate Assembly Bill 32 local land use implementation strategies with Senate Bill 375, including new proposed California Air Resources Board California Environmental Quality Act thresholds of significance to determine which projects will be subject to Assembly Bill 32 requirements.

4.2.3.2 Meteorology and Climate

Basin Characteristics

One of the main determinants of Basin climatology is the Pacific High, a semi-permanent high-pressure center over the Pacific Ocean. In the summer, this pressure center is located well to the north, causing storm tracks to be directed north of California. This high-pressure cell maintains clear skies for much of the year; however, when the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation.

Basin Climate

The climate of the Basin is characterized by warm, dry summers and mild, wet winters. The climate 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 winter when the oceanic high pressure center is weakest and farthest south as the fringes of mid-latitude storms occasionally move through the area. The 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. The annual rainfall is approximately 10 inches.

Generation of Air Pollutants

The same atmospheric conditions that create a desirable living climate, combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted to the pleasant climate. The onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego, and the sinking air within the offshore high-pressure system forms a massive temperature inversion that traps all the air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, causes a number of reactive pollutants to undergo photochemical reactions and form smog, which degrades visibility and irritates the tear ducts and nasal membranes of humans. While programs to control emission air pollutants have substantially improved regional air quality within the last several decades, often parts of the Basin still do not meet clean air standards.

Local Climate

Local meteorological conditions in the Project vicinity conforms 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 summer, moderate breezes of 8 to 12 miles per hour blow onshore and up through the valley from the southwest by day. Light onshore breezes may continue throughout the night when the land remains warmer than the ocean. In 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.

Temperature Inversions

Both the onshore flow of marine air and the nocturnal winds are accompanied by two characteristic temperature inversion conditions that control the rate of air pollution dispersal throughout the Basin. The daytime cool onshore flow is capped by a deep layer of warm, sinking air. Along the coastline, the marine air layer beneath the inversion cap is deep enough to accommodate any locally generated emissions. However, as the layer moves inland, pollution sources (especially automobiles) add pollutants from below without any dilution from above through the inversion interface. When this polluted layer approaches foothill communities east of coastal developments, it becomes shallower and exposes residents in those areas to the concentrated by-products of coastal area sources.

4.2.3.3 Air Quality

CARB sets State air quality standards and monitors ambient air quality at approximately 250 air-monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Ambient air pollutant concentrations in the Basin are measured at ten air quality-monitoring stations operated by the SDAPCD.

The Overland Avenue Monitoring Station located at 5555 Overland Avenue, San Diego, California 92123, was chosen to gather data for the following criteria pollutants (ozone [O_3], NO_2, PM_{10} and fine particulate matter up to 2.5 microns in diameter [$PM_{2.5}$]). As the Overland Avenue Monitoring Station does not monitor for CO, the Union Monitoring Station located at 1133 Union Street, San Diego, California, 92101 is the next closest monitoring station to the proposed Project site, and was chosen to gather data for CO. The data collected at these monitoring stations is representative of the air quality experienced on-site from 2007 through 2009; refer to Table 4.2-3, *Local Air Quality Levels*. The following air quality information briefly describes the various types of pollutants.

Ozone

Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately ten miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer

extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B). –Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_X) and sunlight to form; therefore, VOCs and NO_X are ozone precursors. VOCs and NO_X are emitted from various sources throughout the City. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some man-made materials (such as rubber, paint and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment and reduced crop yields.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide

Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10})

PM_{10} refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (SB 25).

Fine Particulate Matter ($PM_{2.5}$)

Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases and Volatile Organic Compounds

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Toxic Air Contaminants (TACs)

According to Section 39655 of the California Health and Safety Code, a toxic air contaminant is "an air pollutant which may cause or contribute to an increase in mortality or

an increase in serious illness, or which may pose a present or potential hazard to human health." In addition, 189 substances that have been listed as Federal hazardous air pollutants (HAPs), pursuant to Section 7412 of Title 42 of the United States Code are TACs under the State's air toxics program pursuant to Section 39657 (b) of the California Health and Safety Code.

TACs can cause various cancers, depending on the particular chemicals, their type, and the duration of exposure. Additionally, some of the TACs may cause other health effects over the short or long term. The ten TACs posing the greatest health risk in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter.

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.

Current NAAQS and the California ambient air quality standards (CAAQS) are summarized in Table 4.2-2, *National and California Ambient Air Quality Standards*. On April 15, 2004, the EPA formally replaced the 1979 1-hour ozone standard with a more stringent 8-hour standard as part of the Clean Air Rules of 2004. The SDAPCD is currently designated as a nonattainment area for O_3 and PM.

Table 4.2-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 $\mu g/m^3$)	**Nonattainment**	NA[5]	NA[5]
	8 Hours	0.07 ppm (137 $\mu g/m^3$)	**Nonattainment**	0.075 ppm (147 $\mu g/m^3$)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 $\mu g/m^3$	**Nonattainment**	150 $\mu g/m^3$	Attainment
	Annual Arithmetic Mean	20 $\mu g/m^3$	**Nonattainment**	NA[6]	Attainment
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 $\mu g/m^3$	Attainment
	Annual Arithmetic Mean	12 $\mu g/m^3$	**Nonattainment**	15 $\mu g/m^3$	Unclassified
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1 Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)[7]	Annual Arithmetic Mean	0.030 ppm (56 $\mu g/m^3$)	NA	0.053 ppm (100 $\mu g/m^3$)	Attainment
	1 Hour	0.18 ppm (338 $\mu g/m^3$)	Attainment	0.100 ppm	NA
Lead (Pb)	30 days average	1.5 $\mu g/m^3$	Attainment	N/A	NA
	Calendar Quarter	N/A	NA	1.5 $\mu g/m^3$	Attainment
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	N/A	NA	0.030 ppm (80 $\mu g/m^3$)	Attainment
	24 Hours	0.04 ppm (105 $\mu g/m^3$)	Attainment	0.14 ppm (365 $\mu g/m^3$)	Attainment
	3 Hours	N/A	NA	N/A	NA
	1 Hour	0.25 ppm (655 $\mu g/m^3$)	Attainment	N/A	NA
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 $\mu g/m^3$	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Unclassified		

Table 4.2-2, National and California Ambient Air Quality Standards, cont'd

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Vinyl Chloride	24 Hour	0.01 ppm (26 $\mu g/m^3$)	Unclassified		

$\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time. N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM10 and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, the California Air Resources Board (CARB) identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 parts per million ambient concentration specified in the 1978 standard.
2. National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as attainment/unclassifiable, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 □g/m3 is equal to or less than one. For PM2.5, 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.
3. Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas.
6. The Environmental Protection Agency revoked the annual PM10 standard in 2006 (effective December 16, 2006).
7. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

Source: California Air Resources Board and U.S. Environmental Protection Agency, February 16, 2010.

Ambient Air Quality

Violations of NAAQS and CAAQS for O_3, and PM have occurred historically in the Proposed Project area. The frequency of violations and current air quality conditions at the two monitoring sites nearest[2] to the Proposed Project area are summarized in Table 4.2-3, *Local Air Quality Levels*.

[2] The Overland Avenue monitoring station is located approximately 35 miles west-northwest of the Proposed Project area. The Union monitoring station is located approximately 40 miles east of the Proposed Project area.

Table 4.2-3
Local Air Quality Levels

Pollutant	Standard (Maximum Allowable Amount)		Year[1]	Maximum Concentration[2]	Number of Days State/Federal Std. Exceeded
	California	Federal Primary			
1-hour Ozone (O_3)[1]	0.09 ppm for 1 hour	NA[6]	2007 2008 2009	0.088 ppm 0.100 0.105	0/0 4/0 2/0
8-hour Ozone (O_3)[1]	0.07 ppm for 8 hours	0.075 ppm for 8 hours	2007 2008 2009	0.076 ppm 0.093 0.082	5/2 12/5 1/3
1-hour Carbon Monoxide (CO)[3]	20 ppm for 1 hour	35 ppm for 1 hour	2007 2008 2009	5.18 ppm 2.24 NM	NM/NM NM/NM NM/NM
8-hour Carbon Monoxide (CO)[3]	9.0 ppm for 8 hours	9.0 ppm for 8 hour	2007 2008 2009	5.18 ppm 2.24 NM	0/0 0/0 0/0
Nitrogen Dioxide (NO_2)[1]	0.18 ppm for 1 hour	0.100 ppm For 1 hour	2007 2008 2009	0.087 ppm 0.077 0.060	0/NA 0/NA 0/NA
Fine Particulate Matter ($PM_{2.5}$)[1, 5]	No Separate Standard	35$\mu g/m^3$ for 24 hours	2007 2008 2009	30.6 $\mu g/m$ 27.2 25.1	NA/NM NA/NM NA/0.0
Particulate Matter (PM_{10})[1, 4,5]	50 $\mu g/m^3$ for 24 hours	150 $\mu g/m^3$ for 24 hours	2007 2008 2009	65.0 $\mu g/m$ 41.0 50.0	1/0 0/0 0/0

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2005 to 2009, http://www.arb.ca.gov/adam.

ppm = parts per million; PM_{10} = particulate matter 10 microns in diameter or less; NM = not measured; $\mu g/m^3$ = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; NA = not applicable; * There was insufficient (or no) data available to determine this value.

Notes:

1. Data collected from the Overland Monitoring Station- 5555 Overland Avenue, San Diego CA 92123.
2. Maximum concentration is measured over the same period as the California Standards.
3. Data collected from the Union Monitoring Station-1133 Union Street, San Diego CA 92101.
4. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.
6. The Federal standard was revoked in June 2005.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. According to the City of San Diego CEQA Significance Determination Thresholds, citing to the South Coast Air Quality Management District (SCAQMD), "a sensitive receptor is a person in the population who is particularly susceptible to health

effects due to exposure to an air contaminant than is the population at large," such as medical patients and elderly persons/athletes/children at public parks/playgrounds, long-term care/assisted living facilities, churches, schools, child care centers/homes and athletic fields.

Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and carbon monoxide are of particular concern. Land uses that may include sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers and retirement homes. Table 4.2-4, *Locations That May Include Sensitive Receptors*, lists the distances and locations where sensitive receptors may be found and that lie within a mile of the areas that would be affected by the improvements at the proposed Mira Sorrento Substation. The closest land uses that may contain sensitive receptors would be the residential units located southwest of the proposed Mira Sorrento Project site.

Table 4.2-4
Locations That May Include Sensitive Receptors

Type	Name	Distance from Project Site (miles)[1]	Direction from Project Site
Mira Sorrento Substation			
Residential	Water Ridge Condominium Complex	0.3	North
Hotels	Marriott Courtyard	0.1	North
	Country Inn and Suites	0.7	East
	Woodfin Hotel	0.9	East
	Homestead San Diego	1.0	East
	Holiday Inn Express	0.7	East
Schools	San Diego College of Ayurveda	0.3	West
	Children‘s World Living Center	1.0	Northeast
	San Diego Chinese Institute	0.7	East
	Star Specialties	0.6	Northeast
Hospitals	Scripps Medical Offices	0.3	West
Places of Worship	Bread of Life Christian Church	0.6	Northwest
	The Celebration Center for Spiritual Living	0.6	East
Parks	San Diego Wildlife Refuge	1.0	South

Note:
Sensitive receptor population utilized in this analysis are those within a one-mile radius of the Project site.
Source: http://maps.google.com

4.2.4 Impacts

4.2.4.1 Significance Criteria

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant impact on the environment. The criteria (standards) used to determine the significance of impacts might vary depending on the nature of the Proposed Project, and if there is other substantial evidence in light of the whole record that would show that the Proposed Project could have a significant air quality impact, including proximity of sensitive receptors. The following significance criteria are from Appendix G of the CEQA Guidelines. Air quality impacts resulting from the implementation of the Proposed Project could be considered significant if they would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people;
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (that results in a net increase of more than 1,100 metric tons CO_2e emissions annually over existing conditions); or,
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Proposed Project would also be considered significant if it interfered with the attainment or maintenance of state or national AAQS.

4.2.4.2 SDAPCD Thresholds

Per the SDAPCD, a project is significant if it generates total emissions (direct and indirect) that exceed their adopted thresholds; refer to Table 4.2-5, *SDAPCD Pollutant Thresholds*. A significant project must incorporate sufficient measures to reduce its impact to a level that is

not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible measures. Note that the emission thresholds are given as a daily value and an annual value, so that a multiphased project (such as a project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.

Table 4.2-5
SDAPCD Pollutant Thresholds

Pollutant	SDAPCD Thresholds (lbs/day) [1]	SDAPCD Thresholds (tons/year) [1]
Carbon Monoxide (CO)	550	100
Oxides of Sulfur (SO_x)	250	40
Volatile Organic Compounds (VOCs)	75	40
Oxides of Nitrogen (NO_x)	250	40
Particulate Matter (PM_{10})	100	15
Particulate Matter ($PM_{2.5}$)[1]	55	Not Applicable

1. The San Diego Air Pollution Control District does not have thresholds of significant for $PM_{2.5}$. As such, the $PM_{2.5}$ Threshold from the South Coast Air Quality Management District (SCAQMD) was utilized[3]
Source: SDAPCD Rule 1501, 20.2(d)(2), 1995.

4.2.4.3 GHG Significance Thresholds

Cumulative

GHG emissions do not affect the immediate area of the emissions but may affect the world inventory of emissions. Therefore, the emissions must be analyzed as potentially significant cumulative impacts. The CPUC PEA checklist and Appendix G do not provide a means of determining whether potentially significant effects are actually significant. A lead agency's determination regarding whether an impact is significant is highly discretionary since it "calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data" CEQA Guidelines §15064(b). CEQA Guidelines §15064(h)(1) 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 the CEQA Guidelines, "the mere existence of

[3] Phone conversation with Carl Selnick, Air Quality Specialist, from the San Diego Air Pollution Control District (SDAPCD) on July 17, 2009.

significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable" (CEQA Guidelines §15064(h)(4)). The lead agency must make the judgment whether the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects is "cumulatively considerable" (CEQA Guidelines §15355(b)).

Question 4.3a – Applicable Air Quality Plan Conflicts

Construction – Less-Than-Significant Impact

CAP Emissions

A potentially significant impact on air quality would occur if the Proposed Project would conflict with or obstruct the implementation of the applicable air quality plan. Although the Proposed Project would negatively impact air quality in the Basin, of primary concern is that Project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the Project's consistency with the RAQS. Project consistency with the RAQS is determined in terms of whether the Proposed Project exceeds the criteria pollutant threshold levels established by the SDPACD and whether the Proposed Project would result in growth that has been anticipated in a given subregion. The need for a new substation is based off the buildout of the approved General Plan of the surrounding area; in this case, the City of San Diego.

As indicated in the long-term operational discussion, the Proposed Project would not result in any air quality emissions. Additionally, the Proposed Project is not a trip-generating project such as a residential or commercial development. Once construction of the proposed Project is in place, emissions would be relatively low, resulting only from scheduled maintenance. Therefore, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, and thus would have a less than significant impact in regards to plan consistency.

GHG Emissions

Direct Project-related greenhouse gas emissions from construction activities are provided in Table 4.2-6, *Total Estimated Greenhouse Gas Emissions*. The main GHGs that would be emitted during construction activities for the Project include carbon dioxide, nitrous oxide, and methane emissions from heavy construction equipment. Other construction related GHGs would not be emitted in quantities that would warrant an analysis for the construction phase of the project and have therefore not been included in this analysis. The URBEMIS 2007 version 9.2.4 computer model was used to calculate carbon dioxide emissions. The remaining GHGs were calculated using emission factors provided by SCAQMD. The

detailed calculations for the GHG emissions are provided in Appendix B, *Air Quality Assessment*.

Table 4.2-6
Total Estimated Greenhouse Gas Emissions
(Construction and Operations and Maintenance)

Source	Carbon Dioxide (Metric tons/year)	Nitrogen Dioxide (Metric tons/year)	Nitrogen Dioxide (Metric Tons of Carbon Dioxide Eq/yr)[4]	Methane (Metric tons/year)	Methane (Metric Tons of Carbon Dioxide Eq./yr)[4]	Sulfur Hexafluoride (Metric tons of Carbon Dioxide Eq./yr)	Total Metric Tons of Carbon Dioxide Eq./yr[4]
Construction Emissions[1]							
2013	1,471.82	0.04	0.92	0.20	62.22	0.00	1,534.96
2014	832.70	0.01	0.24	0.05	14.75	0.00	847.69
Total Construction Emissions (Metric Tons of Carbon Dioxide Equivalents/year)6	**2,382.65**						
Total Annualized Construction Emissions over 30 years (Metric Tons of Carbon Dioxide Equivalents/year)[7]	76.82	0.00	0.04	0.00	2.57	*0.00*	*79.42*
Operational Emissions							
Mobile Source[2, 3]	26.09	0.00	0.49	0.00	0.03	*0.00*	*26.61*
Circuit Breakers	0.00	0.00	0.00	0.00	0.00	*131.2*	*131.2*
Total Operational Emissions[6]	**26.09**	**0.00**	**0.49**	**0.00**	**0.03**	***131.2***	***157.81***
Total Project-Related Operational Emissions (Annualized Construction Emissions + Operational Emissions)	*237.23 $MTCO_2eq/year$[6]*						
Greenhouse Gas Threshold ($MTCO_2eq/year$)5,6	*1,100 $MTCO_2eq/year$*						
Is Threshold Exceeded?	***No***						

Refer to Appendix B, *Air Quality Assessment*, for detailed model input/output data.

Table 4.2-6, Total Estimated Greenhouse Gas Emissions (Construction and Operations and Maintenance), cont'd

Notes:

1. Emissions calculated using Air Resources Board's Construction Equipment Emissions Table and the URBEMIS 2007 computer model.
2. Emissions calculated using URBEMIS 2007 computer model and the SCAQMD's *CEQA Handbook* (note that SCAQMD has the most comprehensive demand factors available).
3. Emissions calculated using URBEMIS 2007 computer model and EMFAC 2007, *Highest (Most Conservative) Emission Factors for On-Road Passenger Vehicles and Delivery Trucks*.
4. CO_2 Equivalent values calculated using the U.S. Environmental Protection Agency Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/cleanenergy/energy-resources/calculator.html, accessed March 2010.
5. Totals may be slightly off due to rounding.
6. Greenhouse gas emissions threshold is based on the Bay Area Air Quality Management District, *CEQA Guidelines Update*, May 2010.

Construction of the Project would result in direct emissions of 1,534.96 metric tons of carbon dioxide equivalent in 2014 and 847.69 metric tons of carbon dioxide equivalent in 2015. Analysts annualized construction emissions over the lifetime of the Project (30 years) and added the emissions to the total Project-related operational greenhouse gas emissions. This calculation reflects the Business As Usual approach; that is, with no reductions from project APMs taken into consideration. As the construction-related GHG emissions will be below the Bay Area Air Quality Management District threshold, and the Proposed Project will be consistent with the approved LTPP and Scoping Plan adopted by the CARB because it will support the delivery of additional renewable energy generation. Substantial system-wide reductions, including efficiency programs and RPS, are also being achieved by SDG&E. Standard SDG&E construction practices described in Section 3.0 include minimizing fugitive dust and minimizing construction vehicle idling time. As a result, the impact of GHG emissions due to construction will be less than significant.

Operation and Maintenance – Less Than Significant Impact

CAP Emissions

A potentially significant impact on air quality would occur if the Proposed Project would conflict with or obstruct the implementation of the applicable air quality plan. Although the Proposed Project would negatively impact air quality in the Basin, of primary concern is that Project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the Project's consistency with the RAQS. Project consistency with the RAQS is determined in terms of whether the Proposed Project exceeds the criteria pollutant threshold levels established by the SDPACD and whether the Proposed Project would result in growth that has been anticipated in a given subregion.

The Proposed Project is not a trip-generating project such as a residential or commercial development. Once construction of the Proposed Project is in place, emissions would be

relatively low resulting from scheduled maintenance. Therefore, impacts associated with the Project would have a less than significant impact in regards to plan consistency.

GHG Emissions

Question 4.3b – Air Quality Standard Violations

Construction – Less-Than-Significant Impact

CAP Emissions

Construction of the SDG&E proposed Mira Sorrento Substation and other associated substation components are anticipated to occur for approximately 24 months. Table 4.2-7, *Preliminary Construction Schedule*, includes a preliminary schedule for the Proposed Project. Construction of the Proposed Project is anticipated to begin in Year 2012 with completion by Year 2014.

Table 4.2-7
Preliminary Construction Schedule

Project Segment	Months (Estimated)
CPUC approves PTC	0
Obtain Construction Permits	2
Obtain Grading Permits from City of San Diego	2
Verdura Retaining Wall Construction (concurrent with site grading)	1.5
Site Development and Grading Construction	6
CMU Retaining Wall, CMU Screen Wall, and Gate Construction (concurrent with site grading)	1.5
Substation Below Grade	6
Substation Construction	13
Total Transmission Construction	2-4

Note: The above information was provided by SDG&E and is subject to change upon final Project design.

All construction equipment, vehicles, personnel, and material staging areas would be accommodated within the property lines of the Project site or within SDG&E and public right-of-ways. Construction equipment would include bulldozers, excavators, loaders, and trucks for compacting, hauling, and final grading. Any soil export or import would be transported on or off the site with street-legal haul trucks. Portable cranes and heavy hauling trucks would be employed for the equipment delivery and installation. Concrete trucks, backhoes, crew trucks, and pick-up trucks would arrive and depart the Project site during the installation of the foundations, ground grid, and underground ducts. Crew trucks, boom trucks, and pick-up trucks would arrive and depart from the site daily for the balance of the

construction activities, testing and check-out, final transmission tie-ins, and circuit cabling until the station is energized.

It is anticipated that approximately 12 workers could be employed for the Verdura Retaining Wall Construction phase of the Proposed Project. Eight to fifteen workers could be on-site during the balance of construction of the transmission, substation, and distribution infrastructure until just prior to control wiring checkout and testing. At this stage of construction, approximately four to six electricians would be on-site. Final activities, including final tie-ins and energizing the station, would utilize about six to eight electricians and two to four engineers. Daily transportation of construction workers is not expected to cause a significant effect since there wouldn't not be more than 30 workers at one time at the peak and the number of trips generated would be minimal, and an insignificant percentage of current daily volumes in the area. Moreover, SDG&E will encourage carpooling to the greatest extent possible, and the Proposed Project site is near a park & ride facility, making carpooling and transit even easier.

Future construction of the Proposed Project site would generate short-term air quality impacts during grading and construction operations. The short-term air quality analysis considers the following temporary impacts from the Proposed Project.

- Clearing, grading, excavating and using heavy equipment or trucks creating large quantities of fugitive dust, and thus PM10;
- Heavy equipment required for grading and construction generates and emits diesel exhaust emissions; and,
- The vehicles of commuting construction workers and trucks hauling equipment would generate and emit exhaust emissions.

Construction activities at the proposed Mira Sorrento Substation were modeled based upon the schedule provided in Table 4.2-7. The Proposed Project was modeled using the URBEMIS 2007 program.

The Mira Sorrento construction emissions findings are presented in Table 4.2-8, *Mira Sorrento Construction Air Emissions*. Exhaust emission factors for typical diesel-powered heavy equipment are based on the URBEMIS 2007 program defaults. 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 to be transported on-site or off-site. A listing of mobile and stationary construction equipment is included in the air quality modeling; refer to Appendix B, *Air Quality Assessment*.

Table 4.2-8
Mira Sorrento Construction Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_x
2013						
Unmitigated Emissions	23.17	199.36	111.15	133.16	34.58	0.05
Mitigated Emissions[2]	23.17	199.36	111.15	37.69	14.65	0.05
SDAPCD Thresholds	75	250	550	100	55	250
Is Threshold Exceeded After Mitigation?	No	No	No	No	No	No
2014						
Unmitigated Emissions	5.97	56.27	35.03	2.34	2.05	0.04
Mitigated Emissions[2]	5.97	56.27	35.03	2.34	2.05	0.04
SDAPCD Thresholds	75	250	550	100	55	250
Is Threshold Exceeded After Mitigation?	No	No	No	No	No	No

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter; up to 10 microns

Notes:

1. Emissions were calculated using the URBEMIS 2007 Computer Model, as recommended by the SDAPCD.
2. The reduction/credits for construction emission mitigations are based on mitigation included in the URBEMIS 2007 computer model and as typically required by the SDAPCD. The mitigation includes the following: properly maintain of mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps.
3. Refer to Appendix B, *Air Quality Assessment*, for assumptions used in this analysis, including quantified emissions reduction by mitigation measures.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM_{10}) emissions that may have a substantial, although temporary, impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project area. Fugitive dust emissions are associated with land clearing, excavation, cut and fill, and truck travel on unpaved roadways. Fugitive dust emissions 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 would cease upon Project completion. Additionally, most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

The URBEMIS 2007 computer model calculates PM_{10} and $PM_{2.5}$ fugitive dust as part of the site grading emissions; refer to Table 4.2-8; however, with implementation of SDG&E's standard construction practices, the Proposed Project would not exceed the SDAPCD standards for PM_{10} or $PM_{2.5}$. Standard measures include adherence to standard construction practices (watering of inactive and perimeter areas, track-out requirements, and containing dirt and dust within the Project area).

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. Emitted pollutants would include CO, ROG, NO_X, PM_{10}, and $PM_{2.5}$. As presented in Table 4.2-8, the individual components of the Proposed Project would not cause exceedances of SDAPCD standards. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a significant impact. Therefore, impacts associated with construction would be less than significant.

Toxic Air Contaminants (TACs)

Construction on the Proposed Project site will occur on approximately 2.7 acres. Table 4.2-7 provides the duration of estimated construction activities. Analysts assumed that the project will disturb a maximum of 0.50 acres per day.

Construction vehicle pollutant emission generators primarily include haul truck activities, graders, pavers, contractor vehicles, and diesel-electric lifts. Construction emissions utilized within the SCREEN3 model were derived from URBEMIS2007 construction outputs for the Project; refer to Table 4.2-9, *SCREEN 3 Predicted Emission Concentrations*. Note that, for cancer-risk potential, PM10 from diesel exhaust (not the inert silicates from dust) is the single most contributing factor.

According to the URBEMIS2007 modeling that was performed, the greatest PM_{10} emissions would total 35.58 pounds per day of PM_{10}, which includes 8.73 pounds per day of diesel exhaust; refer to Appendix B, *Air Quality Assessment*, for modeling output information. Typically, the greatest amount of diesel engine particulate matter is generated during grading and earthwork activities. Based upon the on-site emission levels, the aggregate emission rate was input into the SCREEN3 model. This methodology essentially applies all of the diesel emissions over this working area and provides a worst-case assessment of the impacts to sensitive receptors.

The expected diesel construction emission concentrations from the SCREEN3 model are depicted below in Table 4.2-9, *SCREEN 3 Predicted Emission Concentrations*. Based upon the model results, the particulate matter concentrations are below the inhalation Chronic Risk Factor of 1.0 and the Cancer Risk Threshold of 10 in one million. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a significant impact. Therefore, impacts for cancer risks from toxic air emissions during construction activities will be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SDAPCD, the ROG emissions associated with paving have been quantified with the URBEMIS 2007 model. All architectural coatings for Proposed Project structures would comply with SDAPCD Regulation IV, Rule 67 (Architectural Coatings). Rule 67 provides specifications on painting practices as well as regulates the ROG content of paint. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a significant impact, therefore ROG emissions would be less than significant.

Table 4.2-9
SCREEN 3 Predicted Emission Concentrations

Construction Year	Pollutant Concentration (pounds per day)	Calculated Cancer Risk (in a million)	Inhalation Chronic Risk Factor	Significant?
2013	37.69	6.016	0.080	***No***

Notes:

1. SCREEN3 inputs were calculated by converting the diesel engine particulate matter emissions in lbs/day for 2010 construction activities to grams per second per meters squared. The following conversion factors were utilized: 1 day = 86,400 seconds; 1 pound = 453.592 grams; 1 acre = 4,046.873 square meters
2. Pollutant concentrations based upon SCREEN3 modeling results.
3. The calculated cancer risk was based upon the following equation:

$$Risk = \frac{F_{wind} \times EMFAC \times URF_{70\,year\,exposure}}{Dilution}$$

Risk = is the excess cancer risk (probability in one-million); F_{wind} = the frequency of the wind blowing from the exhaust source to the receptor (the default value is 1.0); EMFAC = the exhaust particulate emission factor (the level from the screening model); $URF_{70\,year\,exposure}$ = the CARB unit risk probability factor (300 x 10^{-6}, or 300 in a million cancer risk per μg/m^3 of diesel combustion generated PM_{10} inhaled in a 70-year lifetime based upon the California Air Resources Board (CARB) *1999 Staff Report from the Scientific Review Panel [SRP] on Diesel Toxics*); and, *Dilution* = the atmospheric dilution ratio during source-to-receptor transport (the default value of 1.0 assumes no dilution).

4. The inhalation chronic risk was based upon the following equation:

Inhalation cancer risk = ((Cair*DBR*A*EF*ED*1x10^{-6})/AT)*Inhalation Cancer Potency Factor)

Cair = concentration in the air of DPM; DBR = daily breathing rate (303 L/kg-day); A = inhalation absorption factor (1); EF = exposure frequency (250 days/year); AT = average time period of exposure (25,550 days); Inhalation Cancer Potency Factor = 1.1 mg/kg-d)$^{-1}$

Source: Refer to Appendix B, *Air Quality Assessment*.

GHG Emissions

Direct Project-related greenhouse gas emissions from construction activities are provided in Table 4.2-10, *Total Estimated Greenhouse Gas Emissions*. The main GHGs that would be

emitted during construction activities include carbon dioxide, nitrous oxide, and methane emissions of the Project. Other construction related GHGs would not be emitted in quantities that would warrant an analysis for the construction phase of the project and have therefore not been included in this analysis. The URBEMIS 2007 version 9.2.4 computer model was used to calculate carbon dioxide emissions. The remaining GHGs were calculated using emission factors provided by SCAQMD. The detailed calculations for the GHG emissions are provided in Appendix B, Air Quality Assessment.

Construction of the Project would result in direct emissions of 1,304.59 metric tons of carbon dioxide equivalent in 2014 and 633.20 metric tons of carbon dioxide equivalent in 2015. Construction emissions were amortized over the lifetime of the Project (30 years) and added the emissions to the total Project-related operational greenhouse gas emissions to determine consistency with AB32 by reducing total project GHG emissions by at least 29 percent compared to Business As Usual (BAU). The Proposed Project will be consistent with the approved LTPP and CARB Scoping Plan because it will support the delivery of additional renewable energy generation. Substantial system-wide reductions, including efficiency programs and RPS, are also being achieved by SDG&E. As a result, the impact of GHG emissions due to construction will be less than significant.

Table 4.2-10
Total Estimated Greenhouse Gas Emissions (Construction and Operations and Maintenance)

Source	Carbon Dioxide (Metric tons/year)	Nitrogen Dioxide (Metric tons/year)	Nitrogen Dioxide (Metric Tons of Carbon Dioxide Eq/yr)[4]	Methane (Metric tons/year)	Methane (Metric Tons of Carbon Dioxide Equiv./yr)[4]	Sulfur Hexafluoride (Metric tons of Carbon Dioxide Equivalent/yr)	Total Metric Tons of Carbon Dioxide Equiv./yr[4]
Construction Emissions[1]							
2013	1,471.82	0.04	0.92	0.20	62.22	0.00	1,534.96
2014	832.70	0.01	0.24	0.05	14.75	0.00	847.69
Total Construction Emissions (Metric Tons of Carbon Dioxide Equivalents/year)6	**2,382.65**						
Total Amortized Construction Emissions over 30 years (Metric Tons of Carbon Dioxide Equivalents/year)[7]	62.50	0.00	0.03	0.00	2.06	*0.00*	*64.58*
Operational Emissions							
Mobile Source[2, 3]	26.09	0.00	0.49	0.00	0.03	*0.00*	*26.61*
Circuit Breakers	0.00	0.00	0.00	0.00	0.00	*131.2*	*131.2*
Total Operational Emissions[5]	**26.09**	**0.00**	**0.49**	**0.00**	**0.03**	***131.2***	***157.81***
Total Project-Related Operational Emissions (Amortized Construction Emissions + Operational Emissions)	*222.39 $MTCO_2eq/year$[5]*						
Total Project-Related Operational Emissions (Amortized Construction Emissions + Operational Emissions) ***WITH*** *29% Reduction*	*157.90 $MTCO_2eq/year$[5]*						
Consistent with AB32?	***Yes***						

Table 4.2-10, Total Estimated Greenhouse Gas Emissions (Construction and Operations and Maintenance)

Notes:

1. Emissions calculated using Air Resources Board's Construction Equipment Emissions Table and the URBEMIS 2007 computer model.
2. Emissions calculated using URBEMIS 2007 computer model and the SCAQMD's *CEQA Handbook* (note that SCAQMD has the most comprehensive demand factors available).
3. Emissions calculated using URBEMIS 2007 computer model and EMFAC 2007, *Highest (Most Conservative) Emission Factors for On-Road Passenger Vehicles and Delivery Trucks*.
4. CO_2 Equivalent values calculated using the U.S. Environmental Protection Agency Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/cleanenergy/energy-resources/calculator.html, accessed March 2010.
5. Totals may be slightly off due to rounding.
6. Greenhouse gas emissions threshold is based on the Bay Area Air Quality Management District, *CEQA Guidelines Update*, May 2010.

Refer to Appendix B, *Air Quality Assessment*, for detailed model input/output data.

Operation and Maintenance – Less-Than-Significant Impact

CAP Emissions

As shown in Table 4.2-11, *Criteria Air Pollutant Emissions from Operations and Maintenance*, operation and maintenance of the Proposed Project components would not result in criteria air pollutant emissions and therefore, will not result in any impacts related to existing air quality standards. As a result, there will be no impact.

Table 4.2-11
Criteria Air Pollutant Emissions from Operations and Maintenance

	Pollutant (pounds/day)[1]				
Emissions Source	**Reactive Organic Gases**	**Nitrogen Oxides**	**Carbon Monoxide**	**PM_{10}**	**$PM_{2.5}$[2]**
Area Source (mitigated)	0.54	0.02	1.55	0.01	0.01
Operational (Vehicle)	0.12	0.14	1.24	0.23	0.04
Total Area Source and Operational	0.66	0.16	2.79	0.24	0.05
Air District Threshold	*75*	*250*	*550*	*100*	*55*
Is Threshold Exceeded After Mitigation?	**No**	**No**	**No**	**No**	**No**

Notes:

1. Emissions were calculated using the URBEMIS 2007, Version 9.2.4, as recommended by the Air District. Emissions are presented as a total aggregate of emissions from all construction sources.
2. The Air District does not have thresholds of significance for $PM_{2.5}$. The analysis uses $PM_{2.5}$ threshold from the South Coast Air Quality Management District.

GHG Emissions

Similar to the construction phase of the Proposed Project, GHG emissions during operation and maintenance would be the result of burning fuel during vehicle and equipment operation and electrical generation used to power the Mira Sorrento Substation. Greenhouse gas estimations are based on energy emissions from natural gas usage, as well as automobile emissions. The Project would not result in a substantial amount of mobile source GHG emissions, as the operation activities associated with the Proposed Project would only require approximately one trip per month consisting of two to four employees traveling to and from the Project site. Therefore, operational GHG emissions would be nominal.

The Proposed Project would provide a new substation to meet existing and anticipated customer-driven electrical load growth and to prevent potential long outages or disruption of service to existing customers in SDG&E's service territory in the vicinity of Sorrento Mesa. The electricity that would be delivered to this substation would be a non-fossil fuel-based energy source, which would have the indirect effect of displacing emissions otherwise occurring at natural gas and coal fired power plants. The Project would result in a nominal increase in demand for electricity for night lighting and activities associated with routine

maintenance. In addition, water use on the site would only be used for maintenance and landscaping activities. These uses would result in a nominal increase in operational and maintenance GHG emissions and therefore were not included in the quantitative analysis.

Sulfur Hexafluoride (SF_6)

One other GHG that is used in the construction and operation of electric facilities is sulfur hexafluoride (SF_6), a colorless, odorless, non-flammable gas that has a Global Warming Potential (GWP) that has a global warming potential 23,900 times that of carbon dioxide. SF_6 is an inert, non-toxic gas that has excellent cooling, insulating, and arc-quenching capabilities for potentially high temperature applications such as electrical circuit breakers.

The California Climate Action Registry (CCAR) lists SF_6 as a potential source of fugitive emissions from electrical transmission and distribution equipment (Power/Utility Reporting Protocol, Version 1.0, April 2005). Fugitive emissions are unintentional leaks of GHGs from equipment such as joints, seals, and gaskets. The CCAR recommends that fugitive SF_6 emissions from electricity transmission and distribution operations be calculated using the Mass Balance Approach outlined in the EPA SF_6 Emission Reduction Partnership for Electric Power Systems;[4] however, this method is based on accounting the company-wide inventory of SF_6 throughout the year. Therefore, it is not possible to use this method to estimate fugitive emissions from any particular substation or transmission line.

The Project Substation would be used to connect the 69 kV lines from the existing Genesee Substation and Peñasquitos Substation. This operation would typically utilize five circuit breakers, each with a canister containing 242 pounds of SF_6. The allowable manufacturer leakage limit for each canister is 1 percent per year. Therefore, the anticipated emission rate from the circuit breaker would be approximately 2.42 pounds of SF_6 per year per canister (26.23 metric tons CO_2e) totaling approximately 12.1 pounds of SF_6 per year for all five canisters. Therefore, long-term GHG emissions associated with the Project's Substation would be approximately 131.2 metric tons CO_2e per year (26.23 metric tons CO_2e x 5 = 131.2 CO_2e/year). A method of estimating leakage from a particular substation or transmission line are not currently known. The changes in emissions due to the electrical consumption required to operate the Substation and the on-site SF_6-containing equipment have been calculated and are presented in Table 4.2-10, *Total Estimated Greenhouse Gas Emissions (Constructions and Operation and Maintenance)*. Detailed calculations are provided in Appendix B, *Air Quality Assessment*.

As indicated in Table 4.2-10, *Total Estimated Greenhouse Gas Emissions (Construction and Operations and Maintenance)*, total operational and maintenance metric tons of CO_2e are

[4] U.S. EPA, SF_6 Emission Reduction Partnership for Electric Power Systems, 2009. http://www.epa.gov/electricpower-sf6/index.html

estimated to be 157.81 metric tons of CO_2e, which when combined with the annualized construction emissions, would total 222.39 metric tons of CO_2e and would be reduced by at least 29 percent through the implementation of Renewables Portfolio Standard (RPS) and energy efficiency for nighttime lighting and other minimal electricity uses onsite. The Project includes the implementation of Applicant Proposed Measure (APM) AQ-1, which includes SDG&E's continued participation in their SF_6 mitigation strategy for the operation and maintenance of SF_6-containing equipment. As such, the Proposed Project would therefore be consistent with AB32. Therefore, a less than significant impact would occur.

Question 4.3c – Criteria Pollutant Increases

Construction – Less-Than-Significant Impact

As shown previously in Table 4.2-8, *Mira Sorrento Construction Air Emissions*, the construction of the Proposed Project will lead to a small increase in criteria air pollutants. SDG&E standard construction practices include minimizing vehicle idling time and controls for dust emissions, to reduce the impacts of the construction. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a significant impact. As a result, impacts due to criteria pollutant increases will be less than significant.

Operation and Maintenance – Less-Than-Significant Impact

Operational emissions were simulated using the URBEMIS model, assuming default traffic estimates of daily commutes for the Proposed Project instead of limiting traffic to periodic site visits for maintenance as will actually be the case. Therefore, the emission estimates presented in Table 4.3-11, *Criteria Air Pollutant Emissions from Operation and Maintenance,* represents levels of emission that are overly conservative and unlikely to be approached by the Proposed Project. These increases in CAPs are significantly less than those projected for the construction phase and are well below the acceptable significance thresholds. As a result, CAP increases due to operation and construction will have less-than-significant impacts.

Question 4.3d – Sensitive-Receptor Exposure

Construction – Less than Significant

The Proposed Project site is located in an industrial and commercial area and in proximity to Interstate 805 and Mira Mesa Boulevard. Although sensitive receptors have been identified within a one-mile radius of the site, impacts to these receptors are less than significant with the implementation of SDG&E standard construction practices. These practices include, reducing idling time and dust control measures. Therefore, impacts would be less than significant.

Operation and Maintenance – Less than Significant

As stated above, emissions resulting from operation and maintenance activities associated with the proposed project were calculated using the URBEMIS 2007 modeling; refer to Table 4.2-7, *Estimated Operation and Maintenance Emissions.* As indicated, the operations and maintenance activities associated with the Proposed Project would not exceed the SDAPCD thresholds and will not contribute to the violation of an existing air quality standard and would thereby have a less than significant impact to sensitive receptors.

Question 4.3e – Odor – Less-Than-Significant Impact

Construction – Less than Significant

Construction activity associated with the construction of the proposed Mira Sorrento Substation may generate detectable odors from heavy-duty equipment exhaust. Potential odors generated during construction operations would be temporary in nature and would be limited by the relatively small number of vehicles onsite, small graded area, and distance from any sensitive receptors. Additionally, the Proposed Project site is in close proximity to Interstate 805 which supports a high volume of freeway traffic. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Operations and maintenance activities associated with the Proposed Project would not result in detectable odors. As such, there is no impact in this regard.

4.2.5 Applicant Proposed Measures

The following APM will be implemented to ensure that any potential impacts from SF_6-containing equipment will remain at a less-than significant level. The APMs have been developed by reviewing the applicable control measures included in the CPUC‘s Working Draft Proponent‘s Environmental Assessment Checklist for Transmission Line and Substation Projects.

- APM-AQ-1: SDG&E would implement their existing sulfur hexafluoride (SF_6) mitigation strategies during the operation and maintenance of SF_6-containing equipment installed as part of the Proposed Project. These strategies include:
  - Recording company-wide SF_6 purchases for use in reporting annual GHG emissions under the CCAR Power Utilities Protocol and as a

member of the Environmental Protection Agency's EPA SF_6 Partnership.

- Implementing SDG&E's SF_6 leak detection and repair program. This program includes monthly visual inspections of each GCB, which includes checking pressure levels within the breaker and recording these readings in SDG&E's Substation Management System. During the installation or major overhaul of any GCB, the unit is tested over a 24-hour period to ensure no leaks are present. Minor overhauls of each GCB are conducted every 36 to 40 months to check overall equipment health. This process includes checking gas pressure, moisture ingress, and SF_6 decomposition. If the GCB fails any of these checks, the unit is checked for leaks and repaired. In addition, all GCBs are equipped with a gas monitoring device and alarm that automatically alert SDG&E's Grid Operations Center. If gas pressure approaches minimum operating levels, an alarm is immediately reported to SDG&E's Substation Construction and Maintenance Department. The GCB is usually inspected for leaks within 24 hours of such an alarm. SDG&E's leak detection practice includes the following three methodologies:
    - Spraying a leak-detection agent onto common leak points—including O-rings, gaskets, and fittings
    - Using a field-monitoring device (sniffer) to detect the presence of SF_6 gas
    - Using a laser-detection camera to detect the presence of SF_6 gas when the above two methods are unsuccessful in finding a leak
- Implementing a SF_6 recycling program
- Training employees on the safety and proper handling of SF_6
- Continuing voluntary reporting of GHG emissions with the CCAR or The Climate Registry

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4.3 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant 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 Game or 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 Game 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?	☐	☐	☐	☒

4.3.1 Introduction

The purpose of this Section is to document existing biological resources in the area proposed for location of the SDG&E Mira Sorrento Substation and to assess impacts to biological resources, including wetlands that may potentially occur as a result of Project implementation, including short-term construction activities and long-term operation. In addition, this Section reviews the Proposed Project for potential biological impacts with regards to consistency with plans or policies pertaining to biological resource protection.

The proposed Mira Sorrento Substation site is located in a highly urbanized area within the City; however, significant impacts may occur to sensitive habitat, sensitive wildlife species, or jurisdictional resources from construction activities such as grading or noise. None of the improvements proposed with the Project will result in a significant impact due to an inconsistency with adopted plans or policies intended for the protection of biological resources as the Proposed Project would be consistent with SDG&E's Subregional Natural Community Conservation Plan (NCCP). With implementation of SDG&E's APMs, impacts to biological resources resulting from the Proposed Project would remain less than significant. Refer to Appendix C, *Biological Technical Report.*

4.3.2 Methodology

Data regarding biological resources within the Mira Sorrento Substation Project survey area were obtained through field reconnaissance and a literature review of applicable reference materials and reports. The primary objective of the field surveys was to assess the existing conditions of the on-site biological resources, focusing on three primary objectives: (1) vegetation mapping, (2) plant and wildlife species inventory and assessment of the potential occurrence of sensitive species, and (3) delineating jurisdictional resources.

4.3.2.1 Literature Review

Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; State of California 2009a-d; California Native Plant Society [CNPS] 2001; Reiser 2001); species occurrence records from the California Natural Diversity Database (CNDDB; State of California 2009e); and, the All Species Occurrences Database (U.S. Fish and Wildlife Service [USFWS] 2009), as well as species occurrence records from other sites in the vicinity of the survey area. The *Habitat Assessment for the San Diego Gas and Electric Mira Sorrento Substation Project (Essex 2003)* was also reviewed.

4.3.2.2 Habitat Assessment Surveys

RECON biologists Brenna Ogg and Michael Nieto mapped vegetation within a 6.6-acre survey area on September 2, 2009. The survey area includes the Proposed Project site and a 100-foot buffer. Vegetation communities were mapped on a one-inch-equals-200-feet aerial

photograph flown in 2008. The biologists covered all portions of the survey area on foot. Vegetation community classifications follow Holland (1986) as modified by Oberbauer (2005).

4.3.2.3 Species Inventory and Assessment

All plant species observed on the Project site were noted, and plants that could not be identified in the field were identified later using taxonomic keys. The survey included a directed search for sensitive plants that would have been apparent at the time of the survey. Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as blooming period and emergence of some annual species, and record low precipitation. Floral nomenclature for common plants follows Hickman (1993) as updated by the Jepson Online Interchange (Jepson Flora Project 2009), for ornamental plants Brenzel (2001), and for sensitive plants CNPS (2001).

Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were noted. The wildlife surveys were limited by seasonal and temporal factors. For example, as the survey was performed during summer, species that are only present during the winter (e.g., avian winter migrants) may not have been detected. Surveys were performed during the day; therefore, nocturnal animals were identified by sign that was apparent at the time of the surveys. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (1998) and Unitt (2004); for mammals with Baker et al. (2003) and Hall (1981); for amphibians and reptiles with Crother (2001) and Crother et al. (2003); and for invertebrates with Mattoni (1990) and Opler and Wright (1999).

4.3.2.4 Jurisdictional Delineation

A routine jurisdictional delineation, following the guidelines set forth by USACE (1987, 2006), was performed by Michael Nieto to gather field data at potential jurisdictional wetland sites in the survey area on September 2, 2009. Prior to conducting the delineation, aerial photographs and USGS topographic maps of the site were examined. Once on-site, the potential jurisdictional areas were evaluated to determine the presence of any jurisdictional areas or drainage channels. The remainder of the survey area was also examined in the field for the presence of potential waters of the U.S. The jurisdictional delineation report was prepared as a separate document by RECON; refer to Appendix D.

Wetlands are delineated using three parameters: hydrophytic vegetation, wetland hydrology, and hydric soils. According to the U.S. Army Corps of Engineers (USACE), indicators for all three parameters must be present to qualify as a wetland. Areas delineated as non-wetland jurisdictional waters may lack wetland vegetation or hydric soil characteristics. Hydric soil indicators may be missing because topographic position precludes ponding and subsequent development of hydric soils. Absence of wetland vegetation can result from frequent scouring due to rapid water flow. These types of jurisdictional waters are delineated by the

lateral and upstream/downstream extent of the ordinary high water mark of the particular drainage or depression. Areas meeting the criteria for jurisdiction under the California Department of Fish and Game (CDFG) and the San Diego Regional Water Quality Control Board (RWQCB) were also evaluated and mapped.

4.3.3 Existing Conditions

4.3.3.1 Regulatory Background

Federal

United Stated Army Corps of Engineers

The United Stated Army Corps of Engineers (USACE) maintains regulatory authority over the discharge of dredged or fill material into the waters of the United States, pursuant to Section 404 of the CWA. The USACE and United States Environmental Protection Agency (EPA) recently revised the definition of "fill material" to apply to any "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States." Fill material may include sand, rock, clay, construction debris, wood chips, or other similar "materials used to create any structure or infrastructure in the waters of the United States." The term "waters of the United States" includes the following:

- All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;
- Wetlands;
- All waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of water mentioned above;
- All tributaries of waters mentioned above;
- Territorial seas; and,
- All wetlands adjacent to the waters mentioned above.

In the absence of wetlands, the USACE's jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM), which is defined as "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural

line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area (33 CFR §328.3(e)).”

Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands are jointly defined by the USACE and EPA as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR §328.3(b)).”

On January 9, 2001, the U.S. Supreme Court issued the decision, *Solid Waste Agency of Northern Cook County v. U.S. Army USACE of Engineers et al* (SWANCC). As a result of this case, the scope of the USACE’s Section 404 CWA regulatory permitting program was limited, restricting USACE’s jurisdictional authority over isolated, non-navigable, intrastate waters that are not tributary or adjacent to navigable waters or tributaries (i.e., wetland conditions). The Court held that Congress did not intend for isolated, non-navigable water conditions to be covered within Section 404 of the CWA, as they are not considered to be true “waters of the U.S.”

In 2006, the Supreme Court created a "significant nexus" test in *Rapanos v. U.S.*, 126 U.S. 2208 (2006) for determining the jurisdiction of wetlands adjacent to navigable waters or nonnavigable tributaries of such waters. The Ninth Circuit has concluded that the significant nexus test set out in Justice Kennedy's concurrence is controlling. *Northern Cal. River Watch v. City of Healdsburg*, 457 F.3d 1023 (9th Cir. 2006).

Justice Kennedy stated that "... the Corps' jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense." *Rapanos* at 2248. According to Justice Kennedy, "wetlands possess the requisite nexus, and thus come within the statutory phrase 'navigable waters' if the wetlands either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical and biological integrity of other covered waters more readily understood as 'navigable.′ When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term 'navigable waters'." *Id*.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (50 CFR 17) is aimed at the protection of plants and animals which have been identified as being at risk of extinction, and classified as either threatened or endangered. FESA also regulates the “taking” of any endangered fish or wildlife species, per Section 9 of the Act. As development is proposed, the responsible agency or individual landowners is required to submit to a formal consultation with the USWFS to assess potential impacts to listed species (including plants) or its critical habitat as the result of a development project, pursuant to Sections 7 and 10 of the FESA. The USFWS

is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified. The USFWS may issue an incidental take statement, following consultation and the issuance of a Biological Opinion. This allows for take of the species that is incidental to another authorized activity, provided that the action will not adversely affect the 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 Subregional NCCP.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) is a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 CFR 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

Clean Water Act, 1972

The Clean Water Act (CWA) is intended to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB) are responsible for implementing the CWA.

Unless specifically authorized by a permit, the CWA considers that all discharges into the nation's navigable waters are unlawful. Per Section 404 of the CWA, the discharge of fill material into waters of the U.S. is prohibited without issuance of a permit from the USACE. The U.S. Environmental Protection Agency also has authority over wetlands and may override an USACE permit. Waters of the U.S. include rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands, wherein 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 National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the United States under Section 402 of the CWA. Substantial impacts to wetlands may require an Individual Permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide

Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions.

State

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the State. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The CDFG is given the responsibility by the State to assess development projects for their potential to impact listed species and their habitats. State listed special-status species are also addressed through the issuance of a 2081 permit (Memorandum of Understanding), consistent with the MBHCP which affects the Project area.

Fully Protected Species

Prior to the Prior to the development of the CESA and the FESA, species were listed as "fully protected" by the State of California. Fully protected species, including fish, amphibians, reptiles, birds, and mammals, were identified to allow for the protection of those animals that were rare or that were threatened by potential extinction. The majority of fully protected species have since been listed as threatened or endangered under the CESA and/or the FESA. Per §4700 of the Fish and Game Code, the possession or taking of fully protected species is not allowed at any time.

California Department of Fish and Game (CDFG)

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to Sections 1600-1607 of the California Fish and Game Code; however, on January 1, 2004, legislation went into effect that repealed Fish and Game Code Sections 1600-1607 and instead, added Fish and Game Code sections 1600-1616. This action eliminated the separation between private/public notifications (previously 1601/1603). Section 1602 of the Fish and Game Code requires any person, state or local governmental agency, or public utility to notify the CDFG before commencing any activity that would result in one or more of the following:

- Substantially obstruct or divert the natural flow of a river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or,
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Section 1602 of the Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes within the State of California. While the jurisdictional limits are similar to the limits defined by USACE regulations, CDFG jurisdiction includes riparian habitat supported by a river, stream, or lake with or without the presence or absence of saturated soil conditions or hydric soils. CDFG jurisdiction generally includes to the top of bank of the stream, or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Any project that occurs within or in the vicinity of a river, steam, lake, or their tributaries typically requires notification of the CDFG, including rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

California Fish and Game Code

Within the State of California, fish, wildlife, and native plant resources are protected and managed by the CDFG. The Fish and Game Commission and/or the CDFG are responsible for issuing permits for the take or possession of protected species. The following sections of the Code address the protected species: Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish).

Fish and Game Code

Under Section 1600 of the Fish and Game Code, CDFG regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. 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 CDFG 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." CDFG has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. CDFG jurisdiction does not include tidal areas or isolated resources. The CDFG reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFG and applicant is the Lake or Streambed Alteration Agreement. In addition, the protection of birds of prey is provided for in Sections 3503, 3513, and 3800 of the California Fish and Game Code.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was adopted in 1977 (Fish and Game Code §§ 1900–1913) to preserve, protect, and enhance rare and endangered plants. The CDFG is responsible for administering the NPPA, while the Fish and Game Commission has the

authority to designate native plants as "endangered" or "rare" and provide measures to avoid take.

Porter-Cologne Water Quality Act

The Act provides for statewide coordination of water quality regulations. The California State Water Resources Control Board was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis.

Local

City of San Diego General Plan

The vegetation and wildlife section of the Conservation Element (Part X) of the City of San Diego General Plan includes biological resource policies that may be relevant to the Proposed Project.

These policies include the following:

E. Urban Runoff Management

Goals

Protection and restoration of water bodies, including reservoirs, coastal waters, creeks, bays, and wetlands.

Policies

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 on-site, the disruption of natural water flows and the contamination of storm water runoff.

a. Increase on-site infiltration, and preserve, restore or incorporate natural drainage systems into site design.

e. Maintain landscape design standards that minimize the use of pesticides and herbicides.

f. Avoid development of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and, where impacts are unavoidable, enforce regulations that minimize their impacts.

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.

G. Biological Diversity

Goals

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

H. Wetlands

Goals

Preservation of all existing wetland habitat in San Diego through a "no net loss" approach.

Regional Water Quality Control Board (RWQCB)

The Regional Water Quality Control Board (RWQCB) is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all waters of the State and to all waters of the United States, including wetlands (isolated and non-isolated conditions).

Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed federally permitted activity, which may affect water quality. Such activities include the discharge of dredged or fill material, as permitted by the USACE, pursuant to Section 404 of the CWA. The RWQCB is required to provide "certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards," pursuant to Section 401. Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards, of which are given as objectives in each of the RWQCB's Basin Plans.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the State is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a *Report of Waste Discharge* if a Section 404 does not apply. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

Existing Plans

SDG&E Subregional Natural Community Conservation Plan

SDG&E is responsible for the implementation of its comprehensive multiple species and habitat NCCP. Under Section 10(a) of the Federal Endangered Species Act (FESA), the NCCP is intended to establish and implement a long-term agreement between SDG&E, the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG) to provide for the preservation and enhancement of covered sensitive species and their native habitats with regard to the ongoing operation, maintenance, and expansion of

SDG&E's electric and natural gas transmission system (16 U.S.C. § 1539). To implement the NCCP, SDG&E consults with the USFWS and CDFG when impacts to narrow endemic species may occur. The Implementing Agreement for the SDG&E NCCP requires that the USFWS, CDFG, and SDG&E agree that for absent unforeseen circumstances, mitigation measures provided in SDG&E's NCCP constitute the only mitigation measures that shall be required for activities covered by the Plan when a project impacts a covered species or its habitat.

The NCCP is limited to new electric substations that will result in up to 20 acres of habitat disturbance and does not apply to major expansions of SDG&E's electric system. Because it is not a major expansion and will result in less than 3 acres of habitat disturbance, the Proposed Project is covered by the NCCP.

The NCCP includes 61 Operational Protocols intended to avoid and minimize potential impacts to sensitive species and their habitats, and to provide appropriate mitigation where such impacts are unavoidable, to ensure the protection and conservation of sensitive wildlife species and their associated habitat. These 61 protocols include provisions for personnel training, pre-activity studies, maintenance, and repair and construction of facilities, including access roads, survey work, and emergency repairs; refer to Attachment 4.4-B: *SDG&E NCCP and Operational Protocols*.

SDG&E's NCCP does not exempt projects that are subject to permits from the CPUC or several other Federal or State agencies. As such, the Proposed Project is subject to CEQA review. It is intended that subsequent environmental reviews use the NCCP to evaluate potential impacts to covered species and their habitats. Defined habitat enhancement measures are also included in SDG&E's NCCP; refer Attachment 4.4-B: *SDG&E NCCP and Operational Protocols*.

The utility operations of the Proposed Project will be governed by the NCCP. SDG&E has adopted the mitigation measures and Operational Protocols contained in the NCCP, as detailed in Attachment 4.4-B: *SDG&E NCCP and Operational Protocols*. SDG&E will also implement Project-specific APMs, as given in Section 4.3.5, to further reduce potential Project impacts and to ensure the long-term protection and conservation of listed and covered species and their habitats. While the Proposed Project is located within areas included in the City of San Diego's General Plan and Multiple Species Conservation Plan (MSCP) Subarea Plan, SDG&E's public utility activities are generally not subject to the discretionary regulatory jurisdiction of such local governments, and therefore, are not required to conform to the terms and conditions of such plans. SDG&E will however, continue to coordinate with the City of San Diego to achieve consistency to the extent feasible in implementing its NCCP for the Proposed Project. SDG&E's NCCP provides for protocols and mitigation measures to protect natural community and resource values in these conservation-planning areas where consistency cannot be achieved.

City of San Diego Multiple Species Conservation Program

The City of San Diego's 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 CDFG to meet the requirements of the California 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 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.

4.3.3.2 Biological Setting

The Proposed Project site consists of a small hilltop with steep, northwest- and southwest-facing manufactured slopes and a steep, east-facing slope of an isolated, urban canyon. The canyon is intersected by roads to the north and south and is ultimately surrounded by industrial and commercial development. The drainage, which runs north to south along the canyon bottom, is culverted under Mira Sorrento Place and Vista Sorrento Parkway. The elevation for the biological survey area ranges from approximately 115 feet to 220 feet above mean sea level (MSL), with the lowest elevation in the southernmost canyon bottom and the highest elevation atop the hill in the western portion of the survey area.

Plant Communities and Associated Wildlife

Seven vegetation communities were mapped within the survey area, including freshwater marsh, southern willow scrub, mule fat scrub (undisturbed and disturbed), Diegan coastal sage scrub (remnant, restored, and disturbed), native grassland, disturbed habitat, and ornamental vegetation; refer to Table 4.3-1, *Vegetation Communities/Land Cover Types*. Disturbed land and developed land are also present within the survey area. A total of 82 plant species were identified within the survey area during the 2009 surveys by RECON and 2003 surveys by Essex. Of this total, 47 species (57 percent) are native to southern California and 35 species (43 percent) are introduced. Figure 4.3-1, *Existing Biological Habitat*, shows the extent of each vegetation community or land cover type within the survey area.

Table 4.3-1: Vegetation Communities/Land Cover Types Within the Mira Sorrento Substation Project Survey Area

Vegetation Communities/ Land Cover Types (Holland Code as modified by Oberbauer)	Survey Area (acres)
Freshwater marsh (52410)	0.1
Southern willow scrub (63320)	0.1
Mule fat scrub (63310)	
Undisturbed mule fat scrub	0.1
Disturbed mule fat scrub	<0.1 (1,759 square feet)
Diegan coastal sage scrub (32510)	
Remnant Diegan coastal sage scrub	0.7
Restored Diegan coastal sage scrub	1.0
Disturbed Diegan coastal sage scrub	0.3
Native grassland (42100)	0.1
Disturbed habitat (11300)	1.8
Ornamental vegetation (11000)	0.3
Disturbed land (13000)	<0.1 (210 square feet)
Developed land (12000)	2.0
TOTAL	6.6

Freshwater Marsh

Freshwater marsh is a community that consists of perennial emergent monocots such as cattails (*Typha* sp.) and bulrush (*Scirpus* sp.) that typically form a closed canopy that is 4-5 meters tall (Holland 1986). Freshwater marsh vegetation occurs in open bodies of fresh water with little current flow, such as ponds, and to a lesser extent around seeps and springs. Freshwater marsh communities, as with all wetland habitats, have been greatly reduced throughout their entire range and continue to decline as a result of urbanization.

Southern Willow Scrub

Southern willow scrub is a dense riparian community dominated by broad-leaved, winter-deciduous willow trees (*Salix* spp.). This vegetation community is typically found along major drainages but also occurs in smaller drainages. The density of the willows typically prevents a dense understory of smaller plants from growing. The representative species typically grows in loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. This community requires repeated flooding to prevent succession to community dominated by sycamores and/or cottonwoods (Holland 1986).

Mule Fat Scrub

Mule fat scrub is a tall, herbaceous riparian scrub strongly dominated by mule fat (*Baccharis salicifolia*). It occurs along drainages with a fairly coarse substrate and a moderately deep water table. Mule fat scrub is developed and maintained by flooding or other disturbances but, in the absence of disturbance, may change, through successional processes, to willow-cottonwood or sycamore-dominated riparian forest/woodland. Mule fat scrub typically occurs at elevations below 2,000 feet (Holland 1986).

Diegan Coastal Sage Scrub

Diegan coastal sage scrub is the southern form of coastal sage scrub, a vegetation community composed of low-growing, aromatic, drought-deciduous soft-woody shrubs that have an average height of approximately three to four feet. This community is typically found on sites with low moisture-availability, steep, xeric slopes, or clay rich soils that are slow to release stored water. Diegan coastal sage scrub is found in coastal areas from Los Angeles County south into Baja California, Mexico (Holland 1986).

Native Grassland

Native grassland is generally composed of native perennial bunch grasses. Native and introduced annuals occur between the perennials, often actually exceeding the bunch grasses in percent cover. Native grasslands often have a large component of non-native grasses but are distinguished as native grasslands when the percent cover by native grass species is 10 percent or greater. This community typically occurs on fine-textured (often clay) soils that are moist or even waterlogged during winter, but very dry in summer. In most regions, this community has been mainly converted to non-native annual grasslands due to the invasion of exotic annual grasses (Holland 1986).

Disturbed Habitat

Disturbed habitat generally includes land that has been cleared of vegetation (e.g., dirt roads) or lands containing a preponderance of non-native plant species. Disturbed habitat may include areas that are landscaped regularly and as a result, do not generally allow for development of native vegetation communities.

Disturbed habitats typically support such species as the common raven (*Corvus corax*), European starling (*Sturnus vulgaris*), house finch, house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), and rock dove (*Columbia livia*).

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 onsite.

Disturbed Land

Disturbed land generally includes land that has been previously disturbed by onsite activities, but not necessarily the construction of structures or infrastructure. Disturbed land may include dirt roadways or established pathways, or areas where human activity may have affected the natural state of the property.

Developed Land

Developed land generally includes areas where permanent structures and/or pavement have been constructed. Due to the developed nature of such lands, growth of natural vegetation is generally prohibited. Developed lands also include those lands where landscaping is cleared, tended, or maintained on a regular basis.

General Biological Survey Results

Upland Habitat

Diegan coastal sage scrub occurs throughout much of the survey area and is composed of a mosaic of remnant, restored, and disturbed coastal sage scrub. The coastal sage scrub that occurs on the north-facing slope in the southern portion of the survey area, on a portion of the west-facing slope just upslope of the drainage, and along the hilltop within the western portion of the survey area appear to be remnant, or naturally occurring, stands. The vegetation on the north-facing slope is dense and dominated by coyote bush (*Baccharis pilularis*) and black sage (*Salvia mellifera*). The vegetation on the west-facing slope, east of the drainage, is dense as well, but dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and big saltbush (*Atriplex lentiformis*). The vegetation along the hilltop is more open and is dominated by California buckwheat toyon (*Heteromeles arbutifolia*). The soil within this last patch contains many patches of intact cryptogammic crust.

The restored coastal sage scrub occurs on the slopes adjacent to Mira Sorrento Place. The northwest-facing, cut slope contains very dense vegetation with over 80 percent cover that is dominated by California sagebrush and broom baccharis (*Baccharis sarothroides*). Five torrey pines (*Pinus torreyana*) have also been planted on this slope. The southeast-facing slope, which occurs between the dirt access road and Mira Sorrento Place, is more open and dominated by laurel sumac (*Malosma laurina*) and lemonadeberry (*Rhus integrifolia*), with an understory of native grasses such as needlegrass (*Nassella* sp.) .

Disturbed coastal sage scrub also occurs in small patches on either side of the drainage, as well as on the cut slope that is adjacent to Vista Sorrento Parkway. Dominant native species include shrubs such as coyote bush and black sage, but due to human-caused soil disturbance, non-native ruderal species such as short-pod mustard (*Hirschfeldia incana*) comprise the majority of the ground cover.

A small patch of native grassland was observed within the larger expanse of disturbed habitat on the east-facing slope of the survey area. The native grassland is dominated by non-native grass species such as wild oat (*Avena* sp.) and foxtail chess (*Bromus madritensis* ssp. *rubens*); however, native grasses and wildflowers, including needlegrass and blue-eyed grass (*Sisyrinchium bellum*), comprise over 10 percent of the ground cover.

Wetland Habitat

Freshwater marsh occurs along the extent of the drainage where there is perennial water inundation, and a dense tree canopy is absent. The freshwater marsh vegetation is dominated by southern cattail (*Typha domingensis*) with scattered bulrush (*Schoenoplectus* sp.).

A small stand of southern willow scrub occurs at the southernmost extent of the drainage. Arroyo willow (*Salix lasiolepis*) forms the canopy, and the understory vegetation is open with a few low-lying herbaceous species such as watercress (*Nasturtium officinale*) and brass-buttons (*Cotula* sp.) within and alongside the creekbed.

Mule fat scrub borders the majority of the onsite drainage. The vegetation is dense and dominated by mule fat with native herbaceous species such as chinese pusley (*Heliotropium curassavicum*) and saltgrass (*Distichlis spicata*) scattered along the edges.

Disturbed mule fat scrub occurs adjacent the southern portion of the drainage. The vegetation still largely consists of mule fat but has been disturbed by the introduction of a non-native, invasive plant species, selloa pampas grass (*Cortaderia selloana*), which dominates portions of the drainage.

Other Habitat Types

Disturbed habitat occurs throughout the majority of the central portion of the survey area. This habitat consists of ruderal vegetation dominated by non-native species such as black mustard (*Brassica nigra*), short-pod mustard, tocalote (*Centaurea melitensis*), and various non-native grasses.

Two patches of ornamental vegetation occur within the survey area. A stand of Peruvian pepper trees (*Schinus molle*) occurs adjacent to the northern portion of the drainage. Landscaped vegetation, dominated by acacia (*Acacia* sp.), is also present along the west-facing slope adjacent to Vista Sorrento Parkway.

An existing unvegetated dirt access road that is unvegetated is classified as disturbed land. Paved or graveled roadways are classified as developed land. These include the City roads within the buffer and a gravel access road in the northeast portion of the survey area.

Wildlife Species

The wildlife observed within the survey area is typical of urban, scrub, and riparian communities in San Diego County. During the 2010 field survey, five butterflies, western

pygmy blue (*Brephidium exile*), Lorquin's admiral (*Limenitis lorquini lorquini*), an unidentified sulphur, and cabbage white (*Pieris rapae*), were observed within the survey area. Common butterfly species such as common white (*Pontia protodice*) are also expected to occur. In addition, Western mosquitofish (*Gambusia afinis*) were observed within the freshwater of the drainage.

Water flows perennially within the survey area. No amphibian species were observed during 2009 surveys; however, Pacific tree frog (*Pseudacris regilla*) has previously been detected within the survey area and is anticipated to occur (Essex 2003). Four reptile species, including western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), coastal whiptail, and California kingsnake (*Lampropeltis getula californiae*), were observed within the survey area.

The most commonly observed avian species are typical of urban communities and include Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), house finch (*Carpodacus mexicanus frontalis*), and lesser goldfinch (*Carduelis psaltria hesperophilus*). Common scrub or riparian species were also commonly observed and include California towhee (*Pipilo crissalis*), Bewick's wren (*Thryomanes bewickii*), and common yellowthroat (*Geothlypis trichas*).

A full list of wildlife species observed near or within the Proposed Project area during the September 2009 survey is included as Attachment 2, *Wildlife Species Observed/Detected*, of the Biological Technical Report prepared by RECON (June 2010).

Butterflies

The distribution of butterflies is generally defined by the distribution of their larval food plants. Species common to urban, scrub, and riparian communities are expected to be the most common butterfly species within the survey area.

Five butterflies, western pygmy blue (*Brephidium exile*), Lorquin's admiral (*Limenitis lorquini lorquini*), an unidentified sulphur, and cabbage white (*Pieris rapae*), were observed within the survey area. Common butterfly species such as common white (*Pontia protodice*) are also expected to occur.

Fish

Perennial freshwater streams can support a variety of fish species. Stream courses and vegetative habitat along their banks provide cover and forage for fish in addition to breeding locations. Western mosquitofish (*Gambusia afinis*) were observed within the freshwater of the drainage.

Amphibians

Amphibians require moisture for at least a portion of their lifecycle, with many requiring a permanent water source for habitat and reproduction. Terrestrial amphibians have adapted to

conditions that are more arid and are not completely dependent on a perennial or standing source of water. These species avoid desiccation by burrowing beneath the soil or leaf litter during the day and during the dry season.

Water flows perennially within the survey area. No amphibian species were observed during 2009 surveys; however, Pacific tree frog (*Pseudacris regilla*) has previously been detected within the survey area and is anticipated to occur (Essex 2003).

Reptiles

The diversity and abundance of reptile species varies with habitat type. Many reptiles are restricted to certain vegetation communities and soil types, although some of these species will also forage in adjacent communities. Other species are more ubiquitous, using a variety of vegetation types for foraging and shelter.

Four reptile species – western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), coastal whiptail, and California kingsnake (*Lampropeltis getula californiae*) – were observed within the survey area.

Birds

The diversity of bird species varies with respect to the character, quality, and diversity of vegetation communities present on a site. The survey area is dominated by disturbed, scrub, and riparian habitats and is adjacent to development.

The most commonly observed species are typical of urban communities and include Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), house finch (*Carpodacus mexicanus frontalis*), and lesser goldfinch (*Carduelis psaltria hesperophilus*). Common scrub or riparian species were also commonly observed and include California towhee (*Pipilo crissalis*), Bewick's wren (*Thryomanes bewickii*), and common yellowthroat (*Geothlypis trichas*).

Mammals

Mammal species observed are those that are typically found in urban communities or rural areas within San Diego County. Species observed include California ground squirrel (*Spermophilus beecheyi*) and coyote (*Canis latrans*). Southern mule deer (*Odocoileus hemionus fuliginata*) has previously been detected within the survey area but is no longer anticipated to occur. The construction of Mira Sorrento Place has isolated the survey area from any larger expanse of habitat.

Special-Status Species

For purposes of this PEA, sensitive habitat types are those identified by the CNDDB (State of California 2009e) or Holland (1986). Reasons for the sensitive status of vegetation communities include restricted range, cumulative losses throughout the region, and a high

number of endemic sensitive plant and wildlife species that occur in the vegetation communities. These communities are considered sensitive whether or not they have been disturbed.

The Proposed Project site is located within the SDG&E Subregional NCCP area. The SDG&E NCCP was approved in 1995 by USFWS and CDFG in accordance with the California NCCP Act. The NCCP includes mitigation measures and operational protocols designed to avoid potential impacts to biological resources and to provide appropriate mitigation where impacts are unavoidable to ensure the protection and conservation of covered species. Actions on lands outside of the SDG&E NCCP area are subject to assessment under the California Environmental Quality Act (CEQA).

Raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code 3503.5, which states that it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized. (CDFG 1991).

All wetland areas, wetland buffer areas, and non-wetland waters of the U.S are considered sensitive. USACE regulates the discharge of dredged or fill material into waters of the U.S. (wetland and non-wetland jurisdictional waters) according to Section 404 of the Clean Water Act [33 CFR Part 328]. Streambeds and associated riparian vegetation are under the jurisdiction of CDFG.

Assessments for the potential occurrence of sensitive species were based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, and species occurrence records from other sites in the vicinity of the Proposed Project site.

Sensitive Plants

Special-status plant species include species that are listed by the USFWS, CDFG, and BLM as endangered, threatened, proposed, or candidate species, as well as those listed as sensitive or rare. Sensitive plant species are those included on the CNPS Inventory of Rare and Endangered Vascular Plants of California (2001). Special-status plant species with the potential to occur in the Proposed Project area are listed in Table 4.3-2, *Sensitive Species with the Potential to Occur*.

One sensitive plant species, torrey pine, was observed within the Proposed Project site; however, the individuals are not part of a naturally occurring population. Five torrey pines have been planted along the cut slope immediately south of Mira Sorrento Place and are located within the restored vegetation. No other sensitive plant species are expected to occur within the survey area. Table 4.3-2 summarizes the status, habitats, and potential for sensitive plants to occur onsite, based on their ranges and habitat requirements.

Thirty sensitive species were considered and were determined to have no potential or low to occur within the Proposed Project area. Of these:

- One sensitive plant species is present;
- Seven sensitive plant species have a low potential to occur; and,
- Twenty-two sensitive plant species are not expected to occur.

No sensitive plant species that are considered to have a moderate to high potential to occur within the Project area were identified.

Table 4.3-2: Sensitive Plant Species with the Potential to Occur

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments
BRYOPHYTES					
Sphaerocarpaceae					
Geothallus tuberosus Campbell's liverwort	-/-	1B	-	Ephemeral liverwort; mesic coastal sage scrub, vernal pools; elevation below 2,000 feet. Recently reported from Camp Pendleton, likely extirpated elsewhere in urbanized San Diego County.	This species is not expected to occur due to the lack of suitable vernal pool habitat. The nearest recorded occurrence is approximately one mile southeast of the survey area (State of California 2009e).
Sphaerocarpus drewei Bottle liverwort	-/-	1B	-	Ephemeral liverwort; openings in chaparral and coastal sage scrub; elevation 300–2,000 feet.	This species has a low potential to occur due to the presence of marginally suitable scrub habitat. The nearest recorded occurrence is approximately one mile southeast of the survey area (State of California 2009e).
GYMNOSPERMS					
Pinaceae	**Pine Family**				
*Pinus torreyana (*ssp. *Torreyana)* Torrey pine	-/-	1B	C, RSS	Evergreen tree; closed-cone coniferous forest, chaparral, sandstone; elevation 300-500 feet.	This species was observed within the Proposed Project site, but the individuals do not belong to a naturally occurring population. They have been planted within restored vegetation.
ANGIOSPERMS: DICOTS					
Apiaceae	**Carrot Family**				
Eryngium aristulatum var. *parishii* San Diego button-celery	CE/FE	1B	C	Annual/perennial herb; vernal pools, mesic areas of coastal sage scrub and grasslands, blooms April-June; elevation less than 2,000 feet.	This species is not expected to occur due to the lack of suitable vernal pool habitat. There are multiple recorded occurrences within two miles of the survey area; however, all are associated with vernal pool habitat, and one population is extirpated (State of California 2009e, USFWS 2009).

Table 4.3-2: Sensitive Plant Species with the Potential to Occur, continued

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments
Asteraceae	**Sunflower Family**				
Ambrosia pumila San Diego ambrosia	-/FE	1B	C, NE, RSS	Perennial herb; chaparral, coastal sage scrub, valley and foothill grassland, creek beds, vernal pools, often in disturbed areas; blooms May – Sept; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.	This species is not expected to occur within the survey area. It would have been apparent during the survey if present.
Artemisia palmeri San Diego sagewort	-/-	4	-	Deciduous shrub; coastal sage scrub, chaparral, riparian, mesic, sandy areas; blooms May–Sept.; elevation less than 3,000 feet.	There are multiple recorded occurrences of this species within two miles of the survey area, with the closest within one mile to the northwest (State of California 2009e); however, this species would have been apparent if present; it is not expected to occur within the survey area.
Corethrogyne filaginifolia var. *incana [=Lessingia filaginifolia* var. *filaginifolia]* San Diego sand aster	-/-	1B	-	Perennial herb; chaparral, coastal bluff scrub, coastal sage scrub, blooms June-Sept.; elevation less than 400 feet. Known in California from only six occurrences.	This species would have been apparent if present and is not expected to occur due to the lack of suitable sandy soils. The nearest recorded occurrence is approximately two miles west of the survey area (State of California 2009e).
Corethrogyne filaginifolia var. *linifolia [=Lessingia filaginifolia* var. *filaginifolia]* Del Mar sand aster	-/-	1B	C	Perennial herb; coastal bluff scrub, openings in southern maritime chaparral and coastal sage scrub, sandy soil; blooms May-Sept.; elevation less than 500 feet.	This species would have been apparent if present and is not expected to occur due to the lack of suitable sandy soils. The nearest recorded occurrence, which is possibly extirpated, is approximately two miles west of the survey area (State of California 2009e).
Holocarpha virgata ssp. *Elongate* Graceful tarplant	-/-	4	-	Annual herb; coastal sage scrub, cismontane woodland, valley and foothill grassland, chaparral; blooms July-Nov.; elevation 200-3,600 feet.	This species has a low potential to occur due to the presence of marginally suitable scrub and grassland habitat.
Isocoma menziesii var. *menziesii [=*var. *decumbens]* Decumbent goldenbush	-/-	1B	-	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April-Nov.; elevation less than 500 feet.	This species is not expected to occur due to the lack of sandy soils. It would have been apparent during surveys if present.

Table 4.3-2: Sensitive Plant Species with the Potential to Occur, continued

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments
Iva hayesiana San Diego marsh-elder	-/-	2	-	Perennial herb; marshes and swamps, playas, riparian areas; blooms April-Sept.; elevation below 1,700 feet.	This species would have been apparent if present during surveys; it is not expected to occur within the survey area. The nearest recorded occurrence is within two miles northwest of the survey area (State of California 2009e).
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	-/-	1B	-	Annual herb; coastal salt marsh, vernal pools, playas; blooms Feb.-June; elevation less than 4,000 feet.	This species is not expected to occur within the survey area due to the lack of suitable salt marsh or vernal pool habitat. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).
Viguiera laciniata San Diego County viguiera	-/-	4	-	Shrub; chaparral, coastal sage scrub; blooms Feb.-June; elevation less than 2,500 feet.	This species would have been apparent during surveys if present and was not observed. Therefore, it is not expected to occur within the survey area.
Boraginaceae	**Borage Family**				
Harpagonella palmeri Palmer's grapplinghook	-/-	4	C, RSS	Annual herb; chaparral, coastal sage scrub, valley and foothill grassland; clay soils; blooms March–May; elevation less than 2,800 feet. Inconspicuous and easily overlooked.	This species has a low potential to occur within the survey area due to the presence of marginally suitable scrub habitat and clay soils. The nearest recorded occurrence is within one mile northwest of the survey area (State of California 2009e).
Cactaceae	**Cactus Family**				
Cylindropuntia californica [=Opuntia californica var.*californica, O. parryi]* Snake cholia	-/-	1B	C, NE, RSS	Succulent shrub; chaparral, coastal sage scrub; blooms April-May; elevation 100-500 feet.	This species is not expected to occur within the survey area; it would have been apparent if present during surveys. The nearest recorded occurrence is approximately one mile west of the survey area (State of California 2009e).
Ferocactus viridescens San Diego barrel cactus	-/-	2	C, RSS	Succulent; chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; blooms May–June; elevation less than 1,500 feet.	This species would have been apparent if present during surveys; it is not expected to occur. There are multiple recorded occurrences of this species in the vicinity of the survey area, with two within one mile (State of California 2009e).

Table 4.3-2: Sensitive Plant Species with the Potential to Occur, continued

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments
Convolvulaceae	**Morning-Glory Family**				
Dichondra occidentalis Western dichondra	-/-	4	-	Perennial herb; chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland; blooms Mar. – July; elevation less than 1,650 feet.	This species has a low potential to occur due to the presence of marginally suitable scrub habitat, within an area that has experienced a high level of previous disturbance.
Crassulaceae	**Stonecrop Family**				
Dudleya brevifolia [=D. blochmaniae ssp. *Brevifolia]* Short-leaved dudleya	CE/-	1B	C, NE	Perennial herb; southern maritime chaparral, coastal sage scrub on Torrey sandstone; blooms in April; elevation less than 1,000 feet. Known from fewer than five occurrences in the Del Mar and La Jolla areas of San Diego.	This species is not expected to occur due to the lack of suitable open habitat and soils. The nearest recorded occurrences, both of which are extirpated, are within one mile south of the survey area (State of California 2009e).
Fagaceae	**Oak Family**				
Quercus dumosa Nuttall's scrub oak	-/-	1B	-	Evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub, sandy and clay loam soils; blooms Feb.– March; elevation less than 1,300 feet.	This species is not expected to occur within the survey area; it would have been apparent during surveys if present. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).
Lamiaceae	**Mint Family**				
Acanthomintha ilicifolica San Diego thorn-mint	CE/FT	1B	C, NE	Annual herb; chaparral, coastal sage scrub, and grasslands on friable or broken clay soils; blooms April– June; elevation less than 3,100 feet.	This species has a low potential to occur due to the presence of marginally suitable scrub habitat, within an area that has experienced a high level of previous disturbance. Broken clay soils were not observed within the remnant coastal sage scrub.

Table 4.3-2: Sensitive Plant Species with the Potential to Occur, continued

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments
Monardella linoides ssp. *Viminea [=M. viminea]* Willowy monardella	CE/FE	1B	C, NE	Perennial herb; closed-cone coniferous forest, chaparral, coastal sage scrub, riparian scrub, riparian woodlands, sandy seasonal dry washes; blooms June–Aug; elevation 160– 1,300 feet. Known in California from fewer than 15 locations.	This species is not expected to occur within the survey area. It would have likely been apparent if present during the survey, and the survey area lacks suitable sandy soils. The nearest recorded occurrence is approximately two miles northeast of the survey area (State of California 2009e).
Pogogyne abramsii San Diego mesa mint	CE/FE	1B	C	Annual herb; vernal pools; blooms April-July; elevation 300-700 feet.	This species is not expected to occur due to the lack of suitable vernal pool habitat. The nearest recorded occurrence is approximately one mile southeast of the survey area and is associated with vernal pools (State of California 2009e).
Pogogyne nudiuscula Otay mesa mint	CE/FE	1B	C, NE	Annual herb; vernal pools; blooms May-July; elevation 300–800 feet. Known from six occurrences in Otay Mesa.	This species is not expected to occur due to the lack of suitable vernal pool habitat. The nearest recorded occurrence, which has not been located since 1968, is approximately two miles east of the survey area (State of California 2009e).
Polemoniaceae	**Phlox Family**				
Navarretia fossalis Spreading navarretia	-/FT	1B	C	Annual herb; vernal pools, marshes and swamps, chenopod scrub; blooms April–June; elevation 100–4,300 feet.	This species is not expected to occur due to the lack of suitable vernal pool habitat. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).
Rhamnaceae	**Buckthorn Family**				
Adolphia californica California adolphia	-/-	2	-	Deciduous shrub; Diegan coastal sage scrub and chaparral; clay soils; blooms Dec. – May; elevation 100-1,000 feet.	This species would have been observed during surveys; it is not expected to occur within the survey area. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).
Ceanothus verrucosus Wart-stemmed ceanothus	-/-	2	C, RSS	Evergreen shrub; chapparal; blooms Dec.-April; elevation less than 1,300 feet.	This species would have been apparent if present; it is not expected to occur within the survey area. The nearest recorded occurrence is within one mile of the survey area (State of California 2009e).

Table 4.3-2: Sensitive Plant Species with the Potential to Occur, continued

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments
ANGIOSPERMS: MONOCOTS					
Juncaceae	**Rush Family**				
Juncus acutus ssp. *leopoldii* Southwestern spiny rush	-/-	4	-	Perennial herb; coastal dunes, meadows and seeps, coastal salt marsh, riparian; blooms May–June; elevation less than 3,000 feet.	This species is not expected to occur; it would have been apparent during surveys if present.
Poaceae	**Grass Family**				
Orcuttia californica California Orcutt grass	CE/FE	1B	C	Annual herb; vernal pools; blooms April-August; elevation 50-2,200 feet.	This species is not expected to occur due to the lack of suitable vernal pool habitat. The nearest recorded occurrence, which is a reintroduced population, is approximately two miles northwest of the survey area (State of California 2009e, USFWS 2009).
Themidaceae					
Brodiaea orcuttii Orcutt's brodiaea	-/-	1B	C, RSS	Perennial herb (bulbiferous); closed cone coniferous forest, chaparral, meadows and seeps, valley and foothill grassland, vernal pools, mesic, clay soil; blooms May–July; elevation less than 5,300 feet.	This species has a low potential to occur along the drainage within the survey area due to the presence of marginally suitable habitat and suitable soils. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).
Muilla clevelandii San Diego goldenstar	-/-	1B	C, RSS	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170–1,500 feet.	This species has a low potential to occur due to the presence of marginally suitable scrub and grassland habitat, within an area that has experienced a high level of previous disturbance. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).

FEDERAL CANDIDATES AND LISTED PLANTS
FE = Federally listed endangered
FT = Federally listed threatened

STATE LISTED PLANTS
CE = State listed endangered

Table 4.3-2: Sensitive Plant Species with the Potential to Occur, continued

Species	Federal / State Status	CNPS List	SDG&E NCCP	Habitat / Blooming Period	Potential to Occur / Comments

SAN DIEGO GAS & ELECTRIC (SDG&E) NATURAL COMMUNITY CONSERVATION PLAN (NCCP)
C = Covered Species
NE = Narrow endemic
RSS = Regionally Sensitive Species

CALIFORNIA NATIVE PLANT SOCIETY LISTS
1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
2 = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

Sensitive Wildlife Species

Special-status wildlife species are those species listed by the USFWS or CDFG as endangered, threatened, proposed, or candidate species; those listed by CDFG as fully protected or species of special concern; and, those listed by the BLM as sensitive. Table 4.3-3, *Sensitive Wildlife Species Observed or with the Potential to Occur*, provides a list of sensitive species that were observed within the survey area or have the potential to occur, based on the ranges and habitat requirements of these species, and includes the likelihood of occurrence for these species. The special-status wildlife species occurring or with the potential to occur in the Proposed Project area include the following:

- one sensitive reptile species was observed and one sensitive mammal species was previously observed;
- no sensitive species with a high potential to occur;
- two avian sensitive species with a moderate potential to occur;
- four reptile and two avian sensitive species with a low potential to occur; and,
- one invertebrate, five avian, and four mammal species with no potential to occur.

Species observed or known to occur, and species with a high or moderate potential to occur within the Proposed Project area, are discussed in detail as follows:

Observed

Coastal whiptail (*Aspidoscelis tigris stejnegeri*). The coastal subspecies of the western whiptail has no official state or federal status but was formerly a federal candidate for listing and is likely rare or endangered within California according to its CNDDB rank (State of California 2009b). The coastal whiptail ranges from Santa Barbara County south into western Baja California, Mexico, predominantly on the coastal slope. Habitat consists of coastal sage scrub and chaparral communities, woodlands, and streamsides where plants are sparsely distributed (Stebbins 1985). Its diet consists of insects, spiders, scorpions, and other lizards. The decline of populations of coastal whiptail is also attributed to habitat loss and fragmentation.

One coastal whiptail was observed during the 2009 survey alongside the dirt access road within disturbed coastal sage scrub habitat. This species is expected to occur within the Proposed Project site due to the presence of open coastal sage scrub habitat and isolation of the survey area within development.

Southern mule deer (*Odocoileus hemionus*). The southern mule deer is an SDG&E NCCP covered species. Southern mule deer are presently widespread throughout undeveloped portions of San Diego County, ranging from Camp Pendleton to the Laguna Mountains,

Sweetwater River, and Otay Lakes at elevations of 400 to 3,600 feet (Bleich and Holl 1982). Resident and migratory populations are present throughout California. This species requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats. Breeding usually occurs between November and February, with the fawning period between June and August. The diet of the southern mule deer consists of forbs, grasses, and nuts. Although the species is not threatened with extinction within its range, urbanization and habitat fragmentation could result in local extirpation without appropriate conservation measures.

Southern mule deer was previously detected within the survey area by Essex (2003); however, due to the recent isolation of the survey area, following construction of Mira Sorrento Place, this species is no longer expected to occur within the survey area.

Not Observed with Potential to Occur

Coastal California gnatcatcher (*Polioptila californica californica*). The coastal California gnatcatcher is federally listed as threatened, is a CDFG species of special concern, and is an SDG&E NCCP covered species. The coastal California gnatcatcher is a non-migratory, resident species found on the coastal slopes of southern California, ranging from Ventura County southward through Los Angeles, Orange, Riverside, and San Diego Counties into Baja California, Mexico (Atwood and Bontrager 2001). Coastal California gnatcatchers typically occur in or near sage scrub habitat, although chaparral, grassland, and riparian woodland habitats are used where they occur adjacent to sage scrub. Breeding occurs from February through August, and nests are constructed most often in California sagebrush. The coastal California gnatcatcher diet consists mainly of sessile small arthropods, such as leafhoppers, spiders, beetles, and true bugs (Atwood and Bontrager 2001). The primary cause of decline in the coastal California gnatcatcher is due to habitat loss and degradation.

Coastal California gnatcatcher has a moderate potential to nest within the survey area due to the presence of suitable coastal sage scrub habitat and the high number of recorded occurrences in the vicinity of the survey are; however, the coastal sage scrub that occurs within the Proposed Project footprint provides less suitable habitat for nesting due to low shrub height or unsuitable plant species composition within restored areas, or open structure of the remnant scrub vegetation.

Sensitive Vegetation Communities

The following vegetation communities identified within the survey area are considered sensitive by the State of California (2009e), the SDG&E NCCP (SDG&E 1995), and Holland (1986): freshwater marsh, southern willow scrub, mule fat scrub, Diegan coastal sage scrub, and native grassland. Table 4.3-4 shows the acreage of these vegetation communities.

Migration Corridors

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

Critical Habitat

Critical habitat is defined as areas of land, water, and air space that contain 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. Critical habitat is designated by the USFWS for endangered and threatened species per the FESA (16 U.S.C. § 1533 (a)(3)), and to the extent prudent and determinable. Special management of critical habitat, including measures for water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types is required to ensure the long-term survival and recovery of the identified species. Critical habitat designation delineates all suitable habitat for the species, whether or not it is occupied.

No USFWS-designated critical habitat is located onsite or within one mile of the Proposed Project area. Critical habitat for San Diego fairy shrimp (*Branchinecta sandiegonensis*), San Diego thornmint (Acanthomintha ilicifoliaIlic), and Western snowy plover (*Charadrius alexandrines nivosus*) do not occur within the Proposed Project area, but exist within five miles of the Proposed Project area.

Preserve Areas

Under the NCCP, preserves are considered sensitive. Within western San Diego County, preserves are defined and delineated using existing preserve areas from local and regional planning documents such as the City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan (City of San Diego 1997), County of San Diego MSCP Subarea Plan (County of San Diego 1997), and the North County Final Multiple Habitat Conservation Plan (MHCP) (San Diego Association of Governments [SANDAG] 2003). Preserve areas in these planning documents include the Multi-Habitat Planning Area (MHPA; City of San Diego 1997), Pre-approved Mitigation Areas (PAMA; County of San Diego 1997), Biological Resource Core Areas (BRCA; County of San Diego 1997), and the Focused Planning Areas (FPA; SANDAG 2003).

The survey area for the Proposed Project falls within the boundaries of the City of San Diego MSCP Subarea Plan. The survey area falls outside land designated as a Preserve; refer to Figure 4.3-2, *Project Survey Area in Relation to MSCP Preserve Areas*.

Table 4.3-3: Sensitive Wildlife Species Observed or with the Potential to Occur

Species	Status	Habitat / Blooming Period	Potential to Occur / Comments
INVERTEBRATES (Nomenclature from Eriksen and Belk 1999; Mattoni 1990; and Opler and Wright 1999)			
Anostraca	**Fairy Shrimp**		
San Diego fairy shrimp *Branchinecta sandiegonensis*	FE, NCCP *	Vernal pools.	This species is not expected to occur within the survey area due to the lack of suitable vernal pool habitat. There are multiple recorded occurrences of this species within two miles of the survey area, all within vernal pools (State of California 2009e, USFWS 2009).
REPTILES (Nomenclature from Crother 2001 and Crother et al. 2003)			
Iguanidae	**Iguanid Lizards**		
San Diego horned lizard *Phrynosoma coronatum* (San Diego/blainvillii population)	CSC, FSS, NCCP, *	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	This species has a low potential to occur within the survey area due to the presence of marginally suitable scrub habitat and soils. No harvester ants (Pogonomyrmex sp.), a main component of this species' diet, were observed within the survey area. The nearest recorded occurrence is within two miles east of the survey area (State of California 2009e).
Scincidae	**Skinks**		
Coronado skink *Eumeces skiltonianus interparientalis*	CSC, FSS, NCCP, *	Grasslands, open woodlands and forest, coastal sage scrub, broken chaparral. Rocky habitats near streams.	This species has a low potential to occur within the survey area due to the presence of marginally suitable habitat. Although a water source is present, the survey area is isolated by development.
Teiidae	**Whiptail Lizards**		
Belding's orange-throated whiptail *Aspidoscelis [=Cnemidophorus] hyperythra beldingi*	CSC, NCCP, *	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	This species has a low potential to occur due presence of marginally suitable, isolated coastal sage scrub habitat and soils. The nearest recorded occurrences are between one and two miles from the survey area (State of California 2009e).

Table 4.3-3: Sensitive Wildlife Species Observed or with the Potential to Occur, continued

Species	Status	Habitat / Blooming Period	Potential to Occur / Comments
Coastal whiptail *Aspidoscelis tigris stejnegeri*	*	Coastal sage scrub, chaparral, woodlands, and streamsides where plants are sparsely distributed.	This species was observed within disturbed coastal sage scrub in the survey area. There are two additional recorded occurrences within two miles of the survey area (State of California 2009e).
Boidae	**Boas**		
Coastal rosy boa *Charina trivirgata roseofusca*	FSS, RSS, *	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	This species has a low potential to occur within the survey are due to the presence of marginally suitable, isolated scrub habitat.
BIRDS (Nomenclature from American Ornithologists' Union 1998, 7th ed. and Unitt 2004)			
Accipitridae	**Hawks, Kites, & Eagles**		
Northern harrier (nesting) *Circus cyaneus hudsonius*	CSC, NCCP	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	This species has a low potential to forage within the survey area but is not expected to nest due to a lack of suitable habitat.
Cooper's hawk (nesting) *Accipiter cooperi*	WL	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas. Year-round resident.	This species has a moderate potential to forage within the survey area but is not expected to nest due to a lack of suitable habitat.
Rallidae	**Rails, Gallinules, & Coots**		
California black rail *Laterallus jamaicensis*	BCC, ST, CFP	Tidal marshes, grassy marshes. Resident populations extirpated.	This species is not expected to occur within the survey area due to the lack of suitable tidal marsh habitat. The nearest recorded occurrence, which is from 1952, is within two miles of the survey area (State of California 2009e).
Light-footed clapper rail *Rallus longirostris levipes*	FE, SE, CFP, NCCP	Salt marshes supporting *Spartina foliosa*. Localized resident.	This species is not expected to occur within the survey area due to the lack of suitable marsh habitat with Spartina foliosa. The nearest recorded occurrences are within two miles of the survey area along Los Peñasquitos Canyon Creek (USFWS 2009).

Table 4.3-3: Sensitive Wildlife Species Observed or with the Potential to Occur, continued

Species	Status	Habitat / Blooming Period	Potential to Occur / Comments
Vireonidae	**Vireos**		
Least Bell's vireo (nesting) *Vireo bellii pusillus*	FE, SE, BCC, NCCP, *	Willow riparian woodlands. Migrant and summer resident.	This species is not expected to occur within the survey area due to the lack of suitable riparian habitat. The southern willow scrub on-site is very small and isolated and lacks a dense understory of vegetation that this species prefers. Multiple recorded occurrences are within two miles north of the survey area along Sorrento Creek and Los Peñasquitos Canyon Creek (State of California 2009e, USFWS 2009).
Troglodytidae	**Wrens**		
Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*	CSC, FSS, BCC, NE	Maritime succulent scrub, coastal sage scrub and desert scrub with *Opuntia* thickets. Rare localized resident.	This species is not expected to occur due to the lack of substantial cactus patches.
Sylviidae	**Gnatcatchers**		
Coastal California gnatcatcher *Polioptila californica californica*	FT, CSC, NCCP, *	Coastal sage scrub, maritime succulent scrub. Resident.	This species has a moderate potential to nest within the coastal sage scrub in the survey area. There are many recorded occurrences of this species (at least six local populations) within two miles of the survey area, and at least three of these local populations occur within one mile (State of California 2009e, USFWS 2009).
Turdidae	**Thrushes**		
Western bluebird *Sialia mexicana occidentalis*	RSS	Open woodlands, farmlands, orchards.	This species has a low potential to nest within the survey area due to the presence of small patches of mature trees within the ornamental and riparian vegetation.
Emberizidae	**Emberizids**		
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	WL, NCCP, *	Coastal sage scrub, chaparral, grassland; favors steep and rocky areas. Localized resident.	This species is not expected to occur within the survey area due to the fragmentation of the sage scrub habitat onsite.

Table 4.3-3: Sensitive Wildlife Species Observed or with the Potential to Occur, continued

Species	Status	Habitat / Blooming Period	Potential to Occur / Comments
MAMMALS (Nomenclature from Baker et al., 2003 and Hall 1981)			
Heteromyidae	**Pocket Mice & Kangaroo Rats**		
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	CSC, NCCP, *	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	This species is not expected to occur within the survey area due to the lack of suitable sandy soils.
Pacific pocket mouse *Perognathus longimembris pacificus*	FE, CSC, NE	Open coastal sage scrub; fine, alluvial sands near ocean.	This species is not expected to occur within the survey area due to the lack of suitable sandy soils.
Cricetidae	**New World Mice & Rats**		
San Diego desert woodrat *Neotoma lepida intermedia*	CSC, NCCP, *	Coastal sage scrub and chaparral.	No woodrat middens were observed within the survey area, and no substantial cactus patches (typically preferred for constructing middens) were observed. Therefore, this species is not expected to occur within the survey area. The nearest recorded occurrences are within two miles of the survey area (State of California 2009e).
Cervidae	**Deer**		
Southern mule deer *Odocoileus hemionus fuliginata*	NCCP	Many habitats.	This species has previously been detected within the survey area (Essex 2003); however, due to the isolation of the survey area following construction of Mira Sorrento Place, this species is not expected to occur.

Table 4.3-3: Sensitive Wildlife Species Observed or with the Potential to Occur, continued

SAN DIEGO GAS & ELECTRIC NATURAL COMMUNITY CONSERVATION PLAN

NCCP = COVERED SPECIES
NE = Narrow endemic
RSS = Regionally sensitive species

FEDERAL/STATE LISTED
FE = Federally listed endangered
FSS = Federal (BLM or USFWS) sensitive species
FT = Federally listed threatened
SE = State listed endangered
ST = State listed threatened

OTHER
BCC = U.S. Fish and Wildlife Service Birds of Conservation Concern species
CFP = California fully protected species
CSC = California Department of Fish and Game Species of Special Concern
WL = California Department of Fish and Game Watch List
* = Taxa listed with an asterisk fall into one or more of the following categories:

- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
- Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic
- systems, native grasslands)

Wetlands and Jurisdictional Waters

USACE jurisdictional area (as defined by the USACE Wetland Delineation Manual) on the Proposed Project site totals 0.23 acre. A total of 0.38 acre of CDFG and RWQCB jurisdictional resources occur within the survey area. City of San Diego wetland resources total 0.38 acre. Existing jurisdictional resources onsite are listed in Table 4.3-4 and shown on Figure 4.3-3, *Jurisdictional Wetlands within the Mira Sorrento Substation Project Survey Area*.

Table 4.3-4: Existing Jurisdictional Resources Within the Mira Sorrento Substation Project Survey Area

Jurisdictional Resource	Acres
USACE	
Wetlands	0.19 acre
Non-wetland waters of the US	0.04 acre
Total USACE	**0.23 acre**
CDFG	
Streambed	0.04 acre
Riparian	0.34 acre
Total CDFG	**0.38 acre**
City of San Diego Wetland	**0.38 acre**
RWQCB	**0.38 acre**

USACE jurisdiction area on-site totals 0.23 acre, which includes 0.19 acre of USACE wetlands and 0.04 acre of USACE non-wetland waters of the U.S. Non-wetland waters are composed of the unvegetated, unnamed drainage channel within the survey area.

A total of 0.38 acre of CDFG jurisdictional areas occur within the survey area, which includes 0.04 acre of CDFG streambed and 0.34 acre of CDFG riparian. This acreage consists of riparian habitat associated with the unnamed drainage. Within the survey area, CDFG streambed is equal to USACE non-wetland waters. CDFG riparian includes all riparian habitat within the survey area in addition to USACE wetlands.

The RWQCB takes jurisdiction over all waters of the State and all waters of the United States as mandated by both the federal Clean Water Act and the California Porter-Cologne Water Quality Control Act. A total of 0.38 acre is within the RWQCB jurisdiction, which is equal to the CDFG jurisdiction.

The City of San Diego takes jurisdiction over all naturally occurring wetland vegetation. A total of 0.38 acre falls within the City of San Diego's jurisdiction, which is equal to the CDFG and RWQCB jurisdiction.

4.3.4 Impacts

Construction and operation of the Proposed Project has the potential to impact sensitive species and habitat. The Project footprint in relation to the existing biological habitat is shown in Figure 4.3-4, *Impacts on Biological Habitat*. The following discussion considers impacts to biological resources likely to occur from construction (both short- and long-term impacts) and those that may occur as a result of operation and maintenance of the Substation or distribution line. SDG&E has identified and incorporated APMs (refer to Chapter 3.0, *Project Description*, and Section 4.3.5, *Applicant Proposed Measures*) in the development of the Proposed Project to avoid or minimize potential impacts to biological resources. The APMs that are proposed to minimize potential impacts to biological resources are founded in part on SDG&E's Operational Protocols as given in the NCCP, and those identified for other similar SDG&E projects.

Significance Criteria

Standards of impact significance were derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Under these Guidelines, the Proposed Project may have a potentially significant impact if it will:

- 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 CDFG or USFWS;
- 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 CDFG or USFWS;
- Have 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;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or,
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

The direct take of a Federally- or State-listed species is considered to be a significant impact. Impacts to sensitive species resulting from temporary or permanent habitat loss is not

considered to be a significant impact (other than for listed or candidate species under the Federal and State Endangered Species Acts) unless a significant amount of the 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. Under the MBTA, impacts to nesting bird species would be considered significant, and therefore, such impacts shall be avoided.

In addition, as the survey area supports a relatively small amount of wetland and riparian features at the base of the onsite slope, a permanent loss of wetland or riparian features would be considered a significant impact. Such impacts would need to be avoided, minimized, or compensated for.

Question 4.4a – Sensitive Species

Construction – Less than Significant Impact

Sensitive Plant Species

As mentioned previously, one sensitive plant species, torrey pine, was observed within the Proposed Project site; however, the individuals are not part of a naturally occurring population. Five torrey pines have been planted along the cut slope immediately south of Mira Sorrento Place and are located within the restored vegetation. No other sensitive plant species are expected to occur within the survey area.

SDG&E will comply with the NCCP to avoid, minimize, mitigate, or compensate for impacts to sensitive or special status plant species. As no naturally occurring sensitive plant species were observed or have a high potential to occur within the Proposed Project survey area, no APMs specific to plant species are proposed for the Mira Sorrento Substation Project.

Sensitive Invertebrate Species

No sensitive invertebrate species were identified on the Proposed Project site. There are multiple recorded occurrences of the San Diego fairy shrimp (*Branchinecta snadiegonensis*) within two miles of the Project survey area, all within vernal pools (State of California 2009e, USFWS 2009); however, this species is not expected to occur within the survey area due to the lack of vernal pool habitat. As such, no impacts on sensitive invertebrate species are anticipated with the Proposed Project.

Sensitive Reptile Species

One sensitive wildlife species not covered by the NCCP, coastal whiptail, was observed within the Project survey area. In addition to the APMs proposed, SDG&E would implement the NCCP Protocols to avoid, minimize, or compensate for impacts to sensitive or special status wildlife species. Implementation of the NCCP Protocols during Project construction is expected to reduce impacts to the coastal whiptail to less than significant.

Sensitive Avian and Other Nesting Avian Species

One NCCP covered wildlife species, coastal California gnatcatcher, has a moderate potential to nest within the Project survey area. Implementation of APM BIO-2 will provide avoidance and impact minimization measures to prevent significant impacts to active nesting birds. In addition to the APMs proposed, SDG&E would implement the NCCP Protocols to avoid, minimize, or compensate for impacts to sensitive or special status wildlife species. As a result, potential impacts on sensitive avian species would remain less than significant.

Sensitive Mammal Species

One sensitive mammal species, southern mule deer, was previously detected within the Project survey area (Essex 2003); however, due to the isolation of the survey area following construction of Mira Sorrento Place, this species is not expected to occur on the Proposed Project site. In addition to the APMs proposed, SDG&E would implement the NCCP Protocols to avoid, minimize, or compensate for impacts to sensitive or special status wildlife species. As such, no significant impacts on sensitive mammal species would occur with the Proposed Project.

Critical Habitat

There is no USFWS-designated critical habitat located within the survey area. As a result, all ground-disturbing activities associated with construction of the Proposed Project would occur outside of critical habitat for sensitive wildlife species. Therefore, no impacts to critical habitat for sensitive wildlife species would occur with the Proposed Project.

Preserve Areas

The survey area falls within the boundaries of the City of San Diego MSCP Subarea Plan; however, the survey area falls outside land designated as a Preserve. As no preserves are located within the Proposed Project area, no impacts to preserves would occur.

Common Species

Few small common mammals, amphibians, or reptiles are expected to be impacted during construction of the Proposed Project. Disturbance may be caused by an increase in vehicle and equipment noise; direct mortality by construction equipment and vehicles; disruption of hibernating, feeding, and breeding from increased human activity; and, direct removal of vegetation inhabited by such species. In addition, the potential for common wildlife species to fall into and become trapped within excavation areas, trenches, or bore pits also exists.

Vegetation removal would not be conducted from March through April without prior approval by the Environmental Surveyor (a qualified biologist assigned by SDG&E). The Surveyor would ensure that the habitat contains no active nests, burrows, or dens prior to clearing. As most species are highly mobile and would be able to move out of the way of

Project-related activities, potential impacts to general wildlife are considered to be less than significant.

Indirect impacts associated with the Proposed Project would include a temporary increase in noise during vegetation clearing and construction activities. As the Proposed Project site is adjacent to development, these impacts are not expected to reduce the wildlife populations onsite or on adjacent lands below self-sustaining levels. Therefore, such impacts are considered to be less than significant.

SDG&E will implement existing NCCP protocols 1, 2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 17, 20, 24, 25, 27, 29, 34, 35, 37, 38, 41, 44, 48, 50, 54, 55, and 57, as described in Attachment 4.3-B: *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 twice daily for wildlife entrapment, and requiring excavations to be sloped on one end to provide an escape route. Additionally, SDG&E would implement Project-specific APMs, as discussed in Section 4.3.5, *Applicant Proposed Measures*. In particular, APM-BIO-1 includes conducting activities in accordance with SDG&E's NCCP, and APM-BIO-2 includes pre-construction surveys and monitoring of vegetation removal activities by a biological monitor for California gnatcatcher.

With implementation of the proposed APMs and implementation of NCCP protocols, permanent impacts to common wildlife species would be less than significant.

Operation and Maintenance – Less Than Significant Impact

Operation and maintenance activities, such as landscape maintenance and structure repairs, may potentially impact sensitive, listed, or covered species if they are present in the Proposed Project area in the future. Potential impacts may include the disruption of nesting and foraging behavior and direct mortality from maintenance vehicles and equipment.

All operation and maintenance activities for the Mira Sorrento Substation would primarily occur within the Substation fence lines in areas previously disturbed by construction. In addition, all maintenance activities required along the landscaped areas will be limited to the previously disturbed areas. Occasional inspection, maintenance and repairs would also occur along the TL665 loop-in trench alignment; however, due to the developed nature of the areas affected by the alignment, significant impacts on sensitive species are not anticipated.

As SDG&E currently operates existing facilities in the Project area, a significant increase in vehicle trips and activities generated by SDG&E maintenance vehicles over that which presently exists is not anticipated. As such, a minimal increase in the potential for impacts on sensitive species or habitat would occur as the result of Project operation and maintenance.

Table 4.3-5: Potential Impacts to Vegetation Communities and Proposed Mitigation Under APM BIO-1 for the Mira Sorrento Substation Project

Vegetation Community/ Land Cover Type	Inside Preserve?	Permanent Impacts (acres)†	Permanent Impacts Mitigation Ratio†	Permanent Impacts Credit (acres)	Temporary Impacts (acres)	Temporary Impacts Mitigation Ratio†	Enhancement
Freshwater marsh	No	-	1:1	-	-	1:1*	Plant, hand-broadcast seed, or hydroseed native species if necessary
Southern willow scrub	No	-	1:1	-	-	1:1*	Plant, hand-broadcast seed, or hydroseed native species if necessary
Mule fat scrub	No	-	1:1	-	-	1:1*	Plant, hand-broadcast seed, or hydroseed native species if necessary
Diegan coastal sage scrub	No	0.9	1:1	0.9	0.1	(a)	Plant, hand-broadcast seed, or hydroseed native species
Native grassland	No	0.1	1:1	0.1	-	(a)	Plant, hand-broadcast seed, or hydroseed native species if necessary
Disturbed habitat	No	1.2	N/A	-	0.3	N/A	N/A
Ornamental vegetation	No	0.2	N/A	-	<0.1 (1,709 square feet)	N/A	N/A
Disturbed land	No	-	N/A	-	-	N/A	N/A
Developed land	No	<0.1 (186 square feet)	N/A -		-N/A		N/A
TOTAL	**2.4**		**1.0**		**0.4**		

*Resource agencies require a 1:1 mitigation ratio in accordance with Federal and State "no-net-loss" policies;
†See Table 7.4 of the NCCP.

SDG&E will utilize protocols 1, 2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 15, 16, 17, 20, 24, 25, 27, 28, 29, 30, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 54, 55, and 57 from their existing NCCP, as described in Attachment 4.4-C: *SDG&E NCCP and Operational Protocols*, which was established according to the FESA and CESA and the state's NCCP Act. These protocols include, but are not limited to, such measures as restricting vehicles to existing roads when feasible, minimizing impacts by defining the disturbance areas, monitoring during clearing and grading activities, designing the operation and maintenance of the Proposed Project to minimize disturbance, and minimizing the potential for erosion to occur. Implementation of SDG&E's NCCP would ensure that potential operation and maintenance impacts resulting from the Proposed Project remain at a less-than-significant level.

Question 4.4b – Sensitive Natural Communities – Less than Significant Impact

Sensitive natural communities include riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the CDFG and USFWS. Two sensitive natural communities, as defined by the USACE, RWQCB, and/or the City of San Diego, exist in the Proposed Project area. These include Diegan coastal sage scrub and native grassland.

No naturally occurring sensitive plant species were observed or are expected to occur within the survey area. As such, no impacts are anticipated to occur to sensitive plant species.

Vegetation communities that would be permanently impacted by the Proposed Project include Diegan coastal sage scrub, native grassland, disturbed habitat, ornamental vegetation, and developed land, as detailed in Table 4.3-5, *Potential Impacts to Vegetation Communities and Proposed Mitigation*. Temporary impacts would occur to Diegan coastal sage scrub and, disturbed habitat, and ornamental vegetation. Impacts to Diegan coastal sage scrub and native grassland would occur with the Proposed Project; however, SDG&E would implement APM BIO-1 to compensate for these impacts as shown in Table 4.3-5, *Potential Impacts to Vegetation Communities and Proposed Mitigation*.

In addition, SDG&E will utilize protocols 7, 11, 13, 14, 15, 16, 17, 20, 24, 25, 28, 29, 30, 35, 36, 39, 41, 42, 43, 44, 48, and 57, as described in Attachment 4.3-B: *SDG&E NCCP and Operational Protocols*. These protocols include, but are not limited to, restricting vehicles to existing roads when feasible, minimizing impacts by defining the disturbance areas, and designing the Proposed Project to avoid or minimize new disturbance and erosion. Additionally, SDG&E would utilize Project-specific APMs, as discussed in Section 4.3.5 Applicant-Proposed Measures. Implementation of SDG&E's NCCP and APMs would ensure that potential impacts on sensitive natural communities remain at a less-than-significant level.

Question 4.4c – Effects on Wetlands – Less than Significant Impact

The Proposed Project has been designed to avoid direct impacts to jurisdictional resources during construction of the Substation. In addition, the Proposed Project is anticipated to provide a sufficient wetland buffer to protect adequately the functions and values of the existing wetlands within the survey area. The Project footprint in relation to the jurisdictional wetlands is shown in Figure 4.3-5, *Avoidance of Jurisdictional Wetlands*. The slope that lies between the proposed Substation wall and the existing wetlands would be revegetated on the tiers between retaining walls. The area at the base of the slope that occurs immediately adjacent to the drainage would be revegetated with native plant species, and no invasive, non-native plant species would be included in the plant palette for the upper tiers. In accordance with APMs BIO-1 and BIO-3 and the "no net loss" wetland policy implemented by USACE, CDFG, RWQCB, and the City of San Diego, impacts on wetlands resulting from construction of the Mira Sorrento Substation would be less than significant. If impacts to wetlands and jurisdictional waters are found to be unavoidable, during construction, SDG&E may be required to obtain certain permits or authorizations such as compliance with the City of San Diego Environmentally Sensitive Lands (ESL) Ordinance and/or Biology Guidelines, or a 404 Nationwide Permit from the USACE.

Over the long-term, all Project operation and maintenance activities, including maintenance of the landscaped slopes will avoid any jurisdictional areas. As such, no indirect or direct impacts on wetlands would occur.

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

A wildlife movement corridor is typically defined as a linear landscape element or feature which links historically connected habitat and/or natural areas, and facilitates movement of wildlife between these areas. The construction of the Proposed Project would not interfere with the movement of any native wildlife species or interfere with known migration corridors. The Proposed Project is located in a highly urbanized area, adjacent to several major roadways with high traffic volumes. The disturbance of approximately 2.4 acres (permanent) would not significantly impede potential wildlife movement through the Project site or on adjacent lands. The drainage and riparian scrub that bisects the canyon and is located below and outside of the Proposed Project site may allow limited and localized wildlife movement within the isolated canyon; however, due to the isolation of the canyon, the drainage does not provide connectivity with suitable habitat or natural areas in the immediate vicinity. Although Western mosquitofish (*Gambusia afinis*) were observed within the freshwater of the drainage, the Proposed Project is not anticipated to interfere substantially with the movement of any native resident or migratory fish species.

The Proposed Project site does not supply a linear landscape feature that would facilitate movement beyond the property to a larger more continuous natural corridor. As a result, no wildlife movement corridors would be impacted as a result of Project activities.

Construction vehicles have the potential to result in accidental injury to or mortality of onsite species during Project construction; however, impacts are considered to be less than significant, as such species would be mobile and would likely temporarily leave an onsite area where construction activity is occurring. In addition, the likelihood of onsite species leaving the site and colliding with vehicles is low, as heavy vehicle traffic is currently present on roadways within the surrounding area. As such, impacts would be less than significant.

Question 4.4e – Conflict with Local Policies – No Impact

Construction, operation, and maintenance associated with the proposed Mira Sorrento Substation will not conflict with any local environmental policies or ordinances promulgated to protect biological resources. The following discussion addresses goals and policies given in the City of San Diego General Plan that may be applicable to the Proposed Project.

E. Urban Runoff Management

Goals

Protection and restoration of water bodies, including reservoirs, coastal waters, creeks, bays, and wetlands.

Policies

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.

a. Increase onsite infiltration, and preserve, restore or incorporate natural drainage systems into site design.

e. Maintain landscape design standards that minimize the use of pesticides and herbicides.

f. Avoid development of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and, where impacts are unavoidable, enforce regulations that minimize their impacts.

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 would not significantly alter the existing onsite drainage patterns or significantly increase the amount of runoff generated from the site. The pad on which the

Substation would be located will be surfaced with gravel, allowing for the majority of storm water to infiltrate through the ground surface, rather than leaving the site as runoff. All disturbed slopes would be revegetated to stabilize the slopes and reduce the potential for erosion or runoff to occur during storm events. The use of pesticides and herbicides would be limited to the minimum necessary to properly maintain onsite landscaping and ensure its long-term survival.

In addition, SDG&E would implement APM-HYD-1, which requires preparation of a SWPPP under the State General Construction Permit, and implementation of BMPs from the SDG&E Water Quality Construction Best Management Practices Manual; refer also to Section 4.7, *Hydrology and Water Quality*. In accordance with the SWPPP, work crews will use approved erosion control measures including the use of gravel bags and construction of catch basins during grading operations. All Project runoff will be directed into catch basins via new trench drains that would discharge into the existing drainage located to east of the Substation site. 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 APM HY-1 and 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 would be consistent with the above goal and policies.

G. Biological Diversity

Goals

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

Permanent impacts would potentially occur to two sensitive vegetation communities; including 0.9 acre of Diegan coastal sage scrub and 0.1 acre of native grassland; refer to Table 4.3-5. Temporary impacts would also potentially occur to one sensitive vegetation community; including 0.1 acre of Diegan coastal sage scrub. Implementation of APM BIO-1, would ensure that potential impacts to sensitive vegetation communities remain less than significant.

In addition, Coastal California gnatcatcher has a moderate potential to occur within areas proposed for permanent and temporary impacts. Implementation of proposed APMs BIO-1 and BIO-2 would ensure that potential impacts to this species remain less than significant. Coastal whiptail was observed within the survey area and has a high potential to occur within areas proposed for permanent and temporary impacts. Implementation of the NCCP protocols would minimize potential impacts to this species such that impacts will be less than significant.

With implementation of APMs BIO-1 to BIO-3, potential impacts on sensitive habitats and wildlife species would remain less than significant. As such, the Project would be consistent

with this goal of preserving healthy, biologically diverse, regional ecosystems and conserving endangered, threatened, and key sensitive species and their habitats.

H. Wetlands

Goals

Preservation of all existing wetland habitat in San Diego through a "no net loss" approach.

The Proposed Project has been designed to avoid direct impacts to jurisdictional resources; refer to Table 4.3-5. In addition, the Proposed Project design is anticipated to provide a sufficient wetland buffer to adequately protect the functions and values of the existing wetlands within the survey area. The slope that lies between the proposed Substation wall and the existing wetlands would be revegetated on the tiers between retaining walls. The area at the base of the slope that occurs immediately adjacent to the drainage will be revegetated with native plant species, and no invasive, non-native plant species would be included in the plant palette for the upper tiers. As such, impacts on wetland habitat would be less than significant. The Proposed Project would be consistent with this goal.

Question 4.4f – Conflict with Conservation Plan – No Impact

The Proposed Project is within the SDG&E Subregional NCCP area. The SDG&E NCCP addresses potential impacts to sensitive resources associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems and typical expansion to those systems throughout SDG&E's existing service area. The SDG&E NCCP includes mitigation measures and operational protocols designed to avoid and/or minimize impacts on biological resources and to provide appropriate mitigation where impacts are unavoidable to ensure the protection and conservation of covered species. The NCCP protocols would be applied to the Proposed Project to avoid and/or minimize potential impacts resulting from Project implementation. SDG&E would follow the habitat enhancement and reclamation measures described within the NCCP to ensure that Project impacts on biological resources remain less-than-significant.

In addition, SDG&E would implement APMs as part of the Proposed Project to ensure that all potential impacts to sensitive biological resources remain at a level of less than significant. APMs that would be implemented as part of the Proposed Project will be consistent with the operation protocols in the NCCP. For the above reasons, the Proposed Project would not conflict with any applicable conservation plan, and no impacts would occur.

4.3.5 Applicant-Proposed Measures

SDG&E has designed and incorporated the following APMs into the Proposed Project to avoid or minimize potential impacts to biological resources:

Sensitive or Special Status Species or their Habitats

- APM-BIO-1: SDG&E will conduct activities in accordance with NCCP Operational Protocols to avoid, minimize, or compensate for impacts to biological resources. See APM BIO-2 below.

California Gnatcatcher

- APM-BIO-2: In accordance with the NCCP, SDG&E will conduct the following:
  - Whenever practicable, all grading or brushing occurring within occupied CAGN habitat shall be conducted from September 1st through February 28th, which is outside of the CAGN breeding season.
  - When conducting all other Project construction activities during the CAGN breeding season of March 1 through August 31 within habitat in which CAGN are known to or have a high potential to occur, the following avoidance measures shall apply:
    - A qualified biologist will conduct a preconstruction survey for CAGN within one week prior to initiating Project construction activities in an area. If CAGN are present but not nesting, a qualified biologist will survey for nesting CAGN approximately once per week in the vicinity of Project activities for the duration of the activity in that area.
    - If an active CAGN nest is located in the vicinity of Project activities, a biologist qualified for CAGN nest monitoring will monitor the nest daily until: (1) Project activities are no longer in the vicinity of the nest, or, (2) the fledglings become independent of their nest.
  - If the CAGN nest monitor determines that the Project activities are disturbing or disrupting the nesting activities, the monitor will make practicable recommendations to reduce the noise or disturbance in the vicinity. This may include recommendations such as (1) turning off vehicle engines and other equipment when ever possible to reduce noise, and (2) working in other areas until the young have fledged.

With these avoidance and minimization measures in place, any incidental take of coastal California gnatcatcher is covered by the SDG&E NCCP.

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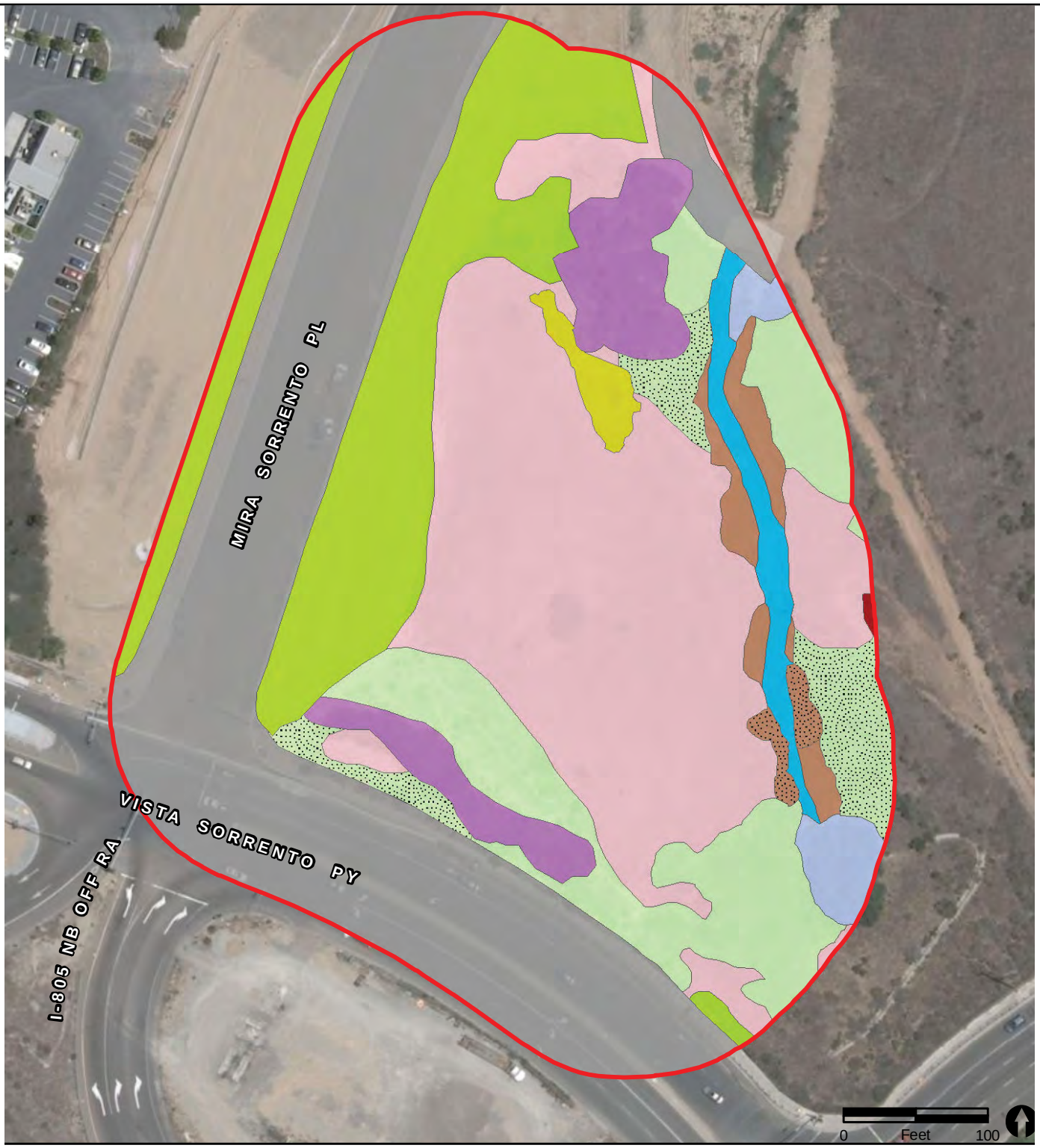

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Source: RECON, 2010.
Image source: Microsoft Virtual Earth

Mira Sorrento Substation
Proponent's Environmental Assessment

EXISTING BIOLOGICAL HABITAT

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Figure 4.3-1

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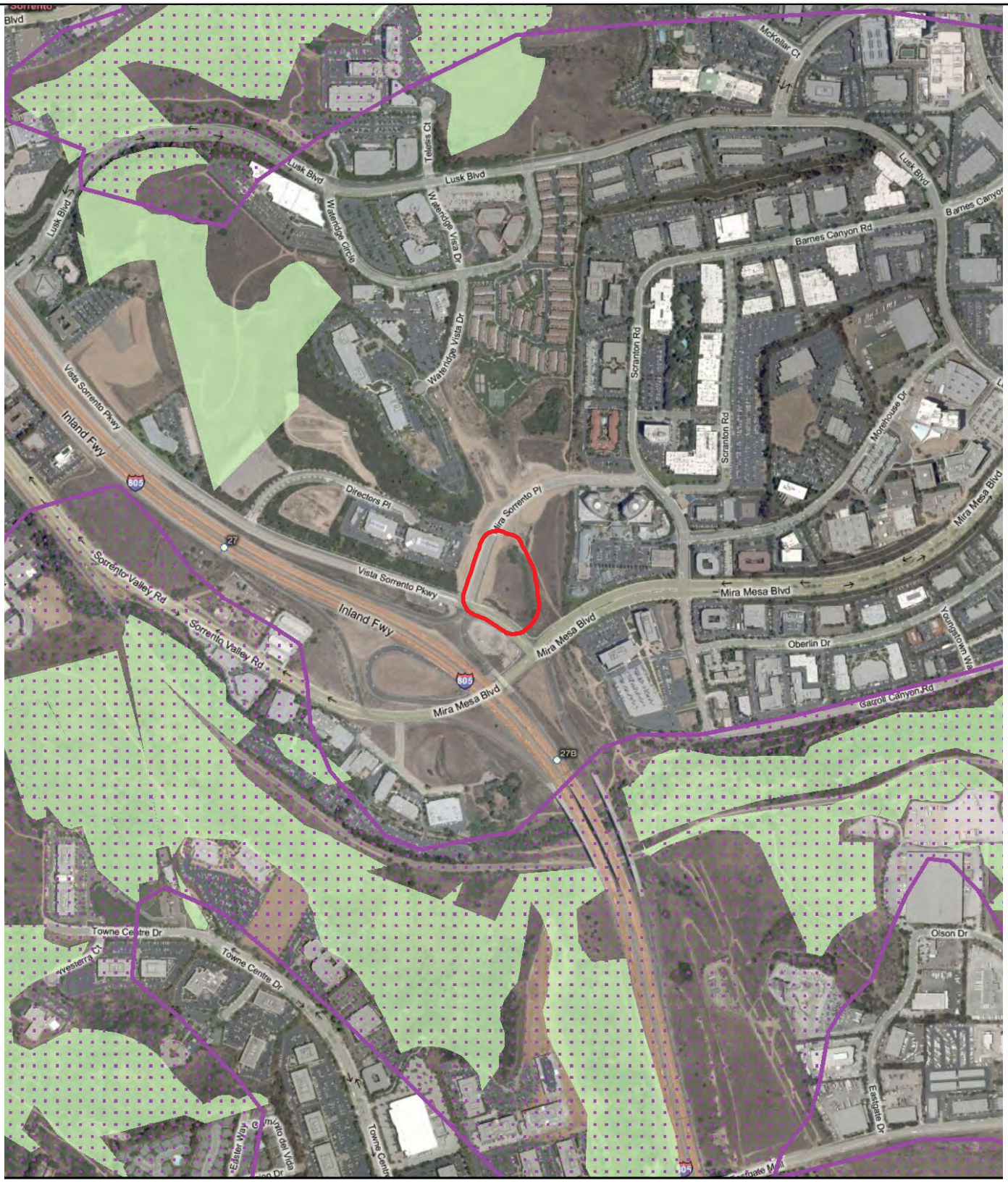

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Mira Sorrento Substation
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PROJECT SURVEY AREA IN RELATION TO MSCP PRESERVE AREAS

Figure 4.3-2

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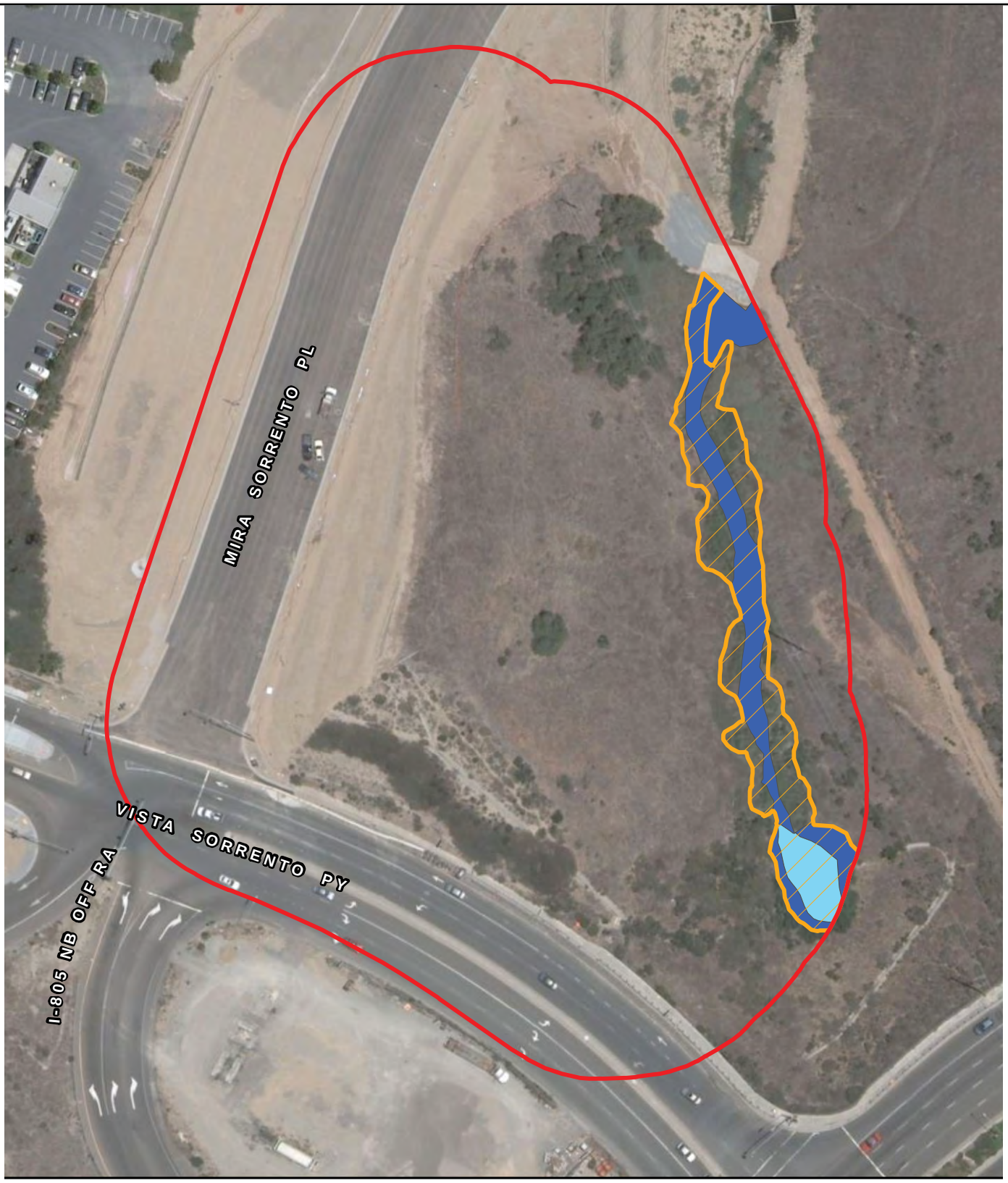

Source: RECON, 2010.
Image source: Microsoft Virtual Earth

Mira Sorrento Substation
Proponent's Environmental Assessment

JURISDICTIONAL WETLANDS WITHIN THE MIRA SORRENTO SUBSTATION PROJECT SURVEY AREA

Figure 4.3-3

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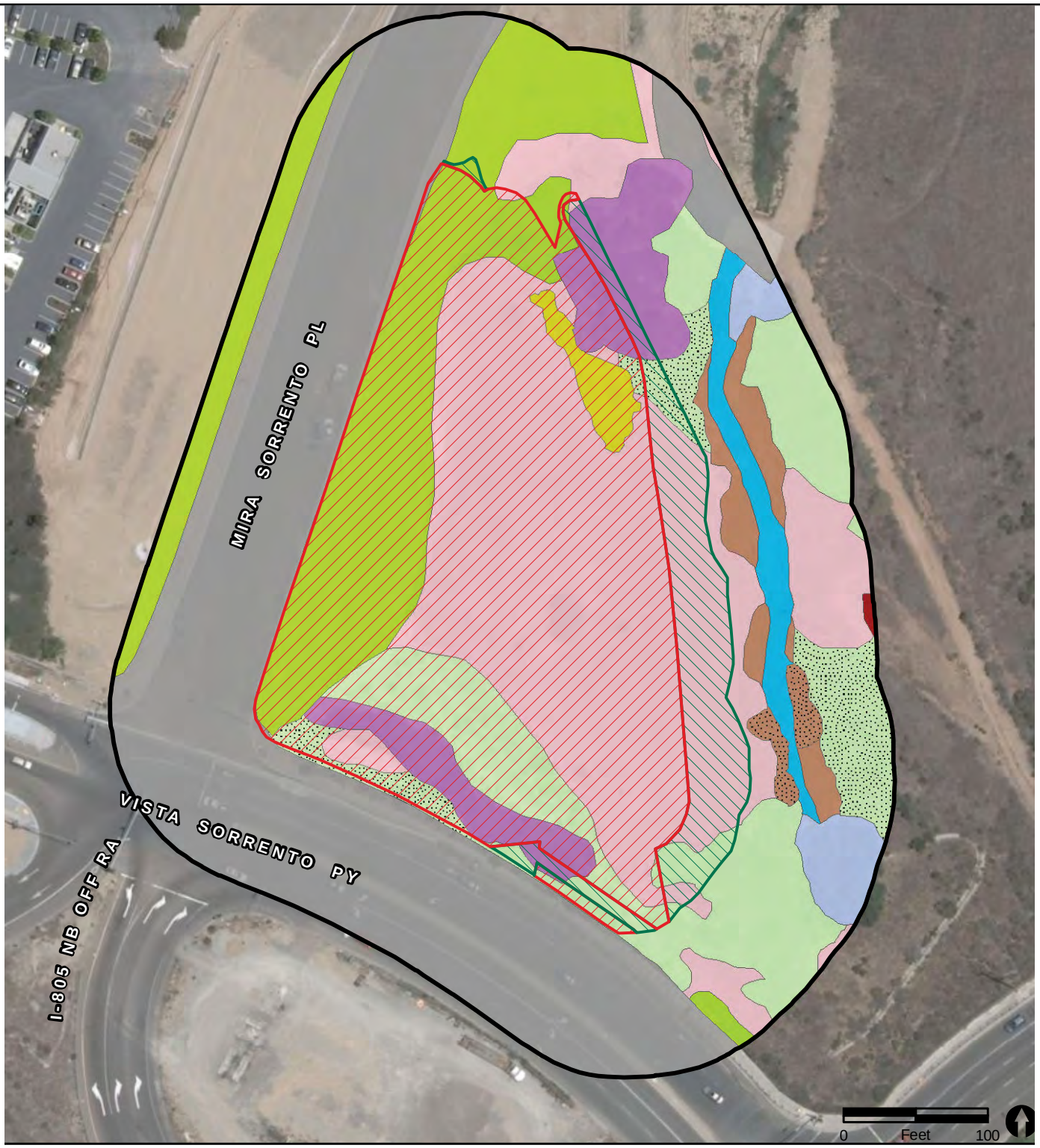

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Mira Sorrento Substation
Proponent's Environmental Assessment

IMPACTS ON BIOLOGICAL HABITAT

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Figure 4.3-4

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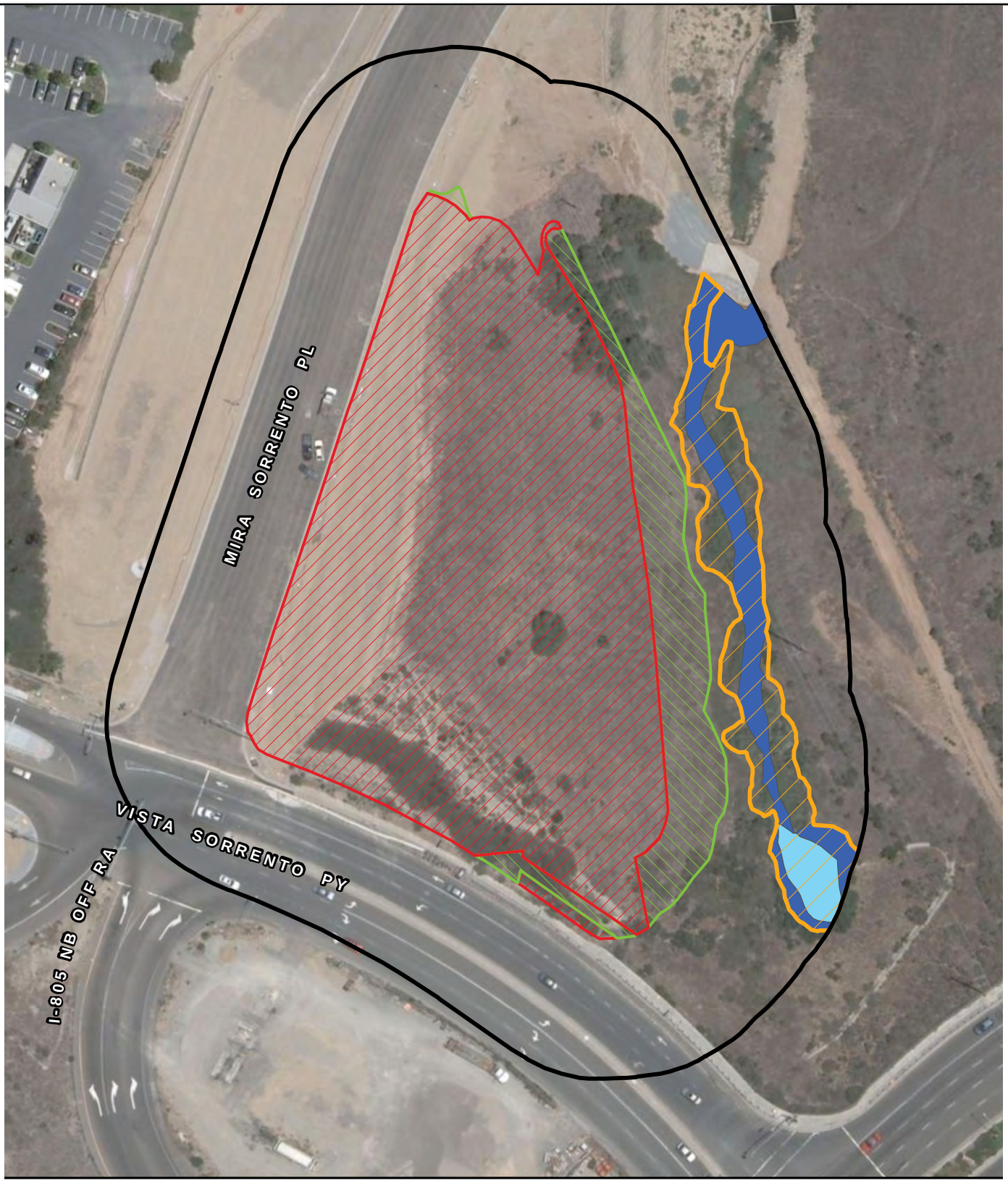

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Source: RECON, 2010.
Image source: Microsoft Virtual Earth

Mira Sorrento Substation
Proponent's Environmental Assessment

AVOIDANCE OF JURISDICTIONAL WETLANDS

Figure 4.3-5

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4.4 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☒	☐

4.4.1 Introduction

The analysis in this Chapter is largely based on the Preliminary Report of Archaeological and Paleontological Monitoring for the SDG&E Mira Sorrento Substation Project prepared by ASM Affiliates in September 2009, as well as the Historic Resource Evaluation prepared by RECON in May 2003, and the Paleontological Survey completed by the San Diego Natural History Museum in April 2003. The purpose of this Chapter is to document existing cultural and paleontological resources in the area proposed for location of the San Diego Gas and Electric Company (SDG&E) Mira Sorrento Substation Project, and to assess potential impacts to cultural and paleontological resources that may potentially occur as a result of Project implementation, particularly with regards to short-term construction activities and long-term operation and maintenance.

Construction of the Mira Sorrento Substation Project on the proposed site would require grading and undergrounding activities. No significant resources were identified on the proposed site, and therefore, no significant direct impacts to known resources would occur. Impacts to undiscovered cultural and paleontological resources resulting from the Proposed Project would be less than significant with the implementation of SDG&E's Applicant Proposed Measures (APMs); refer to Section 4.4.5, *Applicant Proposed Measures*, which outlines avoidance of resources and minimization measures. Refer also to Appendix D, for technical documentation of resources.

4.4.2 Methodology

4.4.2.1 Cultural Resources Records Search

Site record and archival searches were conducted by RECON on in May 2003. In addition, site record and archival searches were conducted at the San Diego Museum of Man (SDMM) and the South Coastal Information Center (SCIC) in 2003 and 2009. No cultural resources have been recorded on any of the lands potentially affected by the Proposed Project.

4.4.2.2 Archaeological Survey

A field survey was conducted by RECON on May 14, 2003. No historic or prehistoric sites were found during the site survey.

In addition, ASM Affiliates conducted archaeological monitoring for the Project on September 15, 2009. An access road for the proposed Substation had previously been graded to a depth of about two feet to facilitate geotechnical boring activities. SDG&E contract crews drilled a hole that was approximately three feet in diameter and about 75 feet deep. No cultural resources were discovered during the drilling activities, and none were identified within the area proposed for the Mira Sorrento Substation. Based on the results of the geotechnical boring, it was determined unnecessary to continue archaeological monitoring of additional construction activities at the Project location.

4.4.2.3 Paleontological Resources Record Search

A Paleontological Survey was completed by the San Diego Natural History Museum (SDNHM) in April 2003; refer to Appendix E. A literature and record review of relevant published geologic reports, unpublished paleontological reports, and unpublished museum paleontological locality data was conducted. The record search revealed the presence of six localities recorded within a one-mile radius of the Project site. Paleontological monitoring by the San Diego Natural History Museum was conducted during the geotechnical boring activities. No resources were identified on any lands potentially affected by the Proposed Project.

4.4.3 Existing Conditions

4.4.3.1 Regulatory Background

Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966, as amended, established a national policy of historic preservation and encourages such preservation. The National Historic Preservation Act established the Advisory Council on Historic Preservation and

provided procedures for the agency to follow if a proposed action affects a property that is included, or that may be eligible for inclusion, on the National Register of Historic Places. The National Register of Historic Places was developed as a direct result of the National Historic Preservation Act. Section 106, 36 CFR Part 800, requires the lead Federal agency for a project to consult with the State Historic Preservation Officer.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act was adopted in 1979 and provides for "the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before the date of the enactment of this Act." The Act is applicable to those projects that occur on public or Indian lands.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) provides measures to guide the federal government and museums to return cultural resources discovered on federal lands to native groups to which they originally belonged. Under the NAGPRA, "cultural items," "sacred objects," and "objects of cultural patrimony" are identified and the methods through which ownership is to be determined are given.

Executive Orders 13007 and 13084

Executive Orders 13007 and 13084 apply to Federal projects. Federal agencies with land management responsibilities are allowed access and use of Indian sacred sites on public lands per Executive Order 13007, with the understanding that such agencies avoid adversely affecting these sites. In addition, Executive Order 13084 requires the establishment of procedural standards for government consultation with recognized Indian tribes.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act (AIRFA) was created to provide protection and preservation of traditional religious rights and cultural practices of Native Americans. Such rights generally include access to sacred sites, the freedom to worship through ceremonial and traditional rights, and the use and possession of objects considered sacred. The Act requires that the policies established by governmental agencies avoid interference with the free exercise of Native religions, and to accommodate access to and use of religious sites to the extent that the use is practicable and does not conflict with the essential functions of the agency. The AIRFA also recognizes prior violation of that right.

State of California

California Register of Historical Resources

The California Office of Historic Preservation established the California Register as an authoritative guide to historical resources in the State of California. Criteria used for inclusion of properties on this listing are as follows:

> *"While the significance criteria for the California Register are similar to those used by the National Register of Historic Places this new California Register will document the unique history of the Golden State."*

To qualify for listing in the California Register, the resource must retain integrity and meet at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- 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; or,
- Has yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in the National Register of Historic Places program as a property's ability to convey its significance. Evaluation of integrity may be a somewhat subjective judgment; however, it must be founded on "an understanding of a property's physical features and how they relate to its significance."

Per the California Public Resources Code (Section 5024.1, 14 California Code of Regulations Section 4850), properties of local significance that are designated under a local preservation ordinance, or that have been identified in a local historical resources inventory, may be eligible for listing in the California Register. Resources that are eligible for listing in the National Register of Historical Resources are automatically listed by the State in the California Register of Historical Resources.

Criteria for listing historical resources on the California Register are consistent with those identified by the U.S. National Park Service for listing properties on the National Register; however, such criteria for State listing have been adapted to adequately recognize historical resources and events that represent the extensive history of the State of California. Historical resources eligible for nomination to the California Register of Historical Resources include the following:

> *"[a] historical resource… designated or listed as a city or county landmark… pursuant to any city or county ordinance, if the criteria for designation or listing under the ordinance have been approved by the Office (Historic Preservation) as meeting standards set by the Commission."*
>
> *"[a] historic resource or a group of local landmarks or historic properties designated under a municipal or county ordinance."*

No historic resources currently listed in the California Register or determined eligible for listing in the California Register of Historical Resources by the State Historical Resources Commission are located on lands potentially affected by the Proposed Project.

California Public Resources Code

The Public Resources Code (PRC) addresses archaeological finds with regard to human remains and associated objects of cultural or historical value. Sections 5097.9 to 5097.996 of the PRC identify appropriate procedures in the event that Native American remains are discovered. In addition, if human remains are discovered during site disturbance activities, Section 7050.5 of the California Health and Safety Code requires that such activities at the site of discovery, and within proximity where human remains are reasonably suspected to exist, shall cease until the county coroner can be notified. If it is determined that the human remains are of Native American origin, the Native American Heritage Commission shall be contacted within 24 hours. All activities shall proceed consistent with applicable State laws relative to the disposition of Native American burials, as regulated by the Native American Heritage Commission (Public Resource Code Sec. 5097).

In addition, paleontological resources are considered as limited, non-renewable resources of scientific, cultural, and educational value per CEQA (PRC 21000 et seq.). The preservation and protection of paleontological resources is guided by measures given in CEQA and PRC Section 5097.

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

The California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010 through 8030) provides for the protection of Native American cultural resources. The Native American Graves Protection and Repatriation Act (NAGPRA) of the Code provides measures requiring that Federal agencies and institutions that receive Federal funding return Native American cultural items and human remains to their respective peoples. Such cultural items may include funerary objects, sacred objects, or objects of cultural patrimony. The NAGPRA also authorizes a program of federal grants to assist in the repatriation process to ensure that California Native American human remains and cultural resources are treated with respect and dignity.

4.4.3.2 Prehistoric Setting

The prehistory of the San Diego region is supported by archaeological remains indicating up to 10,500 years of occupation by Native Americans. The Creation Story and history that is repeated by the local Native American groups indicates both their presence in the local region since the time of creation and from migration from other areas. The earliest archaeological remains suggest a nomadic hunting culture characterized by the use of a varying scrapers, choppers, bifacially worked stone tools, large projectile points and crescentics, a scarcity or absence of milling implements, and a preference for fine-grained volcanic rock over metaquartzite materials. The archaeological record dating from about 6000 BC to AD 0 indicates a gathering culture largely dependent upon shellfish and plant foods from littoral (near shore) resources of the area. Stone-on-stone grinding tools (mano and metate), relatively crude cobble-based flaked lithic technology, and flexed human burials represent this time period.

The Late Prehistoric Period (AD 0 to 1769) in the City of San Diego is represented by ancestors to the Kumeyaay people of today. Prehistorically, the Kumeyaay were a hunting and gathering culture, adapted to a range of ecological zones from the Pacific Ocean Coast to the Peninsular Range. Late Prehistoric populations are differentiated from earlier people in the archaeological record through a shift in grinding technology reflected by the addition of the pestle and mortar to the mano and metate (which signified an increased emphasis on acorns as a primary food staple), as well as the introduction of the bow and arrow, pottery, obsidian from the Obsidian Butte source in Imperial County, and human cremation.[1]

4.4.3.3 Ethnographic Setting

The ethnohistoric period began in the San Diego region in approximately 1769 with the Spanish colonization of Alta California. The mission system was established and changed the lives of the Yuman-speaking Kumeyaay people. Native Americans living in the coastal areas where the mission influence was the greatest were greatly influenced. Ethnohistoric accounts of the coastal Kumeyaay are limited and instead largely represent the people living further inland in the mountain and desert regions. The ethnohistoric Kumeyaay were a nomadic hunting and gathering society whose shelters varied greatly according to locality, need, choice, and raw materials. Formal homes, constructed for the winter months, were small huts made of poles covered with brush or bark. The brush was covered with earth during the winter months to trap heat from escaping. In the summer months, windbreaks were used to provide limited shelter from the elements. Village-owned structures were used for ceremonies, and sweathouses were also built and used by the Kumeyaay men.[2]

[1] City of San Diego Draft General Plan Final Program Environmental Impact Report. Certified September 2007.

[2] City of San Diego Draft General Plan Final Program Environmental Impact Report. Certified September 2007.

4.4.3.4 Historic Setting

The history of San Diego is defined by three main periods that include the Spanish Period (1769-1821), Mexican Period (1821-1846) and American Period (1846-Present). Although Juan Cabrillo made landfall in Point Loma in 1542, colonization of Alta California by the Spanish did not occur until 1769 when the Mission San Diego de Alcalá was founded by Father Junípero Serra. The first Spanish explorers initially inhabited the area of the San Diego Bay that is now represented by Downtown San Diego; however, the lack of access to fresh water caused these settlers to move inland in 1769 to a location closer to the San Diego River, near the established Kumeyaay village of Cosoy. The Spanish constructed a mission and presidio structure at this location near the River.

In 1846, the American Period began when the United States military occupied San Diego and existing residents either supported the Americans, while other prominent groups opposed the United States invasion. In December 1846, a group of Californios led by Andres Pico engaged United States Army forces at the Battle of San Pasqual, resulting in many casualties. By January 1847, the Californio resistance was defeated, and the Americans assumed formal control with the Treaty of Guadalupe-Hidalgo in 1848. Anglo culture and society emerged through visible American political institutions and American entrepreneurial commerce. By 1850, the Americanization of San Diego was underway.

The California State Legislature formally organized San Diego County in February 1850 and San Diego continued to grow slowly over the next decade. A new town was established closer to the San Diego Bay; however, growth of this town failed, combined with a severe drought that slowed ranching activities around the time of the Civil War, leaving San Diego as a frontier town. The population of San Diego declined until 1867 when developer Alonzo Horton arrived in San Diego and began developing away from Old Town, encouraging the urbanization of the town by establishing a New San Diego (present-day Downtown). Opportunities for trade caused an increase in the availability of building materials, and wooden structures gradually began to replace former adobe construction. The American Period brought with it the availability of "Pre-fab" houses which were constructed in the eastern United States, shipped, and reassembled in San Diego. Development spread from Downtown based on availability of potable water supplies and transportation corridors.

Over time, San Diego has developed into a major metropolitan city. Areas of San Diego, such as Mira Mesa, Tierrasanta, Rancho Peñasquitos, and Rancho Bernardo, were developed and are representative of the typical residential development patterns in the City established over the last two to three decades, wherein commercial uses are typically located along main thoroughfares with intermixed residential neighborhoods. Planned industrial parks like Sorrento Valley, where the Project is located, generally support concentrated industrial uses.

Cultural Resources

Record Search Results

A Prehistoric Resource Survey was completed by RECON in May of 2003; refer to Appendix E. A record search for cultural resource sites on and in the vicinity of the Project site was also completed at the San Diego Museum of Man (SDMM) and South Coastal Information Center (SCIC) in May 2003. No sites were found on any lands potentially affected by the Proposed Project.

No historic or prehistoric sites were found during the survey. Site record and archival information from the SCIC indicated that no sites have been recorded on the Proposed Project site. At the time of the records search in 2003, the SDMM identified 18 recorded sites or loci within a 0.5-mile radius of the Project site. Records indicate that several of these sites have been destroyed. The prehistoric sites recorded within the vicinity of the Project site were located primarily to the west and south of the property. The closest recorded site is located to the northwest of the Project site along the side of a hill.

No known cemeteries exist and no recorded Native American or other human remains have been identified within or adjacent to the study area for the Proposed Project; however, the site record and archival searches undertaken in 2003 indicated that human remains have been identified on the mesa top, approximately one mile to the southwest of the proposed site. The site is listed on the National Register of Historic Places and was known ethnographically as the Village of Ystagua.

Archaeological Field Survey Results

On September 15, 2009, ASM conducted archaeological monitoring for the Proposed Project to determine the potential for the presence of cultural resources. An access road associated with improvements for the proposed Substation had previously been graded to a depth of approximately two feet. SDG&E contract crews drilled a hole three feet in diameter and approximately 75 feet in depth.

Based on the records review and field survey, no prehistoric or historic cultural resources were identified, and no such resources were discovered during archaeological monitoring of the drilling activities. In addition, the field survey did not identify any cultural resources within the area where installation of the Substation facilities is proposed. Based on the results of the geotechnical boring, it was determined unnecessary to continue archaeological monitoring of additional construction activities at the Proposed Project location.

Paleontological Resources Assessment

A Paleontological Survey was completed by the San Diego Natural History Museum (SDNHM) in April 2003; refer to Appendix E. The study found that the Project site is located on deposits mapped as Ardath Shale-Scripps Formation (Kennedy, 1975). These deposits

consist of primarily light brown, tan to light gray sandy siltstones and sandstones of middle Eocene age. The record search revealed the presence of six localities recorded within a one-mile radius of the Project site. The nearest locality was recovered approximately 1,000 feet northwest of the Project boundary. Four localities were collected within less than 0.5 mile of the Project area and from rocks exposed during construction activities on a single site. One additional site was located approximately two-thirds of a mile southwest of the parcel near Interstate 805 and produced significant marine invertebrate fossil assemblage and plant material from the Scripps Formation.

Marine fossils of middle Eocene age (approximately 45 million years ago) occur in the deposits of the Ardath Shale and Scripps Formation. Fossils within the Scripps Formation generally consist of the remains of marine organisms including clams, snails, crabs, sea urchins, sharks, rays, and bony fish. Remains of fossil invertebrates generally include reptiles (crocodile and turtle) and terrestrial mammals.

In 2009, personnel from SDNHM provided monitoring for paleontological resources during the onsite drilling activities; however, no unknown paleontological resources were identified.

4.4.4 Impacts

4.4.4.1 Significance Criteria

Cultural Resources

The regulatory framework and methods for determining impacts on cultural resources associated with the Proposed Project include compliance with the requirements of the California Environmental Quality Act (CEQA), as defined in Section 15064.5 of the *CEQA Guidelines*. CEQA calls for the identification of cultural resources that could be affected by the Proposed Project, the evaluation of the significance or importance of such resources, an assessment of Proposed Project impacts on significant or important resources, and the development of a treatment plan to avoid or address adverse effects to significant resources. Significant resources, also called historical resources, are those cultural resources (whether prehistoric or historic) that have been evaluated and determined to be eligible for listing in the California Register of Historical Resources (CHHR).

Under CEQA, effects of a proposed project on significant cultural resources, or historical resources, must be considered in the planning process. According to CEQA, a resource is historically significant if it meets one of the criteria for listing on the California Register of Historical Resources (Public Resources Code 5024.1, Title 14 CCR, Section 4852). That is, a property is significant if it:

- Is associated with an event or person of recognized importance in California or American history or scientific importance in prehistory;

- Can provide useful information of demonstrable public interest and is useful in addressing scientifically consequential and reasonable archaeological research questions;
- Has a special or particular quality, such as oldest, best example, largest, or last surviving example of its kind;
- Is at least 100 years old and possesses substantial stratigraphic integrity; or,
- Involves important research questions that historical research has shown can only be answered with archaeological methods.

In addition to meeting one of the above criteria, a resource must retain enough of its integrity, or the authenticity of a historical resource's physical characteristics that existed during the resource's period of significance [California Code of Regulations (CCR) Title 14, Chapter 11.5 Section 4852(c)].

Projects that may cause a substantial adverse change in the significance of an historical resource may have a significant effect on the environment under CEQA. This includes:

1. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
2. The significance of an historic resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in or eligibility for inclusion in the California Register of Historic Resources or a county or community historical register (CEQA Guidelines 15064.5, 2007).
3. Disturbs any human remains, including those interred outside of formal cemeteries.

"Substantial adverse change" includes demolition, destruction, relocation, or alteration activities that would impair the significance of a historical resource. Any resource listed on, or eligible for listing on, the CRHR is presumed to be historically or culturally significant, per Section 21084.1 of the CEQA Guidelines.

Paleontological Resources

Paleontological resources are limited, non-renewable resources of scientific, cultural, and educational value that are protected under CEQA (PRC 21000 et seq.). CEQA and PRC Section 5097, et seq. govern the preservation and protection of these resources. Since fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. Any impacts to fossils can be significant and, under CEQA guidelines, require mitigation.

Impacts to paleontological resources are typically rated from high to zero depending upon the resource sensitivity of impacted geologic formations. The specific criteria applied for each sensitivity category are summarized below.

- **High Sensitivity:** High sensitivity is assigned to geologic formations known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- **Moderate Sensitivity:** Moderate sensitivity is assigned to geologic formations known to contain paleontological localities with poorly preserved, common elsewhere, or stratigraphically unimportant fossil material. The moderate sensitivity category is also applied to geologic formations that are judged to have a strong, but unproven, potential for producing important fossil remains.
- **Low Sensitivity:** Low sensitivity is assigned to geologic formations that, based on their relatively youthful age and/or high-energy depositional history, are judged unlikely to produce important fossil remains. Typically, low sensitivity formations have the potential to yield poorly-preserved invertebrate fossil remains in low abundance.
- **Zero Sensitivity:** Zero sensitivity is assigned to geologic formations that are entirely igneous in origin and therefore have no potential for producing fossil remains. Artificial fill materials are also placed in this category.

A significant impact would occur if a project would directly or indirectly destroys a unique paleontological resource or site or unique geologic feature. Fossils are considered to be non-renewable resources as they represent the remains of prehistoric animal and plant life.

4.4.4.2 Impact Analysis

Question 4.4a – Historical Resource Change

Construction – Less than Significant Impact

No historic or prehistoric resources have been identified within the proposed construction areas of the Proposed Project. As such, potential impacts on significant historic resources are considered to be avoided and no further testing or monitoring is required. Potential impacts are considered to be less than significant.

Operation and Maintenance - No Impact

The long-term operation of the Mira Sorrento Substation will not impact any known historic resources onsite, as none have been identified. All future activities onsite will occur within the fenced boundaries of the Substation facilities, or along the (manufactured) slopes to the east for maintenance purposes. Therefore, no impacts to historic resources are anticipated as the result of long-term operation or maintenance of the Proposed Project.

Question 4.4b – Archaeological Resource Change

Construction – Less than Significant Impact

No important cultural resources have been identified onsite. In addition, the Project site is located in a highly disturbed area. Construction of Mira Mesa Boulevard, Interstate 805, Vista Sorrento Parkway, and other commercial land uses to the east have previously disturbed surrounding lands. In addition, installation of power lines, a gas pipeline, and drainage-control facilities have all previously disturbed the Project site or surrounding areas. As such, the potential for significant cultural resources to be discovered on lands affected by the Proposed Project is considered to be less than significant.

Operation and Maintenance - No Impact

Portions of the Proposed Project site have been previously disturbed with limited improvements from surrounding roadways, utilities, and drainage facilities, as well as drilling activities associated with onsite geotechnical investigations. Ground-disturbing activities associated with long-term operation and maintenance of the Mira Sorrento Substation would be minimal, due to the nature of the land use, and would not disturb additional areas not previously disturbed during the Project construction phase. As no significant cultural resources have been identified onsite or in the immediate surrounding area, no impacts to cultural resources are anticipated as the result of long-term operation or maintenance of the Proposed Project.

Question 4.4c – Paleontological Resource Destruction

Sensitivity of Paleontological Resources

Construction – Less than Significant Impact

The potential for physical destruction of paleontological resources may occur when ground-disturbing activities such as grading or excavation that cut into the underlying geological deposits or formations occur. Although no known paleontological resources have been identified on the Project site, the site is located in an area where a known abundance of fossils in the Scripps Formation and the underlying lateral equivalent Ardath Formation occurs. As such, fossils may be encountered during excavation activities for the Proposed Project. The Proposed Project includes implementation of APMs CUL-1 through CUL-3

which provide a paleontological construction monitoring program when grading activities take place. Monitoring during ground disturbance activities will ensure that potential impacts to unknown paleontological resources remain less than significant.

Operation and Maintenance – No Impact

Ongoing operation and maintenance activities associated with the Mira Sorrento Substation will occur within areas of the Project site that would be disturbed during the construction phase. As such, it is not anticipated that the Proposed Project would result in activities that would have the potential to encounter paleontological resources during operation and maintenance procedures. Therefore, no impacts will occur.

Question 4.4d – Human Remains Disturbance

Construction – Less than Significant Impact

The site record and archival searches undertaken in 2003 indicated that human remains have been identified on the mesa top, approximately one mile to the southwest of the proposed site. As such, the potential for the unintended discovery of unknown human remains during subsurface construction activities required for the Proposed Project exists. SDG&E will implement APMs to ensure that, in the event that Native American human remains are discovered during construction, all work will be halted in the vicinity of the find and the County coroner will be notified. Standard procedures established in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be implemented to ensure Project compliance with applicable Federal, State, and local regulations with regard to the proper treatment and handling treatment of human remains. As a result, potential impacts are considered to be less than significant.

Operation and Maintenance – No Impact

The presence of human remains within the Project study area is considered unlikely; however, the potential for discovery of human remains in the area does exist. As ongoing Proposed Project operation and maintenance activities will occur in areas already disturbed during the construction phase, they are not anticipated to adversely impact any human remains. Therefore, no impacts with regard to the disturbance of human remains are anticipated.

4.4.5 Applicant Proposed Measures

With implementation of the following APMs, Project impacts on paleontological resources would remain less than significant:

- APM-CUL-1: A qualified paleontologist shall attend preconstruction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety issues. A

qualified paleontologist is defined as an individual with a Master of Science or Doctor of Philosophy in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Southern California, and who has worked as a paleontological mitigation project supervisor in the region for at least one year. The requirements for paleontological monitoring shall be noted on the construction plans.

- APM-CUL-2: A paleontological monitor shall work under the direction of the qualified Project paleontologist and shall be onsite to observe excavation operations that involve the original cutting of previously undisturbed deposits with high or moderate paleontological resource sensitivity. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.
- APM-CUL-3: In the event that fossils are encountered, the Project paleontologist shall have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The paleontologist shall 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 shall determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager shall concur with the evaluation procedures to be performed before construction activities are allowed to resume.

  Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation onsite. When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them along with pertinent stratigraphic data. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk-sedimentary-matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections.

4.4.6 References

California Public Utilities Code. 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 General Plan Final Environmental Impact Report. Certified September 2007.

Cultural and Paleontological Resource Information for the Mira Sorrento Substation, City of San Diego (RECON Number 3829A). Prepared by RECON. May 15, 2003.

Paleontological Resources Record Search. Prepared by San Diego Natural History Museum. April 15, 2003.

Preliminary Report of Archaeological and Paleontological Monitoring for the SDG&E Mira Sorrento Substation Project. Prepared by ASM Affiliates. September 21, 2009.

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4.5 Geology, Soils and Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential 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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
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 (1997), creating substantial risks to life or property?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Have 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?	☐	☐	☐	☒
Minerals				
f. 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?	☐	☐	☐	☒
g. 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?	☐	☐	☐	☒

4.5.1 Introduction

The analysis in this Chapter is taken from the Geotechnical Investigation, prepared by Kleinfelder, Inc., dated May 7, 2003; and, Updated Report of Geotechnical Investigation Proposed SDG&E Mira Sorrento Substation, Kleinfelder, October 1, 2010; refer to Appendix F for documentation relevant to this Chapter. This Chapter describes the geologic and soil conditions in the area for the proposed Mira Sorrento Substation. The potential geologic and seismic impacts of the Proposed Project are analyzed and include the exposure of people and structures to potential 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 implementation of SDG&E's Applicant Proposed Measures (APMs), construction of the proposed Mira Sorrento Substation will result in less than significant geologic impacts.

4.5.2 Methodology

This Chapter was prepared primarily based on the Geotechnical Investigation. Other documentation prepared by the City of San Diego Planning Division and Development Services departments was also reviewed.

The Mira Sorrento Substation and TL665 loop-in were considered in the following analysis. Where existing conditions or potential impacts are identical for multiple components, these components are described together in the subsections that follow.

4.5.3 Existing Conditions

4.5.3.1 Geologic Setting

The Proposed Project area is situated in the Peninsular Ranges Geomorphic Province. 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 late Cretaceous, Tertiary, and Quaternary age sedimentary rocks. Most of the coastal region of the County of San Diego, including the general site area, occur within this coastal region and are underlain by sedimentary rock. Specifically, the Project site in this portion of the Province is underlain at depth by Quaternary-age and Tertiary-age (Eocene) sediments.

4.5.3.2 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 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 predominately controlled by right-lateral strike-slip faulting associated with the movement of two tectonic plates, the Pacific Plate and the North American Plate. This boundary is primarily defined by the tract of the San Andreas fault, which lies east of San Diego County in the Imperial Valley. The San Andreas fault is actually consists of a broad system of numerous subsidiary faults stretching from the main San Andreas fault on the east to well offshore to coast of San Diego County. Much of the San Diego coastal area lies within one of these subsidiary strands known as Rose Canyon Fault Zone, a zone of primarily right-lateral faults.

Fault Rupture

Within the Peninsula Ranges, several complex zones of predominantly right-lateral strike-slip faults occur. A number of active faults occur at a distance from the Project site within the southern California region that are capable of surface rupture.

The project area is considered to be seismically active, as is most of southern California. The Project site does not lie within an active Alquist-Priolo Special Studies Zone and the subject site is not underlain by a known potentially active fault.

The City of San Diego Seismic Safety Study (1995), the geologic map of the La Jolla Quadrangle, and fault maps by Treiman (1993) indicate the Project site is not underlain by active or potentially active faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively), nor does the Project site lie within an Alquist-Priolo Earthquake Fault Zone. The Rose Canyon fault is the closest mapped active fault and is located approximately 3.9 miles (6.3 kilometers) west of the Project site. Based on this data, the potential for fault rupture at the site is negligible.

Strong Ground Motion

The 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 the Caltrans (2009) Seismic Hazard Map, the controlling fault for this Project is the Newport-Inglewood-Rose Canyon fault, which is located at an approximate distance of 3.9 miles (6.3 km) west of the Project site.

Liquefaction

The term liquefaction describes a phenomenon in which saturated, cohesionless soils temporarily lose shear strength (liquefy) due to increased pore water pressures induced by strong, cyclic ground motions during an earthquake. Structures founded on or above potentially liquefiable soils may experience bearing capacity failures due to the temporary loss of foundation support, vertical settlements (both total and differential), and undergo lateral spreading. The factors known to influence liquefaction potential include soil type, relative density, grain size, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking. The cohesionless soils most susceptible to liquefaction are loose, saturated sands and some silts.

The majority of the Project site is underlain at depth by weakly to moderately cemented sandstones and weakly to strongly indurated siltstones and claystones. Based on the dense nature of these formational deposits as well as the absence of a shallow groundwater in those areas, the potential for liquefaction and seismic related settlement across the majority is considered low.

Where the drainage crosses the southeastern portion of the site, however, unconsolidated and saturated landslide deposits were identified during the geotechnical investigation. In addition, alluvium was mapped near the drainage channel area. Therefore, the potential for liquefaction in the southeastern portion of the site where the drainage is located is considered high.

Slope Instability

Earthquake ground shaking can cause damaging landslides and rockfall hazards. Conditions most susceptible to ground failure caused by earthquakes include highly weathered and unconsolidated materials on moderately steep slopes (particularly areas where landslides have previously occurred).

According to the City of San Diego Seismic Safety Study (updated 2008), portions of the Project site are located in Geologic Hazard Category 25, 32, and 53; refer to Figure 4.5-2, *Geologic Hazards and Faults*. Geologic Hazard Category 25 is designated as a site underlain by the Ardath Shale with a moderate risk for landslide hazard; however, the site specific geotechnical study did not identify Ardath Shale on the site and concluded that the site is entirely underlain by the Scripps Formation based on boring samples conducted onsite. Scripps Formation is not identified as a Slide Prone Formation in the City's Seismic Safety Study. Therefore, the risk with respects to landslides would be low.

Hazard Category 32 is related to liquefaction potential in the low lying drainage feature outside of the proposed development area and is not considered a risk.

The proposed development area is located in Geologic Hazard Category 53. This designation characterizes a site as having relatively level to sloping terrain with an unfavorable geologic structure and a low to moderate risk for slope instability; however, the onsite borings observations, showed that the geologic structure is favorable with respects to slope stability. Therefore, the risk with respects to landsliding would be low.

Differential Settlement

Soils that settle non-uniformly can result in damage to a structure. Differential settlement is typically the result of differences in the load-bearing characteristics of soils. A portion of the soil underlying a structure may lose strength during an earthquake as the result of liquefaction. If liquefaction occurs non-uniformly, differential compaction will occur. Geologic units that are unconsolidated or weakened may be subject to differential settlement and typically include areas that are underlain by alluvium and highly weathered rock. Based on the dense nature of the on-site formational deposits, as well as the absence of shallow groundwater in such areas, the potential for seismic-related settlement to occur across the majority of the Project site is low.

Subsidence

Subsidence generally occurs when fluids are extracted from the ground (i.e., oil drilling and extraction), thereby reducing support for soils that were previously saturated. Subsidence can also occur during earthquake events as the result of tectonic downwarping. The Project site is considered to have a low potential for damage due to subsidence, due to the nature of the geologic conditions below the site and surrounding area, proposed site improvements, and long-term operational characteristics of the Substation.

Soils

Geologic units encountered in the soil borings, or mapped during the field evaluation included fill, a landslide deposit, topsoil/colluvium, alluvium, and the Scripps Formation. Detailed descriptions of these units are provided in Appendix A of the 2010 Kleinfelder Geotechnical Report, and generalized descriptions are provided below.

Fill

Fill materials are present along the southern portion of the Project site; however, since these materials are located outside of the proposed Substation improvements, no soil sampling of the fill materials was performed. The fill materials are associated with the construction of Mira Mesa Boulevard to the south of the Project site and Vista Sorrento Parkway to the west of the site.

Landslide Deposit

As encountered during the subsurface evaluation, the landslide deposit consists generally of brown, loose to soft, dry to saturated silty fine-grained sand to clayey silt. The thickness of the deposit varies up to 18 feet, as indicated by boring samples taken onsite during the subsurface geotechnical investigation.

Topsoil/Colluvium (Not Mapped)

Topsoil/Colluvium is a surficial material and was encountered in all borings with the exception of Boring 3, which was performed in an existing cut area associated with an access road. The topsoil/colluvium materials were generally encountered from the ground surface to depths of up to approximately 4.5 feet, with an average depth of approximately three feet. As encountered, the topsoil/colluvium consisted of light brown to dark brown, dry to moist, loose/soft to firm clay silt/clay to sandy clay with some organics and pinhole porosity.

Alluvium

Alluvium is present along the lower eastern portion of the site within the natural drainage feature. This drainage feature however, is located outside of the proposed substation improvements and the alluvium was only encountered in Boring 12 and Boring 13. In general, the alluvium consists of brown, moist and saturated, loose, clayey sand.

Scripps Formation

The Eocene-age Scripps Formation is mapped underlying the Project site, and was encountered in all exploratory borings performed during the subsurface evaluation. The Scripps Formation consisted of light brown to brown and light olive brown, weakly to moderately indurated siltstone and claystone, and weakly to moderately cemented fine-grained sandstone. Laboratory testing of these materials indicated that the on-site materials

are expected to be somewhat wet of optimum and may need to be dried prior to recompaction as engineered fill.

The review of geologic and geotechnical references indicates that the Scripps Formation located near the site contains occasional strongly cemented and very resistant concretionary zones that generally require heavy ripping or excavation effort. Due to the moderately indurated nature of the Scripps Formation located at the Project site, combined with use of limited access drill rigs during the earlier 2003 Kleinfelder investigation, auger borings were not able to significantly penetrate into the formation at any of the boring locations; however, concretions were encountered and penetrated during the 2009 Kleinfelder investigation. This was accomplished with a large diameter rotary bucket-auger drill rig. A specialized core barrel was required to penetrate the concreations and took several hours of effort to accomplish. The largest concretion was approximately 3 feet thick.

Expansive or Collapsible Soils

Expansive soils are composed of a significant amount of clay particles which expand or contract due to respective increases or decreases in moisture content. These shrink and swell characteristics can impart stress and associated deformation to structures with shallow foundation systems. Expansive soils typically have high clay content and are associated with many of the geologic units throughout the San Diego region. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or concrete slabs supported on grade.

A selected sample of soil was tested for expansion index (ASTM D2949) and found to have an Expansion Index of 83. Expansive foundation soils are soils with an expansion index of more than 20. Based on Table 18A-I-B of the California Building Code (CBC), some of the inter-bedded clay layers onsite are classified in the medium expansion range.

Mineral Resources

The Project site is located in a developed industrial area of the City of San Diego. No known mineral resources would be lost due to the proposed development of the site. No mineral resources have been identified on the Project site or in the surrounding Project vicinity.

4.5.4 Impacts

4.5.4.1 Significance Criteria

Standards of significance were derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. These standards are summarized below.

Geology and Soils

Impacts to geology and soils will 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 will 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 UBC (1994), creating substantial risks to life or property; or,
- 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.

Mineral Resources

Impacts to mineral resources will be considered significant if the Proposed Project:

- Results in the loss of availability of a known mineral resource that may be of value to the region and the residents of the State; or,
- Results in the loss of availability of a locally important mineral resource recovery site that is delineated on a local general plan, specific plan, or other land use plan.

4.5.4.2 Impact Analysis

Question 4.5a – Human Safety and Structural Integrity

i. Rupture of a Known Earthquake Fault – 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.

No known active faults or mapped Alquist-Priolo Earthquake Fault Zones traverse or are in the immediate vicinity of any of the areas affected by the Proposed Project. One concealed fault runs just to the south of the Project site, south of Vista Sorrento Parkway and Mira Mesa Boulevard; refer to Figure 4.5-2, *Geologic Hazards and Faults*. The Rose Canyon fault is the closest mapped active fault and is located approximately 3.9 miles (6.3 kilometers) west of the Project site.

To minimize the potential for damage to occur from rupture of an earthquake fault, the Mira Sorrento Substation will be configured according to the Institute of Electrical and Electronics Engineers (IEEE) 693 "Recommended Practices for Seismic Design of Substations" in order to withstand anticipated ground motion. 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 Ground Shaking – Less than Significant Impact

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.

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 ($M \geq 7.0$) and have a relatively low rate of seismic activity. Type B faults are all other than Type A or C. The San Andreas and 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 Rose Canyon fault zone. The Rose Canyon fault zone is more dominant than the nearest Type A fault zone, due to its proximity to the Project site.

The Proposed Project, including the Substation structures and foundations, will be designed to withstand strong seismic accelerations in accordance with SDG&E standard design and engineering practices 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. As such, potential impacts as the result of damage caused by strong seismic shaking are considered less than significant.

iii. Seismic Related Ground Failure (Including Liquefaction) – Less than Significant Impact

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. Typically, loose fine-grained sands and silts below the water table are most susceptible to liquefaction. Medium dense sands and silts below the water table may also liquefy if the shaking is of sufficient severity and duration. Adverse effects of liquefaction include the loss of bearing strength, lateral spreading, sand boils, ground oscillation, and settlement when liquefied ground re-consolidates following the seismic event.

According to the City of San Diego Seismic Safety Study, portions of the Project site are located in Geologic Hazard Category 32. A Geologic Hazard Category of 32 characterizes the site area as having a low potential for liquefaction.

The majority of the subject site is underlain at depth by weakly to moderately cemented sandstones and weakly to strongly indurated siltstones and claystones. Based on the dense nature of the on-site formational deposits as well as the absence of a shallow groundwater in those areas, the potential for liquefaction and seismic related settlement across the majority of the site is low; however, where the previously mentioned drainage crosses the southeastern portion of the site, unconsolidated and saturated landslide deposits were encountered during Kleinfelder's subsurface evaluation. In addition, alluvium was mapped near the drainage channel area. Therefore, the potential for liquefaction in the localized southeastern portion of the site is considered high. Mitigation of potential liquefaction is addressed in the following sections.

To ensure the Proposed Project is designed to minimize the risk from geological hazards, the Proposed Project will implement APM GEO-1. This APM provides specific geotechnical and structural design specifications from the final engineering geotechnical report which enable the Proposed Project to meet existing building code requirements and incorporate design measures that address the site specific geological conditions. Measures for subsurface seepage and groundwater will be required for remedial removal to be accomplished and may consist of temporary dewatering. As site development requirements will be implemented to reduce the potential for hazards to occur as the result of potential liquefiable soils encountered during the construction phase, potential impacts due to liquefaction and subsidence are considered less than significant.

iv. Landslides – Less than Significant Impact

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. Cutting operations can also contribute to landslides when lateral support near the base of unstable hillside areas is removed. 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.

According to the City of San Diego Seismic Safety Study, portions of the Project site are located in Geologic Hazard Category 53 and 25; refer to Figure 4.5-2, *Geologic Hazards and Faults*. A Geologic Hazard Category of 53 characterizes the Project area as having relatively level to sloping terrain with an unfavorable geologic structure and a low to moderate risk for

slope instability; a Geologic Hazard Category of 25 characterizes the Project site as having a slide prone formation present with a neutral or favorable geologic structure.

As previously noted, a relatively shallow landslide was mapped onsite during the field reconnaissance and was subsequently evaluated during the subsurface evaluation. As mapped, the landslide deposit is approximately 190 feet in length and 90 feet in width, with a near vertical head scarp across the upper elevations; however, the base of the slide is difficult to delineate, due to the presence of abundant tall vegetation, but is expected at the bottom of the slope near the natural drainage channel located at the base of the Project site. The maximum anticipated thickness of the landslide deposit is approximately 18 feet near the lower elevations with an average thickness of approximately 10 feet across the natural slope area.

No indications of deep-seated landsliding onsite were observed or identified during the geotechnical investigation; however, a previously-mapped bedding plane shear (BPS) zone is located at an elevation of approximately 210 feet above mean sea level (amsl) within the northwestern portion of the site. This shear zone was identified on the site during the geologic evaluation by Kleinfelder and was projected onto the site by geologic work conducted previously on the properties to the north. In light of this, the BPS zone as mapped is at an elevation proposed to be cut away from the site (proposed pad elevation of approximately 180 feet amsl). No other BPS zones were identified on the adjacent cut slope. Therefore, the potential for significant large-scale slope instability to occur at the Project is considered to be low.

The Project will require construction of two retaining walls along the eastern slope of the site. The soil materials underlying a portion of the proposed retaining walls consist of a combination of native unweathered to weathered formational materials, landslide deposits, and topsoil/colluvium. The Geotechnical Investigation indicates that the compressible soil materials are considered unsuitable for the support of the proposed retaining walls and Substation structure. As such, grading for the Project will include removal and recompaction of the potentially compressible soils within the building envelope and retaining wall footprint areas, consistent with APM GEO-1 and the design measures in the October 2010 Kleinfelder, Inc. report. Removal of these soils will range from several feet in some areas to as much as 18 feet in other areas. As the Proposed Project will include removal and recompaction of these unstable soils prior to construction of any structures, and appropriate measures will be integrated into the Project design to minimize risks associated with slope failure and instability, potential impacts from landslides will be reduced to less than significant.

Question 4.5b – Soil Erosion or Topsoil Loss

Construction – Less than Significant Impact

The Proposed Project would not result in substantial soil erosion or the loss of topsoil. The Proposed Project will require approximately 65,500 cubic yards of cut and 67,000 cubic

yards of fill for the grading, retaining wall backcut, and retaining wall backfill. As such, grading activities will have the potential to subject soils to erosion by removing vegetation and disturbing the existing soil structure. Rain and wind may further contribute to the erosion of disturbed soils, which may also be transported to offsite locations or offsite waterbodies; however, with the implementation of design measures included in the Stormwater Pollution Prevention Plan (SWPPP) and SDG&E's Water Quality Construction Best Management Practices (BMP) Manual, the potential for erosion or loss of topsoil resulting from the Project will be reduced to less than significant.

As part of the Proposed Project, TL665 will be split and proceed underground via two new parallel trench alignments along Vista Sorrento Parkway then cross Mira Sorrento Place to the proposed Mira Sorrento Substation. As construction would occur within the existing paved rights-of-way, the exposure of soils to erosion or loss of topsoil from the removal of vegetation or disturbance of the existing soil structure will not occur. Impacts will be less than significant.

Operation and Maintenance – Less than Significant Impact

Long-term operation or maintenance of the Mira Sorrento Substation will generally not involve ground-disturbing activities or grading. If additional grading is required for maintenance purposes, SDG&E will be required to implement the measures provided in the SWPPP and associated BMPs. To further minimize ground disturbance and potential resulting soil erosion or loss of topsoil, maintenance vehicles will utilize the proposed access road, and will not disturb undeveloped lands. As such, impacts with regard to soil erosion or topsoil loss are considered to be less than significant.

Question 4.5c – Geologic Unit Instability – Less than Significant Impact

The Project site is entirely underlain by the Scripps Formation based on boring samples conducted onsite. The Proposed Project area (and all of southern California) is subject to relatively strong seismic shaking due to earthquakes; however, implementation of APM GEO-1 will be implemented to ensure that all structures and Project components are engineered to withstand strong ground movement and moderate ground deformation. Site development will include removal and recompaction of existing potentially compressible soils within the limits of grading prior to the placement of engineered fill materials and from the entire footprint and backfill zone of the proposed retaining walls in the eastern portion of the site to reduce potential damage from liquefaction. The Proposed Project is not located in an area likely to be subject to subsidence because construction and/or operation and maintenance activities will not involve withdrawal of substantial amounts of groundwater that could result in subsidence. The Substation and TL665 components will be located on relatively flat terrain, and Project design includes the construction of retaining walls to reduce the potential for onsite slope failure, which is considered to be low. To ensure the proposed Project is designed to minimize the risk from geological hazards, the Project will

implement APM GEO-1. This APM provides specific geotechnical and structural design specifications from the final engineering geotechnical report which enable the project to meet existing building code requirements and incorporate design measures that address the site specific geological conditions. As a result, impacts associated with geologic unit and soil instability are considered to be less than significant.

Question 4.5d - Expansive Soils – Less than Significant Impact

Expansive soils are soils that undergo volumetric change with change in water content. Such soils will swell with increase in moisture content and will shrink with decrease in water content. Soils with high shrink-swell potential generally contain high percentages of clay minerals and can potentially cause extensive damage to structures other facilities.

To reduce potential impacts with regard to expansive soils, the Geotechnical Investigation prepared for the Proposed Project recommended that expansive soils with an index greater than 20 be provided beneath foundations and slabs, and be compacted to 90 percent or more relative compaction, in accordance with ASTM D 1557, and moisture conditioned at a moisture content over 2 to 3 percent above optimum. In addition, compliance with standard CBC measures will further reduce potential impacts associated with expansive soils, as such codes will require that specific performance standards are met to ensure structural stability. Therefore, potential impacts from expansive soils will be reduced to less than significant.

Question 4.5e – Soil Permeability – No Impact

The permeability of soil generally affects projects that rely on a septic system for wastewater treatment. The proposed Mira Sorrento Substation would be unmanned. As such, the Substation will not require or result in new or increased demand for the use of septic tanks or alternative wastewater disposal systems. During the construction phase, all waste products and wastewater generated will be reduced through the use of SDG&E's BMPs, including the use of portable sanitary facilities and the collection and off-site disposal of construction wastewater. Therefore, no impacts will occur.

Question 4.5f – Loss of Regional- or State-Valued Mineral Resources - No Impact

The proposed Mira Sorrento Substation site and associated areas affected by the loop-in are located in a developed urban area within the City of San Diego with no known mineral resources on the property. No known mineral resources would be lost due to the proposed construction of the Substation and associated components. Therefore, no impacts will occur.

Question 4.5g – Loss of Locally Important Mineral Resources - No Impact

There are no known locally important mineral sources or Mineral Resource Zones (MRZs) on the proposed Mira Sorrento Substation site or within the areas affected by the Project components. No active mining operations or known areas designated or delineated for

mineral resource recovery are 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 would occur.

4.5.5 Applicant Proposed Measures

Potential issues related to geology and soils identified above can be adequately addressed by implementing the recommendations in the geotechnical report, engineering standard transmission line practices & guidelines, and SDG&E's APM's. Impacts would be reduced to less than significant.

- APM-GEO-01: SDG&E will incorporate the design measures and findings of the final Geotechnical Investigation Reports prepared by Kleinfelder, Inc. and the contractor's Geotechnical Engineer in the final design of all Project components to ensure that the potential for landslides, expansive soils, and slope instability is compensated for in the final design and construction techniques. In addition, SDG&E will comply with all applicable codes and seismic standards, as appropriate, to minimize the potential for damage from a seismic event. The final Project design will be reviewed and approved by a Professional Engineer registered in the State of California, prior to commencement of construction.

4.5.6 References

Alquist-Priolo - Earth Quake Fault Zones. http://www.consrv.ca.gov/CGS/rghm/ap/Map_index/F4F.htm

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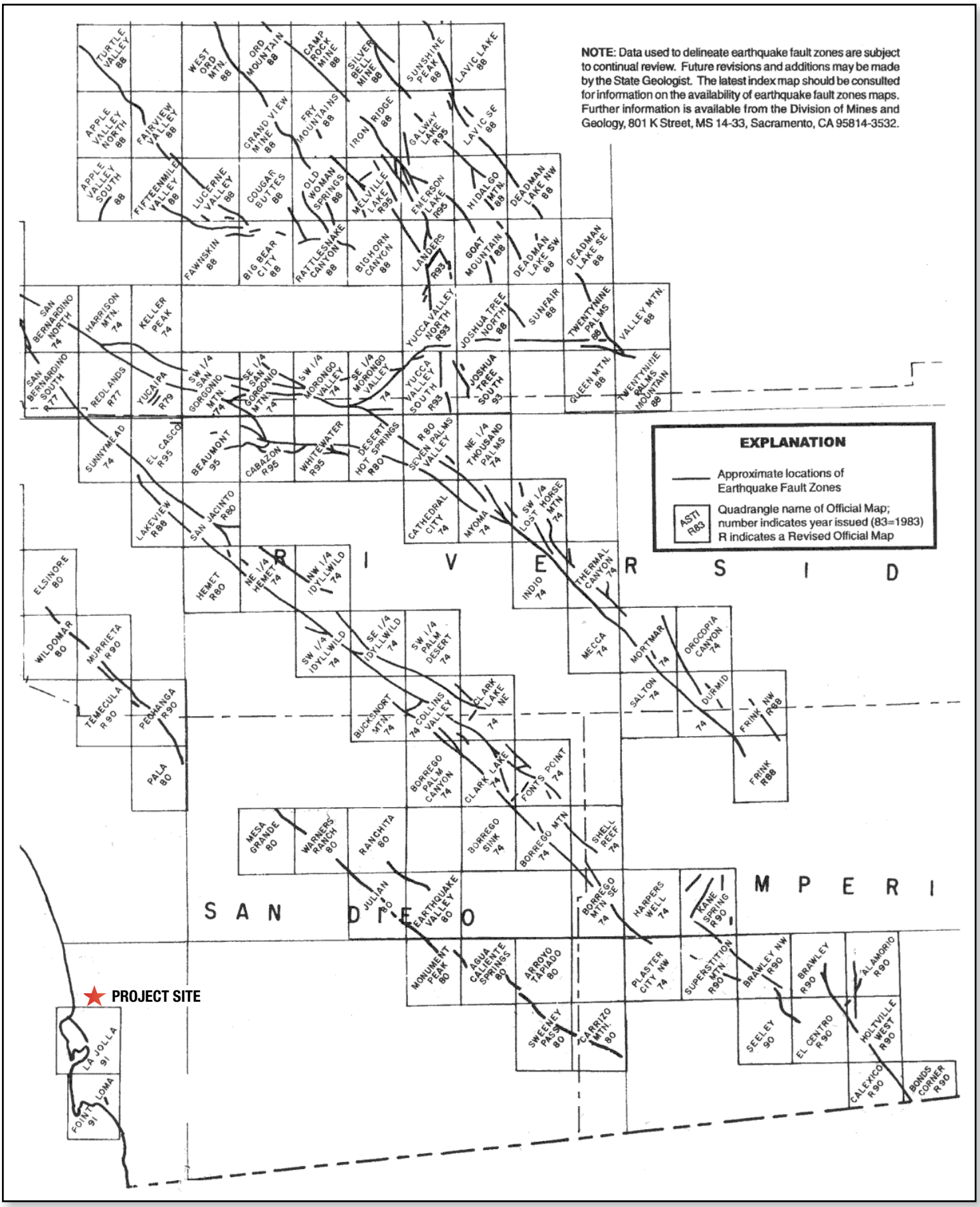
City of San Diego Seismic Safety Study – Geologic Hazards and Faults. Updated 2008.

Filing of Notice of Exemption in Compliance with Public Resources Code Section 21108 or 21152. Mira Sorrento Substation – Geotechnical Borings. March 2009.

Report of Geotechnical Investigation. Kleinfelder,Inc. May 7, 2003.

Update Report of Geotechnical Investigation. Kleinfelder, Inc., October 1, 2010. (Project No. 105945).



Not to Scale

Source: Figure F4. Index to Official Maps of Earthquake Fault Zones.

Mira Sorrento Substation

Proponent's Environmental Assessment

REGIONAL FAULT AND EPICENTER MAP

Figure 4.5-1

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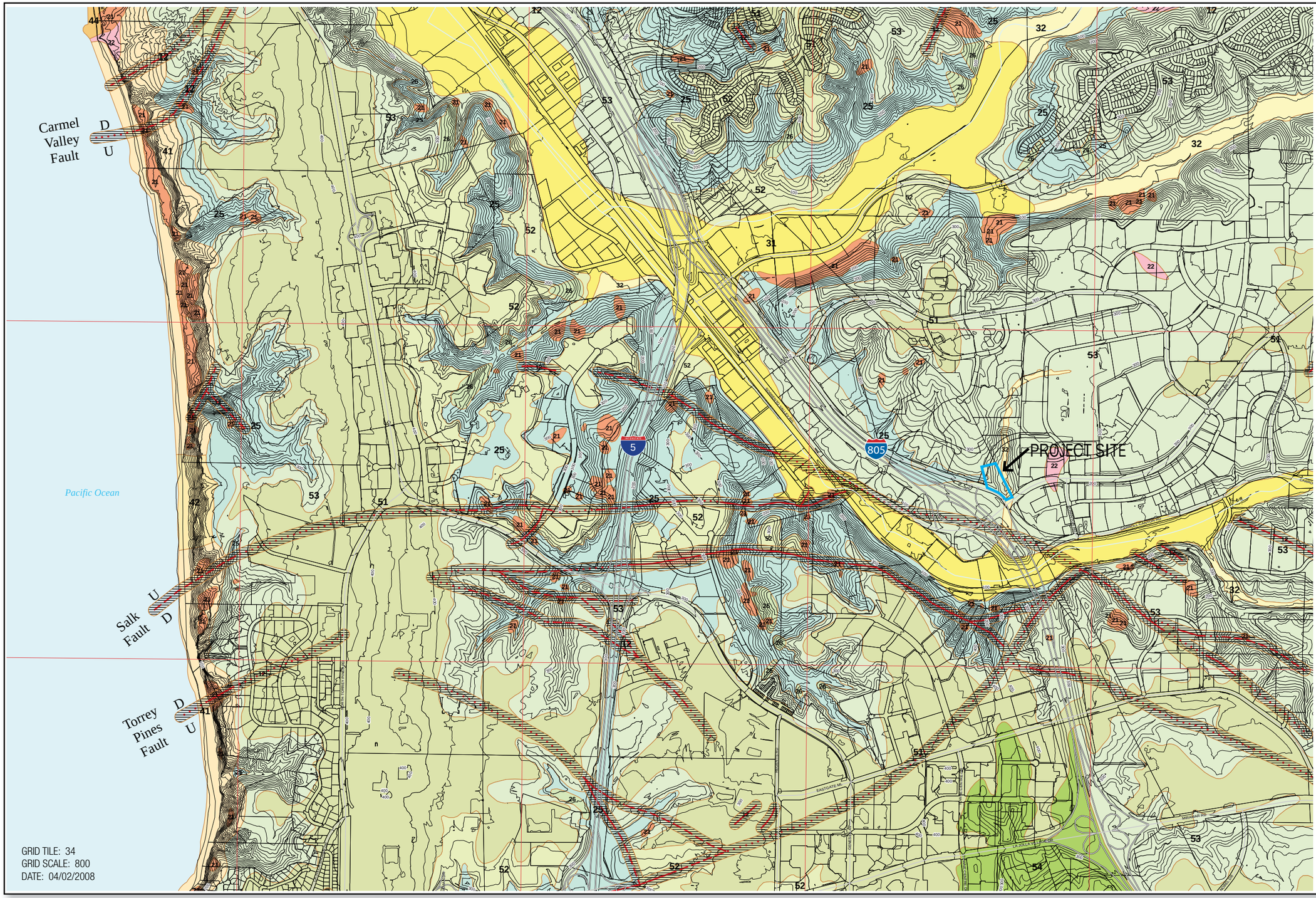


LEGEND
Geologic Hazard Categories

FAULT ZONES
- 11 Active, Alquist-Priolo Earthquake Fault Zone
- 12 Potentially Active, Inactive, Presumed Inactive, or Activity Unknown
- 13 Downtown special fault zone

LANDSLIDES
- 21 Confirmed, known, or highly suspected
- 22 Possible or conjectured

SLIDE-PRONE FORMATIONS
- 23 Friars: neutral or favorable geologic structure
- 24 Friars: unfavorable geologic structure
- 25 Ardath: neutral or favorable geologic structure
- 26 Ardath: unfavorable geologic structure
- 27 Otay, Sweetwater, and others

LIQUEFACTION
- 31 High Potential -- shallow groundwater major drainages, hydraulic fills
- 32 Low Potential -- fluctuating groundwater minor drainages

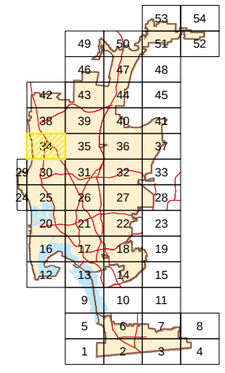
COASTAL BLUFFS
- 41 Generally unstable Numerous landslides, high steep bluffs, severe erosion, unfavorable geologic structure
- 42 Generally unstable Unfavorable bedding plains, high erosion
- 43 Generally unstable Unfavorable jointing, local high erosion
- 44 Moderately stable Mostly stable formations, local high erosion
- 45 Moderately stable Some minor landslides, minor erosion
- 46 Moderately stable Some unfavorable geologic structure, minor or no erosion
- 47 Generally stable Favorable geologic structure, minor or no erosion, no landslides
- 48 Generally stable Broad beach areas, developed harbor

OTHER TERRAIN
- 51 Level mesas -- underlain by terrace deposits and bedrock nominal risk
- 52 Other level areas, gently sloping to steep terrain, favorable geologic structure, Low risk
- 53 Level or sloping terrain, unfavorable geologic structure, Low to moderate risk
- 54 Steeply sloping terrain, unfavorable or fault controlled geologic structure, Moderate risk
- 55 Modified terrain (graded sites) Nominal risk

Water (Bays and Lakes)

FAULTS
- Fault
- Inferred Fault
- Concealed Fault
- Shear Zone
- Project Site

INDEX MAP



0 400 800 1,600 2,400 Feet

0 120 240 480 720 960 Meters

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Source: City of San Diego Seismic Safety Study

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Mira Sorrento Substation
Proponent's Environmental Assessment

GEOLOGIC HAZARDS AND FAULTS

Figure 4.5-2

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4.6 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant 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. Lie on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. Lie 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, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. Lie 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 project:	Potentially Significant Impact	Less Than Significant 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 fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

4.6.1 Introduction

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

With implementation of SDG&E's Applicant Proposed Measures (APMs) and relevant Environmental Standards, potential impacts relative to hazards and hazardous materials would be less than significant; refer to Section 4.6.5, *Applicant Proposed Measures*.

4.6.2 Methodology

A Phase I Environmental Site Assessment (ESA) was prepared by Haley & Aldrich, Inc. for the proposed Mira Sorrento Substation site in August 2009; refer to Appendix G, *Phase I Environmental Site Assessment.* The Phase I assessment included a review of Federal and State databases to identify properties that may be listed in the referenced agency records, located within the ASTM International specified minimum search distances; a review of select historic aerial photographs to assess past usage of the site and surrounding areas; and, a field reconnaissance. Reports summarizing previous hazardous materials investigations were also reviewed to understand existing site conditions. In addition, emergency evacuation and response plans employed by the City of San Diego and emergency measures implemented by the County of San Diego Office of Emergency Services were researched. The City of San Diego General Plan was also reviewed for relevant policies, plans, and programs pertaining to hazards and hazardous materials.

4.6.2.1 Records Review

Federal, State, local, and other databases were reviewed to identify areas where hazardous materials might be encountered during Project construction. A complete list of the databases

reviewed is provided in Appendix G, *Phase I Environmental Site Assessment.* These databases and their relative search radii included, but were not limited to, the following:

- National Priorities List (NPL)—1.0 mile
- Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS)—1.0 mile
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS/NFRAP)—0.5 mile
- RCRA Permitted Treatment, Storage, Disposal Facilities (RCRA-TSD)—0.5 mile
- RCRA Registered Small or Large Generators of Hazardous Waste (GNRTR)—Site and Adjoining
- State CERCLIS (SCL)—0.5 mile
- Toxic Release Inventory Database (TRIS)—0.25 mile
- Leaking Underground Storage Tanks (LUST)—0.5 mile
- Solid Waste Landfill List (SWLF)—0.25 mile
- RCRA Violations/Enforcement Actions (RCRA Viol)—0.25 mile
- Registered Underground or Aboveground Storage Tank Database (UST/AST)—0.25 mile
- Emergency Response Notification System (ERNS) and State Lists (SPILLS)—0.125 mile

Sites where a release, spill, or cleanup has been reported; where a waste disposal/management facility operates or formerly operated; or, where storage tanks are or were present are deemed to have the greatest potential to impact the public or environment if encountered during construction. A complete list and location of all records identified within the ASTM (ASTM E 1527-05 Standard) specified search distances are provided in the Environmental Data Resources, Inc., report; refer to Appendix C of Appendix G.

Historical Use

Aerial photographs and Fire Insurance Maps (Digital Sanborn Maps database) were reviewed, where available, to determine the historical use of the Project site and adjacent properties and to assess the potential for hazardous materials to be encountered on the proposed Mira Sorrento Substation site.

4.6.2.2 Site Reconnaissance

Haley & Aldrich, Inc. performed a site visit on May 7, 2009. The site visit consisted of walking the accessible areas of the property and conducting a visual examination for evidence of potential environmental concerns, including 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 PCBs; and, underground and aboveground storage tanks.

Haley & Aldrich also observed adjoining property conditions from the site boundaries and/or public thoroughfares for potential impacts that could affect the Proposed Project site. Site photographs are included in Appendix D of Appendix G.

4.6.3 Existing Conditions

The following discussion addresses the potential types and amounts of hazardous materials that are anticipated to be located within approximately two miles 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.

4.6.3.1 Regulatory Background

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

- F-List: Wastes from the F-list are published under Title 40 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 Section 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 Section 261.33. These wastes include discarded commercial chemical products in an unused form.

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 for building construction, materials, and other elements or construction practices to be adhered to. 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

The 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, 42 United States Code (USC) Section 6921, et. seq., and its implementing regulations, 40 CFR Section 260, et seq. The generation, transportation, treatment, storage, and disposal of hazardous waste is regulated through Subtitle C of 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. The RCRA also provides the specific quantities of waste that are regulated under the Act.

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

Regulations for planning, reporting, and notification with regard to hazardous materials and hazardous material releases into the environment are given in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA), which is an amendment to CERCLA. Such regulations are given in the Code of Federal Regulations (CFR), Sections 302 through 355.

Annual reporting requirements associated with hazardous material released into the environment are provided in 42 USC Section 11023 and 40 CFR Section 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. Additionally, SARA provides specific planning, reporting, and public notification requirements with regard to the use of hazardous materials.

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.

Under the CAA provisions, regulations governing hazardous materials emissions are provided in 40 CFR Part 68. Such regulations are intended to prevent the accidental release of hazardous materials into the environment.

Marine Corps Air Station Miramar Air Installations Compatible Use Zone Study

The Air Installations Compatible Use Zone Study (AICUZ) for Marine Corps Air Station (MCAS) Miramar is a Department of Defense land use plan used to protect the public's health, safety and welfare and to prevent encroachment from degrading the operational capability of MCAS Miramar. The AICUZ provides the requisite analysis of noise levels, accident potential and obstruction clearance criteria associated with military airfield operations according to the Department of the Navy policy and directives.

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 Regulations (CCRs) identifies the majority of these measures. The Cal-OSHA is responsible for enforcing the occupational and public safety laws adopted by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA). The OSHA is responsible for regulation of workplace hazards and hazardous materials at the Federal level, while the Cal-OSHA regulates hazards and hazardous materials at the State level.

Department of Toxic Substances Control

At the Federal level, the Department of Toxic Substances Control (DTSC) is responsible for the regulation of hazardous waste, pollution prevention, contamination remediation, and identifying means to reduce the potential for hazardous waste contamination. In addition, the California EPA is responsible for regulating hazardous waste at the State level.

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. The 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) and Covenants, Conditions, and Restrictions (CCRs). Individual states are required by 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 waste for the State. The HWCL addresses 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 are not classified as hazardous waste under the Federal RCRA regulations. The 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 Title 19 CCR Section 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 Material 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 (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 Governor's Office of Emergency Services must be notified.

H&SC, Section 25249.5, *et seq*., of the Safe Drinking Water and Toxics Enforcement Act (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 (H&SC §25249.6) occurs. In addition, the Act is aimed at preventing discharges or releases of specified hazardous materials into a ~~–s~~ource 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 San Diego County Department of Environmental Health, HMMD for San Diego County.

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 county and city review of development projects, the Office of the State Fire Marshal, and by local county or city fire chiefs or marshals.

California Public Resource Code

The California Public Resource 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. Clearing of such vegetation shall maintain a 10-foot radius around such structures 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. The removal of trees that may pose the potential to fall on an electrical transmission line and cause damage is also required.

Local

San Diego County

Within San Diego County, including the City of San Diego, the HMMD is responsible for the implementation of the CUPA. Hazardous materials are addressed through various County codes and regulations. The HMMD 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 violation. The regulations for storage and use of explosives are provided in San Diego County General Regulation, Section 6904.

County fire codes are provided in Title 3, Division 5, Chapter 3, County Fire Code, Section 35, *et seq*.

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-rescue, police, storm water protection, and disaster preparedness. 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, are identified.

In addition, the Proposed Project site lies within the City's Airport Environs Overlay Zone, as designated in the City's Municipal Code (Chapter 13, Article 2, Division 3, Sections 132.0301-132.0310). The Overlay Zone provides supplemental regulations for property surrounding the U.S. Marine Corps Air Station (MCAS) Miramar, located approximately three miles to the southeast 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
MCAS-Miramar Airport Land Use Compatibility Plan

The Proposed Project site is located approximately three miles northwest of MCAS Miramar. The Airport Land Use Commission (ALUC) is required by state law to adopt the MCAS-Miramar Airport Land Use Compatibility Plan (ALUCP) which addresses airport compatibility issues related to noise, safety, airspace protection, and aircraft overflight. The ALUCP was adopted on October 2, 2008 and last amended on December 20, 2010. Local agencies are required to submit proposed actions to the ALUC for compatibility review until such time as their General Plans are found to be consistent with the applicable ALUCP.

4.6.3.2 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 Project vicinity, the greater the potential for encountering contamination; and,
- 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, their potential to result in an impact.

4.6.3.3 Existing Hazardous Sites

Haley & Aldrich searched the electronic database service of Environmental Data Resources, Inc. (EDR) to complete the environmental records review relative to the proposed Mira Sorrento Substation. Because the TL665 loop-in would connect into the Mira Sorrento Substation, results from the Phase I ESA for the Mira Sorrento Substation site are also pertinent for the area affected by the loop-in. The database search was used to identify properties that may be listed in the referenced agency records within the ASTM-specified (ASTM E 1527-05 Standard) approximate minimum search distances. Refer to Appendix C of Appendix G, *Phase I Environmental Site Assessment,* for a detailed description of each database searched. The EDR Report also contains search results of other State environmental databases that are relevant to the Project site.

As part of the Phase I ESA for the Mira Sorrento Substation, no listings were identified in the EDR searched databases for the Proposed Project site. The Phase I ESA revealed no evidence of Historic Recognized Environmental Conditions (HRECs), Suspect Recognized Environmental Conditions (SRECs), or Known Recognized Environmental Conditions (KRECs).

In addition, Haley & Aldrich searched the Orphan Site List provided in the EDR Report for the Project site and adjoining sites. Orphan sites are those that, due to incorrect or incomplete addresses, cannot be mapped. The EDR Report identified eight orphan sites; however, neither the Project site nor the adjoining properties were identified on the Orphan Site List.

Four sites were listed within proximity of the Proposed Project that were further considered for their potential to impact the Project site, due to their location relative to the Project site. These sites are described below and shown on Figure 4.6-1, *Hazards Map*:

- ARDEA Biosciences, 4939 Directors Place (Hazards Map ID 2): This facility, located approximately 0.22 mile northwest of the Project site, is listed in the RCRA-SQG, FINDS, and HAZNET databases. No violations were identified in the EDR Report for this site.
- Phase Metrics, 10220 Sorrento Valley Road (Hazards Map ID 1): This facility, located approximately 0.22 mile southwest of the Project site, is listed in the RCRA-SQG, FINDS, and HAZNET databases. No violations were identified in the EDR Report for this site.
- K-Tube Facility, 10581-75 Roselle Street (Hazards Map ID 5): This facility, located approximately 0.87 mile west northwest of the Project site, is listed in the ENVIROSTOR database.

The fourth site considered is Cosmopolitan Cleaners, located approximately 0.30 mile northeast of the Project site. This site is identified as a Suspect Recognized Environmental Condition (SREC), and is described in greater detail below under *Contaminated Soil and*

Groundwater. Refer also to Table 4.6-1, Environmental Database Results, which depicts the sites that were identified by the EDR report within a one-mile radius of the Mira Sorrento Substation site.

Contaminated Soil and Groundwater

The ASTM E 1527-05 Standard defines a Recognized Environmental Condition (REC) as ~~-t~~he presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property." A material threat is defined by the ASTM E 1527-05 Standard as ~~-a~~ physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment." Consistent with ASTM E 1527-05 Section 12.5 (Report Format), those RECs that have been identified as being present with respect to the Proposed Project site are referred to as KRECs, and those RECs that have been identified as being likely present with respect to the site are referred to as SRECs.

A review of regulatory records, historical aerial photography, and a site reconnaissance survey did not identify potentially impacted soil and/or groundwater in any of the areas affected by the Proposed Project. Groundwater is also not expected to be encountered during construction, as groundwater was measured at a depth of approximately 12.5 feet from the surface.

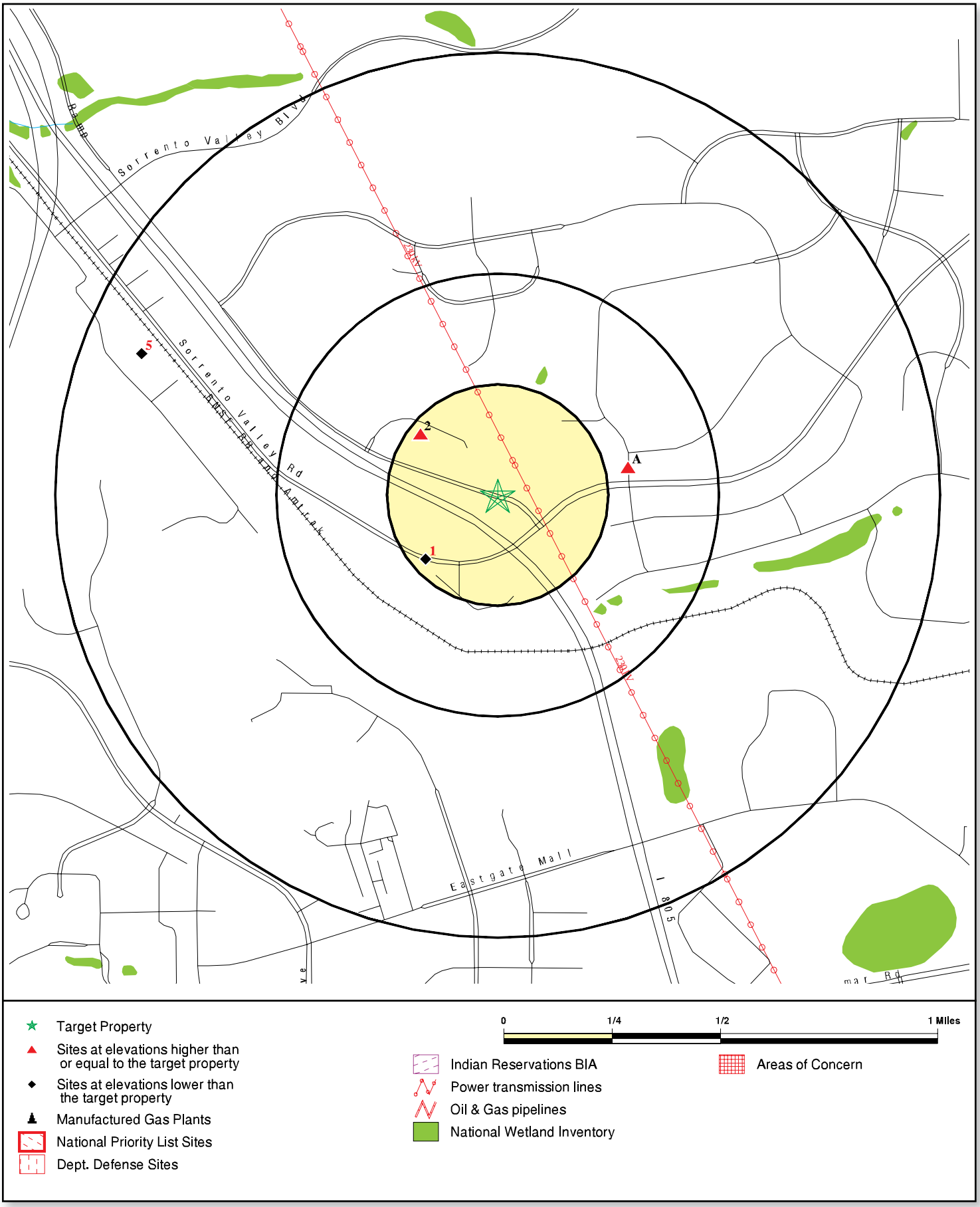
The Phase I ESA conducted by Haley & Aldrich revealed no evidence of KRECs or SRECs in connection with the Proposed Project site; however, one SREC was identified in the database search and is listed in the ENVIROSTOR, SLIC, San Diego County HMMD, and San Diego County SAM and EMI databases. This facility, Cosmopolitan Cleaners, is located approximately 0.30 mile east northeast of the Proposed Project site at 9450 Scranton Road (Map ID A4 on Figure 4.6-1, *Hazards Map*) and has had two previous release cases under the San Diego County Department of Health (DEH) regulatory oversight. The review of DEH records indicated that the first case, involving the release of dry cleaning solvents, trichloroethene (TCE), and tetrachloroethene (PCE) to the soil, obtained regulatory closure in April 2000.

The second case, which remains open, involved the release of TCE and PCE to the soil only and was under assessment at the time the Phase I ESA was prepared for the Proposed Project. According to the DEH records, in 2003 the property owner submitted a letter and identified Cosmopolitan Cleaners as the responsible party of a solvent release and requested assistance for oversight of the investigation. The letter indicated that concentrations of the solvents detected, TCE and PCE, were comparable to those detected from the previous release that was granted closure in 2000. In November 2004, the owner submitted a signed Voluntary

Cleanup Application (VAP) to the DEH. In March 2006, DEH approved permits for four vapor wells drilled to 10 feet below ground surface (bgs) and screened from two to nine feet bgs. In November 2008, Enviroforensics, on behalf of the property owner, submitted a report titled –Request for Site Closure (Closure Report), dated 10/31/2008" to DEH. The Closure Report summarized the work that was conducted and indicated that, based on September 2008 soil samples, closure was requested as TCE and PCE soil concentrations were below Preliminary Remediation Goal's (PRG's).

On December 2008, the DEH requested the property owner to obtain a new VAP application, as the original VAP was outdated. During a telephone interview conducted by Haley & Aldrich in August 2009 during preparation of the Phase I ESA, DEH indicated that the case remains open and that further evaluation on groundwater and soil at this facility was being requested. Based on the database report, the DEH file review, and the interview, the Phase I ESA concluded that this facility is a SREC. As of July 2011, this case was still identified as open with the State Water Resources GeoTracker.[1]

[1] http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=9450+Scranton+Road%2C+San+Diego; accessed July 6, 2011



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Source: Environmental Data Resources, Inc. 2009.

Mira Sorrento Substation
Proponent's Environmental Assessment

HAZARDS MAP

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Figure 4.6-1

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Table 4.6-1: Environmental Database Results

Database Searched	Search Distance (miles)	Number of Sites	Anticipated Risk	Reasoning
HAZNET	0.50	2	None	Because no violations have been reported, and based on the database report, these sites are not expected to pose a risk.
Facility Index System (FINDS)	0.50	2	None	Because no violations have been reported, and based on the database report, these sites are not expected to pose a risk.
San Diego County HMMD	0.50	1	None	This case remained open as of the date of preparation of the Phase I ESA (August 2009). As the release was limited to soil only, and TCE and PCE soil concentrations (September 2008) were below PRGs, a Request for Site Closure Report was submitted to DEH in November 2008. The case is currently being processed by DEH; however, the site is not expected to pose a risk.
San Diego County Site Assessment and Mitigation Program (SAM)	0.50	1	None	This case remained open as of the date of preparation of the Phase I ESA (August 2009). As the release was limited to soil only, and TCE and PCE soil concentrations (September 2008) were below PRGs, a Request for Site Closure Report was submitted to DEH in November 2008. The case is currently being processed by DEH; however, the site is not expected to pose a risk.
RCRA Generators	Site & Adjoining	2	None	Because no violations have been reported, and based on the database report, these sites are not expected to pose a risk.
State Spills, Leaks, Investigation and Cleanup	0.50	1	None	This case remained open as of the date of preparation of the Phase I ESA (August 2009). As the release was limited to soil only, and TCE and PCE soil concentrations (September 2008) were below PRGs, a Request for Site Closure Report was submitted to DEH in November 2008. The case is currently being processed by DEH; however, the site is not expected to pose a risk.

Table 4.6-1: Environmental Database Results, continued

Database Searched	Search Distance (miles)	Number of Sites	Anticipated Risk	Reasoning
State DTSC (ENVIROSTOR)	1.0	2	None	Of the two sites identified in the ENVIROSTOR database, one is located within 0.87 mile downgradient of the Mira Sorrento Substation site; however, based on the database report, distance to the Project site, and downgradient location, the site is not expected to pose a risk. The case for the second site remained open as of the date of preparation of the Phase I ESA (August 2009). As the release was limited to soil only, and TCE and PCE soil concentrations (September 2008) were below PRGs, a Request for Site Closure Report was submitted to DEH in November 2008. DEH is currently processing the case; however, the site is not expected to pose a risk.

Fire Hazards

The Proposed Project is located within the City of San Diego, which is highly urbanized; however, large areas of undeveloped land do exist, particularly within the canyons and along steep slopes where topography does not support the construction of homes or other development. As these areas generally support expanses of natural vegetation, the potential for fire to occur is increased.

The Proposed Project site is located in an area designated as a Very High Fire Hazard Safety Zone (VHFHSZ) as recommended by the California Department of Forestry and Fire Protection (CAL FIRE) in coordination with the City of San Diego Department of Fire and Rescue. The Project's relationship to the fire hazard zone is shown in Figure 4.6.2, *Very High Fire Hazard Severity Zone Map*. Fire Hazard Severity Zones (FHSZ) are found in areas where the State has financial responsibility for fire protection, called State Responsibility Areas (SRA). Areas designated as VHFHSZ are found in local jurisdictions responsible for fire protection, called Local Responsibility Areas (LRA). State law requires that all local jurisdictions identify very high fire hazard severity zones within their jurisdictions. Lands are designated as VHFHSZ based on vegetation density, slope severity, and other relevant factors that contribute to fire severity. Lands are ranked in categories of medium, high, and very high. Landowners within the VHFHSZ are required to implement measures to reduce potential fire risk, such as brush clearing at specified distances from structures, use of specific building materials, and design and construction requirements, among others.

LEGEND

- Roads
- Federal Land
- City of San Diego Boundary
- Parcels
- VHFHSZ & 300' Brush Buffer

GRID TILE: 31

Grid Scale: 25000

Date: February 24, 2009

Source: City of San Diego Fire-Rescue Department

SD Mac: 25103691EIRTabloidLandscape.indd

Mira Sorrento Substation
Proponent's Environmental Assessment

VERY HIGH FIRE HAZARD SEVERITY ZONE MAP

Figure 4.6-2

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The intent is to classify lands in accordance with whether a very high fire hazard is present so that public officials are able to identify measures that would reduce the rate of fire spread and reduce the intensity of uncontrolled fire through vegetation management and implementation of building standards developed to minimize the loss of life, resources, and property.

Schools

Several schools are located within one mile of the Proposed Project site, and children in schools are considered sensitive receptors. These schools are: San Diego College of Ayurveda (approximately 0.3 mile to the west); Children's World Living Center (approximately 1.0 mile to the northeast); San Diego Chinese Institute (approximately 0.7 mile to the east); and, Star Specialties (approximately 0.6 mile to the northeast).

The closest school is located greater than 0.25 miles from the proposed Mira Sorrento Substation site and areas where offsite improvements would occur. Children in schools are considered to be sensitive receptors and are therefore considered in the analysis for potential impacts relative to hazards and hazardous materials.

Airports and Airstrips

The Proposed Project site is not located within two miles of a public or private airport; however, the site is located approximately three miles northwest of Marine Corps Air Station (MCAS) Miramar.

The Proposed Project is required by Federal law to be consistent with the MCAS Miramar AICUZ.

As previously noted, the 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 MCAS Miramar with regard to land use compatibility, noise impacts, and safety hazards, among other issues.

Emergency/Evacuation Plans

The County of San Diego 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 State Office of Emergency Services (OES). The Operational Area is staffed by the County Office of Emergency Services. During a disaster response, OES is responsible for activating the County EOC 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. 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 are also identified. 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 also 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 (CERT) help local communities build a base of emergency preparedness that communities can 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 San Diego Office of Homeland Security, City Police Department, County Sheriff's Department, and San Diego County Office of Emergency Services, also offer coordinated services in the event of an emergency or evacuation.

4.6.4 Impact Analysis

Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. Proposed Project impacts would be considered significant if they:

- Create a hazard to public health or the environment by the routine transport, use, or disposal of hazardous materials;
- Create a hazard to the public or the environment by reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous materials within 0.25 mile of a school;

- Are 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, would create a hazard to the public or the environment;
- Are located within two miles of a public or private airport and would result in a safety hazard for people residing or working in the Proposed Project area;
- Impair implementation of, or physically interfere with, an adopted emergency response or evacuation plan; or,
- Expose people or structures to a risk of loss, injury, or death related to wildland fires.

Question 4.6a – Hazardous Material Transport, Use, or Disposal

Construction – Less than Significant Impact

Potential impacts may occur from the transport or use of hazardous materials during the construction phase. Such impacts may occur as the result of potential spills or other unauthorized releases during ground clearing or driveway construction; excavation for installation of the splice vaults; conductor pulling, splicing, and termination for the installation of the 69 kV transmission line; and, construction of the proposed Mira Sorrento Substation. Other potential impacts relative to the use of hazardous materials may occur during construction at temporary storage sites, from transportation of materials or workers to worksites, or during the refueling or servicing of equipment. In addition, material that is excavated, transported, stored, or disposed of during Project construction has the potential to contain hazardous materials and may present a hazard to construction workers, the public, or the environment if improperly managed. In addition, 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 3.7.5.5 regarding groundwater discharge will be followed.

Table 4.6-2, *Hazardous Materials Typically Used for Construction*, provides a general listing of the types of chemicals typically used during construction of SDG&E substations and associated components. The use of hazardous materials during the construction phase generally has the potential to adversely affect the health or safety of construction workers, nearby building occupants or residents, or other areas within the vicinity of the Proposed Project site.

With the incorporation of SDG&E's APM HAZ-01 given in Section 4.6.5, Applicant-Proposed Measures, which include proper handling and disposal of hazardous materials and training, potential impacts are considered 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 Mira Sorrento Substation would have the potential to pose health and safety hazards to SDG&E maintenance staff, area residents, and the surrounding environment. Potential impacts may occur as the result of possible 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 would be similar to those used during the construction phase; however, daily use of such chemicals would generally be considerably less than those used during construction. Hazardous chemicals used would be transported to and removed from the Project site by maintenance personnel, rather than stored onsite, to reduce the overall potential for accidental release of such substances.

At buildout, the Mira Sorrento Substation would support four standard profile transformers containing approximately 5500 - 9400 gallons of oil per transformer. As the transformers age, the potential for leaks to occur would increase. Other major natural events (e.g. seismic events) or collisions from maintenance equipment would also have the potential to result in a release into the environment. To reduce such risks, SDG&E would install global secondary containment at the Mira Sorrento Substation, which is designed to prevent transport of transformer oil from the property during a leak or spill. Localized mitigation to prevent small leaks from infiltrating into the soil would consist of concrete slabs and curbs around each transformer. Global secondary containment will consist of an onsite containment pit that would drain storm water through filters. If oil were to come in contact with the filter material, the filters would seal shut, thereby preventing oil from leaving the containment pit.

Mineral oil, which is considered to be a hazardous material in the State of California, would be used in the onsite transformers and may represent the potential for accidental release of hazardous substances into the environment. With the incorporation of APM HAZ-1 and BMPs, potential impacts relative to hazardous materials used during operation and maintenance of the Mira Sorrento Substation are considered less than significant.

Table 4.6-2: Hazardous Materials Typically Used for Construction

ABC fire extinguisher	Ammonium hydroxide
Air tool oil	Battery acid (in vehicles and in the meter house of the substations)
Automatic transmission fluid	Insect killer
Bottled oxygen	Puncture seal tire inflator
Canned spray paint	Chain lubricant (contains methylene chloride)
Diesel de-icer	Connector grease (penotox)
Diesel fuel	Diesel fuel additive
Eye glass cleaner (contains methylene chloride)	Contact cleaner 2000
Gasoline	Gasoline treatment
Hot stick cleaner (cloth treated with polydimethylsiloxane)	Lubricating grease
Hydraulic fluid	Starter fluid
Insulating oil (inhibited, non-PCB)	Methyl alcohol
Mastic Coating	Paint thinner
Propane	WD-40
Safety Fuses	ZIP (1,1,1-trichloroethane)
Sulfur hexafluoride (within the circuit breakers in the Substation)	Brake fluid
Two-cycle oil (contains distillates and hydrotreated heavy paraffinic)	Acetylene gas
Wasp and hornet spray (1,1,1-trichloroethene)	Anitfreeze (ethylene glycol)
ZEP (safety solvent)	Motor Oils

Question 4.6b – Reasonably Foreseeable and Upset and Accident Conditions

Construction Activities – Less than Significant Impact

As previously discussed, the Phase I ESA conducted for the existing Mira Sorrento Substation site revealed that no existing contamination has been identified on the Proposed Project site. As the site is presently undeveloped, no demolition activities that could potentially result in the release of hazardous materials (e.g. asbestos) would be required.

As discussed above in response to Question 4.6a – *Hazardous Material Transport, Use, or Disposal*, hazardous materials used in vehicles or equipment during the construction phase may inadvertently be released through spills or leaks; however, with the incorporation of SDG&E's APM HAZ-01, which includes employee training, combined with compliance with applicable Federal and State regulations pertaining to the handling of hazardous

materials and preparation and implementation of a SPCC Plan, potential impacts are considered less than significant.

Operation and Maintenance – Less than Significant Impact

Main Project Component – Proposed Mira Sorrento Substation

Operation and maintenance of the components associated with the Proposed Project would not increase the potential for the release of hazardous materials to impact public safety or the environment. SDG&E and its contractors would be subject to relevant Federal and State regulations regarding the transport, storage, use, handling, and spill response for hazardous materials. Vehicles and equipment that would be used to maintain Project facilities would contain materials that could constitute a hazardous substance if released into the environment; however, the use of such chemicals would typically be considerably less than those used during Project construction activities. To reduce the potential for adverse effects to occur, SDG&E would maintain spill kits within maintenance vehicles to effectively respond to potential spills. In addition, as discussed in the response to Question 4.7a – *Hazardous Material Transport, Use, or Disposal*, SDG&E would implement a SPCC Plan to prevent and/or address any accidental release of hazardous materials. As such, potential impacts from operation and maintenance of the Substation are considered less than significant.

Question 4.6c – Hazardous Substances in Proximity to Schools

Construction – No Impact

Main Project Component – Proposed Mira Sorrento Substation

Schools are considered to be sensitive receptors. No schools are located within 0.25 miles of the Proposed Project site. The closest school, San Diego College of Ayurveda, is located approximately 0.3 mile west of the Project site. Therefore, no impacts from the use of hazardous substances within proximity to schools would occur with the Project.

Operation and Maintenance – No Impact

Main Project Component – Proposed Mira Sorrento Substation

No schools would be affected by long-term operation and maintenance of the Proposed Project, as hazardous materials would not be stored, used, or transported within close proximity to any school. Therefore, no impacts would occur.

Question 4.6d – Existing Hazardous Materials Sites

Construction – Less than Significant Impact

Long-term operation and maintenance activities for the Proposed Project would not result in significant impacts, as no known hazardous sites have been identified on the Project site or on adjacent lands. Although several properties identified in Table 4.6-1, Environmental Database Results, have the potential to, or are known to, contain hazardous substances, they do not pose significant risk to the Proposed Project due to their localized nature, distance and/or downgradient location from the Project site, present regulatory status, or lack of violations reported. As no hazardous materials have been identified on the Proposed Project site, it is unlikely that hazardous materials would be encountered during excavation activities. In addition, the groundwater table is at a sufficient depth such that encountering groundwater during excavation activities is not anticipated. With the incorporation of a SPCC Plan and SDG&E's APMs, impacts would be less than significant.

Operation and Maintenance- No Impact

Long-term operation and maintenance activities would not result in significant impacts, as no known existing hazardous materials or contamination sites are located onsite or within the immediate area. Future maintenance activities for the Substation would 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 would occur.

Although the TL665 components would be installed underground, once construction is complete, operation and maintenance activities would not further disturb underlying surfaces or require activities that would have the potential to encounter unknown hazardous materials sites. As such, no impacts would occur.

Question 4.6e – Public Airport Hazards – No Impact

No components of the Proposed Project are located within two miles of a public airport, and therefore, would not affect or disrupt existing operations or worker safety at such a facility. The Project site is located approximately three miles northwest of MCAS Miramar and the Project would be designed to comply with the requirements of the MCAS Miramar ALUCP and MCAS Miramar AICUZ, as applicable. As such, the Proposed Project would not impact operations at a public airport. No impacts would occur.

Question 4.6f – Private Airstrip Hazards – No Impact

No components of the Proposed Project are located within two miles of a private airstrip and therefore, would not affect or disrupt existing operations or worker safety at such a facility. No significant impacts would occur.

Question 4.6g - Emergency Response and Evacuation Plans

Construction – Less than Significant Impact

Main Project Component – Proposed Mira Sorrento Substation

No conflicts with public safety or emergency response and evacuation plans have been identified with construction or operation of the Mira Sorrento Substation. The majority of construction equipment, vehicles, personnel, and material staging areas would be accommodated within the property lines of the proposed Substation site. Equipment staging would also occur at other existing substation storage yards, including Kearny, Miguel, Peñasquitos Substation, and Clairemont storage facilities. Temporary parking of limited construction-related vehicles along Mira Sorrento Place may be required depending on the construction activities being accomplished at the time. Emergency access would not be directly impacted during construction, as all streets would remain open to emergency vehicles at all times.

TL665 Loop-In

All Project-related trenching and vault installations would occur within City streets or public areas. Additional work areas would be required at each new vault structure location and along the proposed TL665 loop-in underground trench alignment to support construction activities. Trenching installation construction work areas would occupy approximately 20 to 30 feet in width (10 to 15 feet from centerline of trench) or would stay within designated work areas to maintain traffic flow through construction areas. The vault installation would stay within the same work space footprint as the trench work designated work areas.

No conflicts with public safety or emergency response and evacuation plans have been identified with any components of the Project. Emergency access would not be impacted during construction as all streets would remain open to emergency vehicles at all times, and would therefore not interfere with evacuation efforts in the time of an emergency. Project impacts on emergency response times or evacuation plans are considered less than significant.

Operations and Maintenance – No Impact

Ongoing operation and maintenance of the Mira Sorrento Substation would not affect emergency plans or evacuation routes as all components would be located on the Proposed Project site within the property boundaries. As the TL665 components would be underground, occasional maintenance or emergency repairs may require temporary lane closures along affected roadways; however, emergency access would be maintained and such activities would not interfere with evacuation plans. Therefore, no impacts would occur.

Question 4.6h - Fire Hazard

Construction – Less than Significant Impact

Although the Proposed Project site is located in a highly urbanized area, the site planned for the Substation, the adjacent SDG&E transmission corridor, and adjacent lands to the east are undeveloped and support a variety of largely unmaintained natural vegetation with the potential to support wildfire, particularly when considered with the sloping hillsides where winds may enable the rapid spread of flames. As previously stated, the Proposed Project is located within an area designated as a VHFHSZ as recommended by CAL FIRE in coordination with the City of San Diego Department of Fire and Rescue. Therefore, the potential for fire to occur is high.

During construction, heat or sparks from vehicles or equipment have the potential to ignite dry vegetation and create a fire. In general, the Proposed Project activities would occur within non-vegetated areas, including cleared areas for access and the Substation building pad. SDG&E would follow standard Project Protocols to reduce the potential for fire hazards to occur. Project Protocols include such measures as exercising care when operating vehicles and not parking vehicles on or in close proximity to dry vegetation where hot catalytic converters could ignite a fire. In times of high fire hazard, it may be necessary for construction vehicles to carry water and shovels or fire extinguishers. In addition, fire protective mats or shields may be used during grinding or welding to prevent or minimize the potential for fire. Based on SDG&E's standard construction practices, potential impacts are considered less than significant.

Operation and Maintenance – Less than Significant Impact

Operation and maintenance activities are presently conducted by SDG&E in the Proposed Project area, and the schedule of these activities would not increase significantly as a result of the proposed facilities. Such activities would occur primarily in previously cleared areas, thereby reducing the potential to start a fire. Operation and maintenance for the Mira Sorrento Substation would generally involve the clearing of vegetation on an as-needed basis for purposes of safety and/or access. Such activities would involve the clearing and/or trimming of vegetation to ensure that an adequate working space is maintained around the Project components.

Although maintenance vehicles would use the proposed access driveways and the existing unimproved (dirt) access road during operation and maintenance activities (particularly in maintaining landscaping along the eastern slope), the potential for heat or sparks generated by a maintenance vehicle to ignite dry vegetation and start a fire does exist. Maintenance vehicles would use the existing easements, driveways, parking areas, and rights-of-way, as applicable, to access Project facilities during operation and maintenance activities in order to reduce potential fire hazards.

Operation and maintenance activities for the TL665 loop-in would include routine inspection, maintenance, and repair activities. The Project components associated with the TL665 loop-in would be installed underground within existing rights-of-way or in public areas. Therefore, the potential for wildfire to occur during maintenance or operational activities is low, due to the location of the facilities and the general lack of vegetation. As a result, fire hazard impacts resulting from operation and maintenance of the TL665 loop-in facilities are not anticipated.

In addition, SDG&E implements its Wildland Fire Prevention and Fire Safety Electric Standard Practice during all operation and maintenance procedures. Implementation of such measures would further reduce potential impacts. As such, impacts resulting from long-term operation and maintenance activities with regard to fire hazards are considered less than significant.

4.6.5 Applicant Proposed Measures

The following measures are proposed to ensure that impacts remain at a less-than-significant level:

- APM-HAZ-1: SDG&E would prepare a Project-specific Hazardous Substance Management and Emergency Response Plan during the construction period to reduce or avoid potentially hazardous materials, for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials.

4.6.6 References

Aerial photographs dated 1953, 1963, 1974, 1980, 1990, 1994, 2002, and 2005.

Airport Land Use Compatibility Plan – MCAS Miramar. Originally adopted 1977. Last amended December 20, 2010.

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.

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City of San Diego – Mira Mesa Community Plan. Resolution Numbers R-280829; R-280830; and, R-282543. Adopted by City Council October 6, 1992. Last amended June 19, 2001.

City of San Diego Municipal Code.

EDR Radius Map Report with GeoCheck. Prepared by Environmental Data Resources, Inc. Inquiry Number 2482912.2s. April 30, 2009.

Google. Google Earth Version 5.1 Software. Program used June 2010.

Haley & Aldrich, Inc., *Phase I Environmental Site Assessment – Mira Sorrento Substation*. Prepared August 5, 2009.

Historic topographic maps for the Site dated 1904, 1930, 1967, and 1994.

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4.7 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant 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 preexisting 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 that would result in flooding on- or off-site?	☐	☐	☒	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
h. Place within a 100-year flood hazard area structures which 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. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

4.7.1 Introduction

The purpose of this Chapter is to document existing conditions of surface water and groundwater resources in the area proposed for location of the San Diego Gas and Electric (SDG&E) proposed Mira Sorrento Substation, as well as to assess potential impacts that might occur as a result of project implementation. In addition, this Chapter is intended to evaluate the Proposed Project for potential impacts resulting from flood hazards or inundation from seiche, tsunami, or mudflow.

Grading and construction activities required for the proposed Mira Sorrento Substation would not substantially alter existing onsite drainage patterns, nor create substantial sources of polluted runoff. In addition, impacts resulting from flood hazards or exposure of people or structures to a significant risk of loss, injury, or death involving flooding, or inundation by seiche, tsunami, or mudflow are considered less than significant. With the incorporation of SDG&E's Applicant Proposed Measure (APM HYD-1) and implementation of Environmental Standards relative to SDG&E's Water Quality Construction Best Management Practices (BMP) Manual, impacts on hydrology and water quality resulting from the Proposed Project would be less than significant.

4.7.2 Methodology

Hydrology and water quality in the Proposed Project area were evaluated by reviewing water quality studies and environmental impact reports from other projects in the area, the City of San Diego General Plan, U.S. Geological Survey (USGS) 7.5-minute series quadrangle

maps, and online geographical information system sources. Aerial photographs of the Proposed Project area were also reviewed. The San Diego Regional Water Quality Control Board's (RWQCB) Water Quality Control Plan for the San Diego Basin was reviewed to ensure compliance with State and local regulations. Federal Emergency Management Agency (FEMA) maps were referenced for flood zones; refer to Appendix X, *FEMA Maps*. Reconnaissance-level surveys and general habitat assessments were conducted by RECON Environmental, Inc. (RECON) on the proposed Mira Sorrento Substation site.

4.7.3 Existing Conditions

A description of the regulatory requirements and overall existing hydrologic conditions for the Proposed Project is provided below.

4.7.3.1 Regulatory Background

The San Diego Basin, in which the Proposed Project is located, encompasses approximately 3,900 square miles of surface area. The San Diego Basin falls under the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). San Diego County and the other municipal storm water co-permittees have been mandated by the San Diego RWQCB to regulate discharges to its storm drains.

The following authorities regulate water quality in the Proposed Project area:

- U.S. Environmental Protection Agency (EPA)
- California State Water Resources Control Board (SWRCB)
- San Diego Regional Water Quality Control Board (RWQCB)
- City of San Diego

The following sections describe applicable Federal, State, and local water quality requirements.

Federal and State

Clean Water Act

The Clean Water Act (CWA) is a Federal law intended to protect surface waters of the United States, which include lakes, rivers, coastal wetlands, and "waters of the U.S." The CWA regulates all discharges to waters, which are considered illegal, unless authorized by an appropriate permit. Discharge of dredged and fill materials, construction-related storm water discharges, and other activities that may result in discharges of pollutants to waters of the United States are regulated by the permit. Potential discharges to such waters would be considered an impact, and the applicant would be required to obtain a CWA Section 401 Water Quality Certification from the appropriate RWQCB.

CWA Section 402

The National Pollutant Discharge Elimination System (NPDES) program is administered by the EPA, which provides oversight in California to the Regional Water Quality Control Boards. The NPDES program was established in 1972 to control discharges of pollutants from defined point sources (33 U.S.C. § 1342) and was initially focused on industrial-process wastewater and Publicly-Owned Treatment Works. Section 402 of the CWA was amended in 1987 to include requirements for five separate categories of stormwater discharges, known as Phase I facilities which include:

- 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
- Facilities that are considered significant contributors of pollutants to waters of the U.S.

In August 1995, the U.S. Environmental Protection Agency (EPA) issued a final rule for Phase II discharges. Light industrial facilities, small construction sites (less than five acres), and small municipalities (less than 100,000 population) are considered Phase II stormwater discharges.

Within the State of California, permitting authority for the NPDES is administered by the nine Regional Water Quality Control Boards (RWQCBs). The NPDES program provides general permits and individual permits. Under Section 402 of the CWA, projects that disturb one acre or more of soil are required to obtain coverage under the SWRCB's General Permit for Stormwater Discharges Associated with Construction Activity (General Permit). The General Permit requires the applicant to file a public notice of intent to discharge storm water and to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP includes a site map, description of proposed activities, demonstration of compliance with applicable ordinances and regulations, and a description of Best Management Practices (BMPs) to be implemented to reduce potential erosion and discharge of construction-related pollutants.

CWA Section 404

"Waters of the U.S.," including wetlands, are subject to U.S. Army Corps of Engineers (USACE) jurisdiction under Section 404 of the CWA. Section 404 regulates the filling and dredging of U.S. waters. The limits of non-tidal waters extend to the ordinary high-water mark, defined as the line on the shore established by the fluctuations of water and indicated

by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. In general, ditches excavated on dry land that do not convey flows from historical streams are considered non-jurisdictional; however, the USACE determines jurisdiction on a case-by-case basis.

CWA Section 401

CWA Section 401 requires states to certify actions authorized by Federal permits that could impact waters within the state. Any applicant for a Federal license or permit to conduct any activity that may result in any discharge into navigable waters is required to provide the licensing or permitting agency with a certification that the discharge would comply with the applicable CWA provisions (33 U.S.C. § 1341). A CWA Section 401 Water Quality Certification or Waiver is required from the RWQCB for Section 404 permit actions and for Section 10 permit actions.

CWA Sections 303 and 304

Under Section 303 of the CWA, states are required to adopt standards aimed at protecting the quality of all surface waters of the U.S. (33 U.S.C. § 1313). The EPA is responsible for the publication of specific criteria that consider the latest scientific knowledge on the type and extent of effects that pollutants in water may have on public health and welfare (33 U.S.C. § 1314(a)). Such water quality standards are required to protect the most sensitive use where multiple uses are present.

Under Section 303(c)(2)(b) of the CWA, states are required to identify and adopt standards for water quality for specific toxic pollutants that the U.S. EPA has published water quality criteria for and that are considered to have the potential to interfere with designated uses of a water body. Section 303(d) of the CWA, requires that states, territories, and authorized tribes identify and list segments that do not meet water quality standards, even when the minimum required levels of pollution control technology have been implemented at point sources of pollution. Such jurisdictions are then required to establish priority rankings for water bodies identified on the list and to prepare an action plan for Total Maximum Daily Loads for the improvement of surface water quality.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) is responsible for distributing the Flood Insurance Rate Maps (FIRM) used in the National Flood Insurance Program (NFIP). Flood elevations and floodplain boundaries are also determined by FEMA, based on studies performed by the USACE. Flood hazard areas, including the 100-year floodplain, are identified on these maps. Within the floodplain, non-residential development is allowed and construction activities are restricted within flood hazard areas, depending on the potential for

flooding identified within a specific area. Title 44, Part 60 of the Code of Federal Regulations provides measures requiring that municipalities that participate in the NFIP adopt specific standards aimed at reducing flood hazards by regulating construction and development activities within the 100-year floodplain.

State

Streambed Alteration Agreements

Sections 1601–1603 of the California Department of Fish and Game (CDFG) Code protect the natural flow, bed, channel, and bank of any river, stream, or lake designated by the CDFG in which there is either an existing fish or wildlife resource or a resource from which these resources derive benefit. The CDFG Code requires completion of formal notification and subsequent agreements prior to initiating construction activities. General project plans must be submitted to CDFG in sufficient detail to indicate the nature of planned construction where the project would:

- Divert, obstruct, or change a streambed;
- Drill under a jurisdictional drainage;
- Use material from the streambeds; or,
- Result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a stream.

Porter Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act acts in cooperation with the CWA to establish the State Water Resources Control Board (SWRCB). The SWRCB is divided into nine regions, each overseen by a RWQCB. The SWRCB, and thus each RWQCB, is responsible for protecting California's surface waters and groundwater supplies.

The Porter-Cologne Water Quality Control Act develops Basin Plans that designate the beneficial uses of California's rivers and groundwater basins. The Basin Plans also establish narrative and numerical water quality objectives for those waters. Basin Plans are updated every three years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Water Quality Control Act is also responsible for implementing CWA Sections 401-402 and 303(d) to SWRCB and RWQCBs.

State Water Resources Control Board Order 2001-11-DWQ

The SWRCB adopted a statewide permit for dewatering utility vaults and underground structures (Statewide General NPDES Permit for Discharges from Utility Vaults &

Underground Structures to Surface Waters [General Permit CAG990002]) in 2001. This permit is utilized by permittees for the discharge of uncontaminated water from vaults and substructures (i.e., water not related to construction groundwater dewatering) to surface waters.

Local

San Diego Regional Water Quality Control Board Basin Plan

The RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the San Diego area. The RWQCB adopted a Basin Plan in September 1994 which 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 in the region 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. Permits, waste discharge requirements and waivers are utilized by the RWQCB to control discharges and protect water quality.

The Basin Plan contains a waiver for the use of pits for onsite management of drilling muds. This waiver requires the maintenance of a two-foot freeboard above the level of the drilling muds and the removal of the drilling muds within sixty days of the completion of the construction.

City of San Diego

The Proposed Project is located within the City of San Diego. The San Diego RWQCB issued the San Diego Municipal Permit (NPDES No. CA0108758) to the County of San Diego, Port District, and 18 cities in the region 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 would address and prevent pollution from development projects. The Municipal Code for each of these co-permittees prohibits discharge into storm water conveyance systems that results in or contributes to a violation of this permit. Discharges that are regulated under an individual NPDES permit issued directly to the discharger are exempt from the requirements and prohibitions of the co-permittees' Municipal Codes.

4.7.3.2 Surface Water and Groundwater Resources

General Setting

Of the eleven major watersheds in San Diego County lying west of the Peninsular Range, seven lie within the jurisdiction of the City of San Diego. These watersheds all ultimately

drain to the Pacific coast and include the San Dieguito, Los Peñasquitos, San Diego, Pueblo, Sweetwater, Otay, and Tijuana.

The Project site lies within the Los Penasquitos Basin (Region 9). Based on surface topography, surface water at the Site appears to flow south and southwest. Also based on topography, regional groundwater flow is anticipated to be to the south and southwest, generally toward the Pacific Ocean.

Due to the highly urbanized character of the City of San Diego, natural drainage patterns have been greatly modified, largely to protect against the risk of flooding. Storm water within the City is largely conveyed into natural, man-made, and modified features comprising the City's Multiple Separate Storm Sewer System (MS4). Water from rain events within the City of San Diego flows into the MS4 and ultimately drains into receiving water bodies such as rivers, reservoirs, or bays. The MS4 also directs water into the Pacific Ocean.

General winter storms usually occur during the period from mid-October to May, with the greatest frequency and intensity normally occurring from December to March. These storms usually originate over the Pacific Ocean as a result of the interaction between Polar Pacific and Tropical Pacific air masses and move eastward over the San Diego area. This type of storm occasionally lasts for several days. Generally, more precipitation falls in the mountains than over the coast due to increased condensation from the presence of cooler air at higher elevations. General summer storms, including tropical cyclones, have on a few occasions occurred in the summer and early fall months. These storms usually occur near the end of the dry season in August and September and rarely result in any major flooding.

Local storms can occur at any time of the year, either during general storms or as isolated phenomena. Local summer storms occur more frequently in the higher mountains than on the coast. These storms, which normally result from a flow of moist air into the region from the south and east, cover comparatively small areas but result in high-intensity precipitation for a duration of three hours or less. Local winter storms can occur on occasion in conjunction with a strong cold front or deep upper level low-pressure center and are sometimes imbedded within a general winter storm. Like their summer counterparts, local winter storms result in high-intensity precipitation for a short duration over small areas. Mean seasonal precipitation in the San Diego area from all storm type occurrences ranges from a low of three inches in the eastern desert regions of the County to highs of thirty-five to forty inches in the Cuyamaca and Laguna Mountains.

Average annual rainfall in the area is approximately 10 inches per year, with the majority of precipitation falling between November and April. Rainfall between June and October averages less than 0.5 inch per month.[1]

[1] Western Regional Climate Center, Climate data for San Diego WSO Airport, http://www.wrcc.dri.edu/cgi-bin/cl:Main.pl?ca7740, accessed June 15, 2010

Surface Water

Channels, Creeks, and Rivers

Many rivers and creeks in San Diego County are intermittent due to the seasonal nature of rainfall and the relatively low yearly rainfall totals. Some drainages have perennial and intermittent segments due to effects from dams or other artificial blockages. Imported water adds to each watershed in the form of runoff from urban, agricultural, and water storage activities, sometimes producing flow in drainages when they would otherwise be dry.

A small drainage is located in the lower portions of the Project site, along the eastern portion of the slope (see *Wetlands*, below). No elements of the Proposed Project would require the crossing of any water body.

Wetlands

The Proposed Project site consists of undeveloped land. The majority of the site is covered in non-native grassland, with some isolated patches of disturbed coastal sage scrub. A narrow band of riparian habitat exists on site along the existing drainage located just to the east of the proposed development area. USACE jurisdictional area onsite totals 0.23 acre. A total of 0.38 acre of CDFG and RWQCB jurisdictional resources occur within the survey area. City of San Diego wetland resources total 0.38 acre. Refer also to Section 4.3, *Biological Resources,* for additional detail regarding the biological value of the wetland areas associated with the proposed Mira Sorrento Substation site.

Reservoirs, Ponds, Lakes

No reservoirs, ponds, or lakes are located onsite or in the areas surrounding the Proposed Project. No such water bodies would be crossed or impacted by the 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 onsite at a depth of approximately 12.5 feet at the time when exploratory borings were conducted onsite. The groundwater elevation of 120 feet above mean sea level (amsl) correlates to the adjacent drainage to the east and represents a perched condition.[2] It should be noted that groundwater levels may fluctuate due to seasonal variations, irrigation, and other factors. Groundwater or seepage is not expected to be a constraint to the construction of the Proposed Project.

[2] Update Report of Geotechnical Investigation Proposed SDG&E Mira Sorrento Substation Kleinfelder,Inc. October 1, 2010.

Surface Water Quality

The Water Quality Control Plan for the San Diego Basin describes water quality objectives for surface water in the Project area. Wildlife habitat, municipal, industrial, and agricultural supplies, and recreation are among the beneficial uses that the objectives seek to protect. The quality of surface water is affected by storm water runoff and runoff from industrial, commercial, and agricultural activities in the region. The San Diego RWQCB uses permits and other programs to regulate and reduce pollution of surface waters.

No known impaired water bodies would be crossed or impacted by the Proposed Project. The Project site lies within the Los Peñasquitos watershed. Los Peñasquitos Canyon Creek lies approximately one mile to the north of the proposed Mira Sorrento Substation site. The Los Peñasquitos Creek watershed encompasses a land area of approximately 100 square miles. Los Peñasquitos Creek is listed on the California 303(d) list for phosphate and total dissolved solids (TDS). The Creek discharges to a 0.6 square mile lagoon that is identified as an impaired water body (Los Peñasquitos Lagoon) that is listed on the California 303(d) list for sedimentation/siltation.[3]

Floodplains

According to a Federal Emergency Management Agency (FEMA) flood insurance rate map (FEMA, 1983), the site is in FEMA Zone C. As such, the Project is considered to be outside of 100-year and 500-year floodplains and subject to minimal potential for flooding.

Dam Failure Inundation Areas

The State Office of Emergency Services and the California Department of Water Resources (DWR) maintain a list of areas that are subject to potential inundation in the event of dam failures. The list is intended to guide local jurisdictions in developing evacuation plans for areas located below such dams to minimize public risk. Estimated times when floodwaters would arrive at certain locations downstream are also provided to guide such planning efforts. No dams are located upstream of the Proposed Project area.

4.7.4 Impacts

4.7.4.1 Significance Criteria

According to Appendix G of the California Environmental Quality Act Guidelines, the Proposed Project would have a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;

[3] California State Water Resources Control Board. 2006 CWA Section 303(d) List of Water Quality Limited Segments Requiring TMDLs.

- 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;
- 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 that would result in substantial erosion or siltation on- or off-site;
- 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 that would result in flooding on- or off-site;
- Create or contribute to runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place 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;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- 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; or,
- Cause inundation by seiche, tsunami, or mudflow.

4.7.4.2 Impact Analysis

Question 4.7a – Water Quality Standards and Waste Discharge Violations

Potential impacts on hydrology and water quality of greatest concern involve negative effects due to ground disturbance (erosion and sedimentation), potential storm water runoff as a result of construction activities, and the limited use of hazardous materials; however, these potential impacts are considered less than significant by incorporating SDG&E's APM-HYD-1, BMPs, and by adhering to existing regulations. As part of APM-HYD-1, all crews and on-site personnel would receive SWPPP training. As a result, the Proposed Project would not result in a prohibitive discharge as defined in the Water Quality Control Plan for the San Diego Basin; increase pollutant load of contaminants identified in exceedance of water quality standards for the Los Peñasquitos Creek; or, conflict with any water quality objectives.

Construction – Less than Significant Impact

Potential, temporary, short-term impacts on surface water and groundwater quality could occur during construction of the Proposed Substation, on the existing access roads, at structure locations, and at temporary work areas by:

- An accidental release of diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, or lubricating grease from a vehicle or construction equipment; or,
- From a release of materials during concrete preparation or placement of foundations, concrete washout stations, and concrete splice vaults.

Such spills could wash into nearby drainages or infiltrate into the soil, resulting in surface or groundwater quality degradation. Hazardous materials would be delivered, stored, managed and disposed of according to BMPs outlined in SDG&E's BMP manual. These potential, temporary, short-term indirect impacts would be minimized by compliance with applicable Federal, State, and local laws, and the proper implementation of SDG&E's APM HYD-1 and BMP Manual. SDG&E's BMP manual outlines several BMPs to store, use, and control spills if one should inadvertently occur. Section 4.6, *Hazards and Hazardous Materials*, includes additional detail regarding hazardous materials found in the proposed Mira Sorrento Substation area. As such, potential discharges would be prevented, no water quality standards or impacts to wastewater quality would occur with Project construction. As a result, impacts would be less than significant.

In accordance with the SWPPP to be prepared under the State General Construction Permit, work crews would use approved erosion control measures including the use of gravel bags and construction of catch basins during grading operations. All Project runoff would be directed into catch basins and oil containment basins that will discharge into the existing drainage located to east of the Substation site and or the storm drain system in Mira Sorrento Place (see Figure 3-9).

In addition, the Proposed Project is anticipated to provide a wetland buffer to protect adequately the functions and values of the existing wetlands within the survey area. The slope that lies between the proposed Substation wall and the existing wetlands would be revegetated. Impacts to jurisdictional wetlands have been avoided.

Impacts relative to groundwater quality for the TL665 loop-in would be similar to that identified for the proposed Mira Sorrento Substation. Potential, temporary, short-term impacts on surface water and groundwater quality may occur during construction; however, these potential short-term, indirect impacts would be minimized through compliance with applicable Federal, State, and local laws, and proper implementation of SDG&E's APM HYD-1 and BMP Manual.

The Proposed Project would not violate any water quality standards or waste discharge requirements. With the incorporation of APMs, SDG&E would prepare a SWPPP under the State General Construction Permit and would implement BMPs from the SDG&E Water Quality Construction Best Management Practices Manual to avoid or minimize potential impacts to water quality. Therefore, impacts related to this issue would be less than significant.

Operation and Maintenance – Less than Significant Impact

Areas affected by the Proposed Project would be stabilized using BMPs, including installation of landscaping and, with regard to the Substation components, road-base or gravel, to permanently stabilize ground surfaces and minimize the potential for sediment discharge into onsite or offsite waters.

SDG&E operations and maintenance personnel may use oils, paint, or solvents in the course of routine maintenance of the Substation equipment. These materials would not be stored or disposed of at the Substation site and their use would conform to applicable laws and regulations governing the use, management and disposal of hazardous materials.

No hazardous materials exist on the proposed Substation site. Some equipment used in the Substation, such as the capacitor banks, contain mineral oil. The Substation would include four standard profile, low sound 28 MVA transformers. As such, a mineral-oil release from electrical equipment associated with operation of the proposed Mira Sorrento Substation could occur. Such releases, either from leaks or equipment failure, could wash into nearby waterways or infiltrate soil to groundwater. To prevent this, the Mira Sorrento Substation design would include a local oil containment basin, consisting of concrete slabs and walls configured to contain the total volume of oil in the transformers. Although the mineral oil is non-toxic, the CWA and Porter Cologne Water Quality Act prohibit the release of any oil to State waters; however, with implementation of SDG&E's APM HYD-1 and BMPs identified in the SWPPP and Water Quality Construction BMP Manual, potential impacts are considered less than significant.

Question 4.7b – Groundwater Depletion or Recharge

Construction – Less than Significant Impact

Main Project Component – Proposed Mira Sorrento Substation

During Project construction, water from the City's public water system would be used to supply water for purposes of dust control and grading activities. All unpaved construction areas would be sprayed with water or other acceptable dust-control agents during dust-generating activities to reduce potential emissions. No existing water quality conditions would be adversely affected.

Although no dewatering is anticipated during construction, where localized shallow groundwater is encountered, dewatering systems, as outlined in SDG&E's BMP Manual, may be installed in trenches and excavations, as appropriate to allow construction under dry conditions. Dewatering activities may have localized effects on groundwater levels; however, such effects would be temporary and are not expected to affect any area wells. Therefore, impacts on groundwater supply would be less than significant with Project construction.

TL 665 Loop-In

Impacts relative to groundwater supplies and recharge for the TL665 loop-in and associated trenching and duct installation would be similar to that identified for the construction of the proposed Mira Sorrento Substation. As the improvements would occur within the existing right-of-way, significant generation of dust and subsequent water use for dust suppression would not be required. Although no dewatering is anticipated during construction, in the event that groundwater is encountered, it is anticipated to occur during construction of the duct bank and manhole installation for the new TL665 underground loop-in underground segment. Where localized shallow groundwater is encountered, dewatering systems, as outlined in SDG&E's BMP Manual, may be installed in trenches and excavations, as appropriate to allow for construction under dry conditions. Dewatering activities may have localized effects on groundwater levels; however, such effects would be temporary and are not expected to affect area groundwater within the City of San Diego or other nearby areas. Therefore, impacts on groundwater supply would be less than significant with Project construction.

Operation and Maintenance – No Impact

The only water used at the Project site would be for landscaping irrigation. Water for irrigation would be provided by the existing domestic water supply system which is not reliant upon groundwater resources.

A limited amount of water would be required to allow for long-term operation and maintenance of the Mira Sorrento Substation. As applicable, water would primarily be utilized for irrigation of landscaping, fire protection, and other general operational uses. Water would be obtained from permitted municipal sources which are currently adequate to supply water to the site. In addition, the Proposed Project would involve a limited increase in the amount of impervious surfaces and would be surrounded by large areas of permeable ground, allowing water to continue to infiltrate the ground surface. As such, operation and maintenance activities would not affect existing groundwater supplies, and no impacts on groundwater reserves or recharge capabilities would occur with the Proposed Project.

Question 4.7c – Drainage Patterns – Erosion / Siltation

Construction – Less than Significant Impact

Main Project Component – Proposed Mira Sorrento Substation

The Proposed Project would require approximately 65,500 cubic yards of cut and 67,000 cubic yards of fill for the grading, retaining wall backcut, and retaining wall backfill, which is required to complete the Substation pad. Existing onsite vegetation would be removed during grading activities and soils would be disturbed, making the site more susceptible to erosion caused by wind or water. Storm water run-on and runoff have the potential to detach and transport soil particles and deleterious material from bare soils and deposit them in nearby waterways. Sediment can result in increased turbidity in waterways, impair riparian habitat, restrict recreational uses, and cause the transport of other pollutants. Construction vehicles and equipment may also disturb underlying soils through the transport of soils from construction areas to adjacent area roadways, thereby further eroding the ground surface. Water trucks used during construction to assist with soil compaction and abate fugitive dust would also have the potential to cause erosion and discharges.

SDG&E would prepare a drainage plan to address storm water flows across the site and runoff from within the Substation limits. Implementation of the drainage plan would reduce potential impacts on existing drainage patterns in the area below the Substation pad by ensuring that runoff does not alter any swales or other drainage features beyond the Substation limits. As such, runoff from the Project site would not result in significant erosion as compared to existing conditions. Impacts would be less than significant.

During the above-grade phase of construction, the Substation building pad would be relatively flat, thereby supporting the infiltration of storm water and decreasing the potential volume of runoff. In addition, the Project site would be stabilized with road-base or gravel to minimize the potential for wind and water erosion and to reduce tracking of soils from the site.

With implementation of SDG&E's APM HYD-1, which includes incorporation of a SWPPP and BMPs to address erosion and sediment control, the potential for the Project to impact water quality as a result of erosion and sedimentation would remain less than significant. According to SDG&E's BMP Manual, implementation of silt fences, fiber rolls and gravel bags would reduce potential sediment run-off. Sediment would be prevented from entering the storm drain system through use of gravel bag berms, and tracking controls would be used to minimize construction traffic tracking dirt onto adjacent roadways. Incorporation of these, as well as other BMPs outlined in the manual, would ensure that potential impacts remain less than significant.

TL 665 Loop-In

All trenching and vault installations for the TL665 loop-in would occur within City streets and public areas. Existing drainage patterns would not be changed with the proposed improvements. All surface areas along the affected roadways would be returned to their prior condition once construction activities have been completed. As such, the potential for erosion or siltation to occur as the result of the Proposed Project is considered minimal. Impacts on water resources and water quality would be less than significant with implementation of SDG&E's APM HYD-1 and BMP Manual. Therefore, the potential for impacts on water quality as a result of erosion and sedimentation would be less than significant.

Operation and Maintenance – No Impact

On-site drainage patterns established during construction would generally remain unchanged with long-term operation and maintenance of the Mira Sorrento Substation. The proposed grading improvements are not anticipated to result in impacts in the form of increased on- or off-site erosion or siltation. As such, no impacts as the result of on-site or off-site drainage patterns are anticipated with operation and maintenance of the facilities.

Question 4.7d – Drainage Patterns – Runoff/Flooding

Construction – Less-than-Significant Impact

As discussed in the response to Question 4.7c – Drainage Patterns – Erosion/Siltation, above, construction-related activities would result in minor alterations to the existing drainage patterns on-site, due to required grading and facilities construction. Such changes would not substantially increase the existing velocity or volume of stormwater flows either on-site or in off-site areas. As such, flow rates and volumes would not be substantially altered with implementation of the Proposed Project, and potential impacts from runoff or flooding either on-site or off-site would be less than significant.

Operation and Maintenance – No Impact

Once construction of the Mira Sorrento Substation facilities and associated improvements are complete, no additional changes to on-site or off-site drainage patterns are anticipated. As such, the Proposed Project would not result in the potential for increased runoff volumes, and storm water facilities in the surrounding area would not be further affected. Therefore, no impacts resulting from storm water runoff or flooding are anticipated with operation and maintenance of the Mira Sorrento Substation.

Question 4.7e – Stormwater Runoff

Construction – Less than Significant Impact

Main Project Component – Proposed Mira Sorrento Substation

Grading activities for the Proposed Project would be required at the Mira Sorrento site to accommodate the new Substation layout. The Proposed Project would not substantially alter existing drainage patterns of the site or surrounding area in a manner that would result in significant runoff from the Project site. The Project proposes pervious surfaces for water to infiltrate into the ground. The Proposed Project will collect surface water in water quality catch basins designed to allow the water to be released at the same rate as water currently flowing off the site. The relatively small size and generally flat topography of the building pad preclude flooding either on-site or off-site. The Project would not discharge into a water body that has been identified as an already impaired water body (as listed on the Clean Water Act 303(d) list). Therefore, potential Project impacts on impaired water bodies are considered less than significant.

The two main access driveways from Mira Sorrento Place and all internal driveways would be paved with concrete or asphalt concrete. These features would increase the amount of impervious surface area on the site, as compared to existing conditions. The Substation site would not be paved; rather, a pervious gravel base would be placed over soil in the areas between equipment to allow percolation of storm water into the ground, rather than runoff into the existing drainage system.

The total disturbed area needed for construction of the Substation is approximately 2.7 acres which includes both temporary and permanent disturbed area. This area includes the following: the construction lay-down yard, remedial grading, cut and fill slopes, the Substation pad, driveways, and landscape/irrigation. As the final grade of the Substation building pad is established, the potential for runoff from the Proposed Project site would decrease as the site would be generally flat and would facilitate greater infiltration. Once grading is complete, the concrete foundations and steel structures for the Substation equipment would be constructed. The majority of the Substation site would remain pervious (unpaved). The drainage for the Proposed Project would not be substantially altered from that prior to site improvement. Therefore, Project impacts on existing storm water conveyance systems would be less than significant.

In addition, new sources of pollutants generated during the construction phase may potentially be released into offsite water bodies by storm water. Potential sources of pollutants may include hazardous materials, such as diesel fuel, hydraulic fluid, oil and grease, as well as construction materials, sediment, and trash. Standard practices would be implemented to ensure that such pollutants or sediment are not carried to onsite or offsite water bodies via storm water. The Proposed Project would not violate any water quality standards or waste discharge requirements, and the proposed improvements would not

significantly impede or redirect storm water runoff flows. Construction of new structures and the access roads, construction of the Substation, and associated clearing and grading would not significantly alter existing drainage patterns or result in substantial runoff from the site. By implementing SDG&E's APM HYD-1 and BMP Manual, the potential for hydrologic or water quality impacts as a result of storm water runoff would remain less than significant.

TL 665 Loop-In

Ground disturbance for the proposed underground duct bank or TL665 loop-in would occur from operation of construction vehicles, trenching, and other construction activities. All trenching and vault installations associated with the TL665 loop-in would occur within existing City streets, public areas, and SDG&E property and or easements. Proposed improvements would not create conditions that cause an increase in storm water runoff that enters the local storm water system over that of pre-construction rates. Implementation of SDG&E's BMP Manual would reduce potential erosion and sedimentation through such measures as street sweeping, soil stabilization measures, and installation of silt fences, if applicable. Implementation of SDG&E's APM HYD-1 and BMP Manual would ensure that potential impacts with regard to polluted runoff remain less than significant.

Operation and Maintenance – Less than Significant Impact

Following the completion of construction, runoff from the Project site is anticipated to be similar to that which presently occurs. The site is located within a highly developed urban area. No significant impacts to existing storm water conveyance systems are anticipated with operation and maintenance of the Mira Sorrento Substation, and no significant alteration of existing drainage facilities such as culverts, catch basins, or drainage basins would be required to support long-term operation and maintenance of the Substation.

Stormwater runoff from the Project would be designed to drain to two separate bioretention areas; one on the west side of the Project, along the Mira Sorrento Place frontage; and a basin located on the south side of the site. The bioretention areas would be sized in accordance with the City's SUSMP and would be designed to treat all storm water runoff from the impervious areas (roadway). Each bioretention area would detain runoff and slowly infiltrate into an 18-inch sand/compost mix section beneath a grass or rock cover. Each bioretention basin would have a perforated pipe that would drain any runoff in excess of the water quality storm event. The Substation pad itself would be considered a self-treating area since the majority of area would be Class II base and would infiltrate stormwater and provide water quality treatment. A Water Quality Technical Report would be prepared for this Project in accordance with the City's SUSMP and would address all site, source, and treatment control BMPs for the Project as well as any long term maintenance activities that are required. The Water Quality Technical Report would be submitted to the City with the final grading plans when ministerial permits from the City are required.

In addition, maintenance activities would have the potential to increase the presence of pollutants on-site. The use of fertilizers or other soil additives may potentially be applied to the ground surface to enhance and maintain landscaping materials. Such substances would be applied on-site, consistent with manufacturer's specifications and are not anticipated to be transported into any off-site waterways by means of storm water runoff. Materials and/or equipment used for maintenance purposes would be used at the site on an as-needed basis and stored in off-site SDG&E maintenance facilities, as appropriate, to reduce the potential for introduction of new or increased pollutants on the property. In addition, standard measures to control and dispose of any pollutants that may be used during maintenance activities would be implemented in accordance with Federal and State regulations. SDG&E would implement standard practices to reduce the potential for pollutants to leave the site and enter any off-site waterways. By implementing SDG&E's APM HYD-1 and BMP Manual, the potential for hydrologic and water quality impacts as a result of storm water runoff from the Project site would remain less than significant.

Question 4.7f - Water Quality Degradation – Less than Significant Impact

The potential for the Proposed Project to result in water quality degradation as the result of Project construction or operation is also discussed in responses to Question 4.7a – Water Quality Standards and Waste Discharge Violations, and Question 4.7e – Storm Water Runoff. Other potential pollutants are not anticipated to result in a degradation of groundwater quality as a result of Project implementation. Therefore, impacts would be less than significant.

No existing water quality conditions would be adversely affected. The only water used at the site would be for landscaping irrigation provided by the existing domestic water supply system that has no reliance on groundwater resources.

Shallow groundwater may be encountered during excavation or installation of underground facilities, which may require dewatering from excavations. With implementation of SDG&E's APM-HYD-1, which includes preparation of a Hazardous Substance and Emergency Response Plan, potential impacts would remain less than significant.

Question 4.7g – Housing in Flood Hazard Areas – No Impact

No housing would be constructed as part of the Proposed Project, and therefore, no housing would be placed within a 100-year flood hazard area. Therefore, no impact would occur.

Question 4.7h – Structures in Flood Hazard Areas

Construction – No Impact

Based on the review of topographic maps, the site is not located downstream of a dam or within a dam inundation area. According to a Federal Emergency Management Agency (FEMA) flood insurance rate map (FEMA, 1983), the site is in FEMA Zone C and

considered to be outside of 100-year and 500-year floodplains and subject to minimal flooding. Based on the document review and site reconnaissance, the potential for flooding to occur at the site is considered low. No new structures would be constructed that impede or redirect flood flow within a 100-year flood hazard area at the proposed site. As a result, the Proposed Project would not impact flood flows. Therefore, no impacts would occur.

Operation and Maintenance – No Impact

Impacts during the operation and maintenance phase would be identical to the construction phase with regard to placing structures within flood hazard areas. None of the operation and maintenance activities required for the proposed facilities would cause flooding, impede flood flows, or be adversely affected by flooding. Therefore, no impacts would occur.

Question 4.7i – Flood Exposure – No Impact

Main Project Component – Proposed Mira Sorrento Substation

Based on the review of topographic maps, the site is not located downstream of a dam or within a dam inundation area. According to a Federal Emergency Management Agency (FEMA) flood insurance rate map (FEMA, 1983), the site is in FEMA Zone C and considered to be outside of 100-year and 500-year floodplains and subject to minimal flooding. Based on the document review and site reconnaissance, the potential for flooding to occur at the site is considered low.

The potential for risk, loss, injury, or death from installation of new structures and modifications to existing structures within dam inundation areas is minimal with the Proposed Project. The Project would not involve construction of inhabited structures in an inundation area, nor would it change the structural integrity of any dams or levees. After construction is complete, the Proposed Project would not 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 a dam. As a result, no significant impacts would occur.

TL 665 Loop-In

Similar to the proposed Mira Sorrento Substation, the potential for associated improvements at the proposed site to result in risk, loss, injury, or death from installation of new structures or modifications to existing structures within dam inundation areas is considered minimal. These improvements would not involve construction of inhabited structures in an inundation area, nor would they change the structural integrity of any dams or levees. Therefore, no significant impacts would occur.

Question 4.7j - Flooding, Seiche, Tsunami, and Mudflow – No Impact

Main Project Component – Proposed Mira Sorrento Substation

As the Proposed Project does not involve the development of residential uses, there would be no impacts associated with flooding of residences or occupied structures, or the exposure of people or structures to a significant risk of loss, injury, or death involving flooding. According to a FEMA flood insurance rate map (FEMA, 1983), the site is in FEMA Zone C and considered to be outside of 100-year and 500-year floodplains and subject to minimal flooding. Based on the document review and site reconnaissance, the potential for flooding of the site is considered low.

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. A seiche is an oscillation (wave) of a body of water in an enclosed or semi-enclosed basin that varies in period, depending on the physical dimensions of the basin, from a few minutes to several hours, and in height from several inches to several feet. A seiche is caused chiefly by local changes in atmospheric pressure, aided by winds, tidal currents, and occasionally earthquakes. Based on the elevation and inland location of the site, the potential for damage due to either a tsunami or seiche is very low. The Proposed Project is not located in an area where people or structures may be exposed to a seiche or tsunami, due to the inland location, and therefore, no impacts would occur.

A mudflow occurs when a flow of dirt and debris is created, typically initiated by heavy rainfall or seismic activity, or along unvegetated slopes following a wildfire event. Slope steepness, soil types, and soil moisture content all affect the potential for a mudflow to occur. As the Proposed Project site is located in an area that supports significant slopes, the potential for a mudflow to occur does exist; however, as the slopes are vegetated, previous development has created large flat development pads which reduce the steepness of the slops, and wildfire potential has been minimized by existing development, the potential for such an event is considered to be low. Therefore, no impacts with regard to mudflow are anticipated.

4.7.5 Applicant-Proposed Measures

With implementation of SDG&E's APM-HYD-1 and Environmental Standards, as well as adherence to applicable Federal, State, and local regulations, potential Project impacts on hydrology and water quality would remain less than significant, and no mitigation is proposed or required.

- APM-HYD-1: SDG&E would prepare a SWPPP under the State General Construction Permit, and implement BMPs from the SDG&E Water Quality Construction Best Management Practices Manual in order to avoid and minimize potential impacts to water quality.

4.7.6 References

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 General Plan. Adopted March 10, 2008.

City of San Diego General Plan Final Environmental Impact Report. Certified September 2007.

Federal Emergency Management Agency (FEMA) Maps

Jurisdictional Delineation Report for the Mira Sorrento Substation Project. Prepared by RECON Environmental, Inc. June 28, 2010.

Water Quality Control Plan for the San Diego Basin. California Regional Water Quality Control Board, San Diego Region. September 8, 1994 (with amendments effective prior to April 25, 2007).

Update Report of Geotechnical Investigation Proposed SDG&E Mira Sorrento Substation Kleinfelder,Inc. October 1, 2010.

4.8 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant 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 or 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?	☐	☐	☐	☒

4.8.1 Introduction

This Section describes the existing land uses in the vicinity of the proposed San Diego Gas & Electric Company (SDG&E) Mira Sorrento 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 would not result in significant impacts to existing or proposed land uses, nor would it physically divide an established community. The Proposed Project would be compatible with all applicable land use plans and policies adopted by local governments.

4.8.2 Methodology

The land use analysis involved a review of various land use plans, policies, and regulations for the City of San Diego (City), including the City of San Diego General Plan – City of Villages (2008), City Municipal Code, and Mira Mesa Community Plan. The land use analysis also involved a review of Google Earth aerial imagery of the Proposed Project area. Personal communication with local agency representatives and a site visit to the Proposed Project area also confirmed jurisdictions and existing land uses, respectively. In addition, the City of San Diego Multiple Species Conservation Program (MSCP) and SDG&E's Natural Community Conservation Program (NCCPs) were reviewed.

4.8.3 Existing Conditions

4.8.3.1 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 in relation to government at the local level to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities; however, other State agencies share concurrent jurisdiction with the CPUC. The CPUC encourages, and SDG&E participates in, cooperative discussions with affected local governments to address their concerns where feasible; however, local governments do not have the power to regulate activities related to electric transmission facilities. As applicable, SDG&E is obligated to obtain ministerial permits from local agencies. SDG&E has considered relevant land use plans, policies, and issues, and has prepared the following evaluation of potential impacts resulting from the Proposed Project with regard to land use and planning.

City of San Diego

The City of San Diego General Plan – City of Villages provides a framework of policies, objectives, and land use designations to guide development within the City for the long-term. The City of San Diego Municipal Code supports the General Plan and gives specific details for the development of lands within the individual zoning districts identified. No specific plans or redevelopment plans affect the Project area.

4.8.3.2 Existing Land Uses

Project Components

Mira Sorrento Substation

The Mira Sorrento Substation would permanently occupy approximately 1.4 acres within the 3.7-acre parcel. The Mira Sorrento Substation would be located on land owned and acquired by SDG&E.

The Project site is presently undeveloped and features a small hilltop with steep, northwest- and southwest-facing manufactured slopes and a steep, east-facing slope of an isolated urban canyon. The parcel is disturbed and currently unoccupied. The site is bordered by Vista Sorrento Parkway to the southwest, Mira Sorrento Place to the northwest, a 200-foot SDG&E utility easement to the north, and an undeveloped area to the east with a drainage channel that trends from northwest to southeast. Other surrounding land uses include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the north/northeast across the drainage. The Marriott Courtyard and Water Ridge condominium complexes are located north of the site at distances of approximately 800 and 1,000 feet, respectively. Adjacent to the northeast side of the Substation site is an existing 200-foot

SDG&E utility corridor easement containing TL 13810 and TL 23013 overhead lines. Within the easement, an unimproved (dirt) access road supports operational and maintenance activities for the SDG&E facilities.

TL 665 Loop-In

The TL665 loop-in would be constructed in the general location of the Mira Sorrento Substation site, as further described below. The loop-in would be located partially on the Project site and within SDG&E's existing right-of-way (ROW).

As part of the proposed Project, TL665 would split and proceed underground via two new parallel trench alignments along Vista Sorrento Parkway to the proposed Mira Sorrento Substation at a distance of approximately 600 feet each of single circuit 69kV duct package infrastructure. The new underground alignment would proceed south along Vista Sorrento Parkway then cross Mira Sorrento Place to the new Mira Sorrento Substation; refer to Figure 3-17, *TL 665 Loop-In Trench Alignment*.

The loop-in would parallel the easterly side of Vista Sorrento Parkway, which presently supports non-native ornamental vegetation. The TL665 loop-in would cross the existing paved roadway of Mira Sorrento Place (four lanes). Surrounding land uses include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the north/northeast, and Vista Sorrento Parkway and Interstate 805 to the west.

Staging Areas

Mira Sorrento Substation

The majority of construction equipment, vehicles, personnel, and material staging areas would be accommodated within the property lines of the proposed Substation site; however, equipment staging areas for the Mira Sorrento Substation would also occur at existing substation storage yards, including the Kearny, Miguel, Peñasquitos, and Clairemont Substation storage facilities. These staging areas are located within developed areas of the City and would allow for efficient storage and transport of construction materials, vehicles, and equipment to the proposed Project site, as needed.

TL665 Loop-In

Staging for the TL665 loop-in component would occur at the existing Peñasquitos Substation, approximately 1.6 miles to the north of the Proposed Project site. The footprint of the existing staging area at Peñasquitos Substation occupies approximately 0.60 acre. As stated above, the Peñasquitos Substation is located within a developed area within the City of San Diego; refer to Figure 3-13, *Transmission Laydown Site*.

4.8.3.3 Designated Land Uses

All components of the Proposed Project would be located within the City of San Diego, located in the Sorrento Valley area. All components would be located entirely on land owned or acquired by SDG&E, or within SDG&E's existing right-of-way.

This section summarizes the designated land uses traversed and/or adjacent to the Proposed Project and planned development within the Proposed Project vicinity. Table 4.8-1, *Existing and Designated Land Uses*, summarizes the existing and designated land uses and zoning designations for lands affected by the Proposed Project. Lands surrounding the Proposed Project area are primarily designated for industrial and commercial employment, retail, and service uses. The land use designations are further described below.

City of San Diego General Plan

The City of San Diego General Plan was adopted in 2008. The General Plan provides a framework of goals, policies, and objectives, and identifies land use designations to guide future development of the City. As shown in Table 4.8-1, *Existing and Designated Land Uses*, the proposed Substation site and lands affected by the TL665 components have a General Plan designation of Industrial Employment. Lands designated as Industrial are largely located in the northern and southern portions of the City where research and development, manufacturing, warehouse and distribution facilities have historically been established, due to the availability of large parcels of land and ease of access to major freeway corridors. A variety of land use types are recommended within the Industrial Employment designation, including scientific research, technology and business parks, and light and heavy industrial uses.[1]

Table 4.8-1: Existing and Designated Land Uses

Proposed Project Components	City of San Diego General Plan Land Use Designation	Zoning Designation	Existing Land Use
Mira Sorrento Substation	Industrial Employment	RS-1-8 (Residential)	Undeveloped
TL665 Loop-In	Industrial Employment	IL-2-1 (Industrial- Light / Mixture of Light Industrial and Office Uses with Limited Commercial)	Office Complex/Undeveloped /Roadway
Staging Areas	Industrial Employment	Varies – Industrial Designations	SDG&E Substations

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.

[1] City of San Diego General Plan. Adopted 2008.

City of San Diego Municipal Code

The Proposed Project site is zoned RS-1-8 which is a residential zone. SDG&E representatives have met with City staff regarding the zoing designation and have determined that the residential zone was erroneously applied to property and the proper designation is IL-2-1 (Light Industrial). SDG&E is currently working with City staff to correct the zoning designation. The surrounding existing light industrial land uses, the site's adjacency to several major roadways, and the topography of the site are compatible with the proposed Substation use.

Mira Mesa Community Plan

The Mira Mesa Community Plan is a component of the City's General Plan and provides goals and policies to guide future development within the Mira Mesa community. Approximately 26 percent of the land area in Mira Mesa is planned for industrial and commercial office development.[2] The Mira Mesa Community Plan Land Use Map designates the proposed Substation site and lands affected by the TL665 loop-in as Industrial (Park), reflective of the General Plan designation of Light Industrial.

Natural Community Conservation Plans/ Habitat Conservation Plans

In addition to the review of planning documents adopted by local jurisdictions that are potentially applicable to the Proposed Project, relevant Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs) were also reviewed for goals and policies that may be applicable. The Proposed Project components are proposed on lands affected by SDG&E's Subregional NCCP and the City of San Diego's MSCP. Relevant land use related policies were not identified within the plans; however, relevant biological and habitat-related policies were identified and are further addressed in Section 4.3, *Biological Resources*.

SDG&E's Subregional Natural Community Conservation Plan

In 1995, SDG&E entered into an agreement with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), establishing its Subregional NCCP. The NCCP is an incidental take permit under Federal and State endangered species laws. The NCCP was developed according to the Federal and California Endangered Species Acts and the State's Natural Community Conservation Planning Act. SDG&E's NCCP establishes a comprehensive, long-term, agreement between SDG&E, the USFWS, and the CDFG for the conservation of multiple species covered in the Plan and their associated habitats. As such, the NCCP provides protection for those species while allowing SDG&E to develop, install, maintain, operate, and repair necessary electric and gas utility facilities within the region.

[2] Mira Mesa Community Plan. Adopted December 1994. Last Amended April 2011.

The NCCP prescribes as "protocols" various protection, mitigation, and conservation measures that SDG&E must implement as part of its covered activities to ensure the survivability and conservation of protected species and their habitat, according to applicable law. The NCCP identifies 61 protocols that SDG&E routinely implements with each project to avoid and minimize impacts to sensitive areas. These 61 protocols are applicable to the Proposed Project and would be implemented to avoid and minimize potential impacts to biological resources. Refer to Section 4.3 – *Biological Resources*, which expands on the Proposed Project's conformance with SDG&E's NCCP.

City of San Diego Multiple Species Conservation Program

From a biological resources management perspective, the proposed Mira Sorrento Substation site is located within the boundaries of the City of San Diego's MSCP Subarea Plan. The MSCP is a subregional plan under the NCCP, which is implemented through local subarea plans. The City's MSCP Subarea Plan and its associated Implementing Agreement establish the conditions under which the City, for the benefit of itself, public and private landowners, and other land development project proponents within its Subarea boundaries would receive from the USFWS and CDFG certain long-term Take Authorizations (and an acknowledgement that the MSCP satisfies conditions established in the Section 4(d) Special Rule for the coastal California gnatcatcher), which would allow the taking of certain covered species incidental to land development and other lawful land uses authorized by the City.

While the proposed Mira Sorrento Substation site is located within areas included in the City of San Diego's MSCP Subarea Plan, it is not in the MHPA preserve area. Moreover, SDG&E's NCCP identifies appropriate protocols that would sufficiently avoid and minimize potential impacts. Despite the potential for conservation planning documents to overlap, guidance in the SDG&E NCCP is clear that SDG&E projects and activities shall be conducted according to the NCCP. Therefore, all design, construction, and operation activities for the Proposed Project would be conducted according to SDG&E's NCCP.

Marine Corps Air Station Miramar Air Installations Compatible Use Zone Study

The Air Installations Compatible Use Zone Study (AICUZ) for Marine Corps Air Station (MCAS) Miramar is a Department of Defense land use plan used to protect the public's health, safety and welfare and to prevent encroachment from degrading the operational capability of MCAS Miramar. The AICUZ provides the requisite analysis of noise levels, accident potential and obstruction clearance criteria associated with military airfield operations according to the Department of the Navy policy and directives.

4.8.4 Impacts

4.8.4.1 Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to land use and planning are 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 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; or,
- Conflicts with any applicable habitat conservation plan or natural community conservation plan.

4.8.4.2 Impact Analysis

Question 4.8a – Physical Division of an Established Community

Construction – No Impact

Mira Sorrento Substation

The Mira Sorrento Substation would be constructed on approximately 3.7 acres of undeveloped land owned and/or acquired by SDG&E. Ultimately, the Substation perimeter security/screen wall/gates would enclose an area totaling approximately 62,420 square feet, or a total of approximately 1.4 acres. The TL665 loop-in would be constructed on land acquired for the new Substation and within SDG&E's existing ROW.

The Proposed Project site is located in a highly urbanized area of San Diego. Surrounding lands generally support various light industrial and commercial uses. The Substation site is bounded by Vista Sorrento Parkway to the southwest, Mira Mesa Boulevard to the southeast, and Mira Sorrento Place to the northwest; a commercial retail center is present to the east. The land affected by the TL665 loop-in is generally bordered by an office complex to the east and Vista Sorrento Parkway to the west. No residential uses occur within the area immediately surrounding the Substation site or the lands affected by the TL665 loop-in.

Access to all businesses and other uses within the area surrounding the Proposed Project site would generally be maintained during the construction phase. Although it is not anticipated that the Proposed Project would require any road closures, traffic may be restricted to one-way traffic on a periodic basis to allow for the transport of materials to and from the Proposed Project site and for installation of the underground transmission line; however, such traffic control measures would be temporary and short-term and are not anticipated to create a division between area land uses or within the larger community.

There are no existing established communities that would be physically divided as a result of the Proposed Project, due to the location of the site and the existing surrounding land uses. As the Proposed Project would not divide an established community, no impact would occur.

TL 665 Loop-In

As stated above, the TL665 loop-in would be installed on land acquired for the new Substation and within SDG&E's existing ROW. Therefore, the TL665 loop-in would not affect other privately-owned lands or established uses. There are no existing established communities that would be physically divided as a result of the TL 665 Loop-In, therefore no impact would occur.

Operation and Maintenance – No Impact

Operation and maintenance activities for the Proposed Project would be the similar to those currently performed by SDG&E in the area to maintain existing facilities and would occur on land owned or acquired by SDG&E. Such activities do not currently divide an established community, nor would they be anticipated to do so as a result of the Proposed Project. The Proposed Project would be an industrial use similar to the surrounding uses. Therefore, there would be no impact.

Question 4.8b – Plans and Policy Conflicts – Less than Significant Impact

Per the requirements of CEQA, projects must be evaluated with regard to potential conflicts with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project, and that have been adopted for the purpose of avoiding or mitigating an environmental effect (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance, or any applicable HCP or NCCP).

Pursuant to Article XII, Section 8 of the California Constitution, the CPUC has exclusive jurisdiction to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities; however, other State agencies may have concurrent jurisdiction with the CPUC. The CPUC actively encourages, and SDG&E participates in, discussions with local governments, as applicable, to address their concerns where feasible.

As part of the environmental review process, the following discussion evaluates the Proposed Project's conformance with applicable land use plans and policies. A summary of the applicable goals and policies considered, and the Proposed Project's consistency with such goals and policies is provided in Table 4.8-2, *Local Land Use Plans and Policies Consistency Analysis*. Project consistency with the City of San Diego General Plan, Mira Mesa Community Plan, and Marine Corps Air Station Miramar AICUZ is discussed. Additional discussion is also provided to address the Project's consistency with the City's Municipal Code, MSCP Subarea Plan, and SDG&E's NCCP.

The proposed Mira Sorrento Substation site is designated as Industrial Employment by the City of San Diego's General Plan. As previously stated, a variety of land use types are recommended within the Industrial Employment designation, including scientific research, technology and business parks, and light and heavy industrial uses. Substations are typically permitted within general industrial areas because their visual characteristics (such as scale, nature, and intensity) are similar to that of other industrial uses. In addition, substations and similar energy infrastructure uses are generally considered a compatible use within all zones.

Table 4.8-2: 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		
G. Airport Land Use Compatibility Goals: 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 aircraft accidents.	Yes	The Proposed Project would result in the development of the Mira Sorrento Substation and associated Project components. The Substation would be unmanned and operated remotely, thereby reducing potential public exposure to noise and aircraft accidents, particularly if the site were developed with an alternate land use such as a commercial retail or industrial park. As such, the Proposed Project would be consistent with this goal.
Protection of public use airports and military air installations from the encroachment of incompatible land uses within an airport influence area that could unduly constrain airport operations.	Yes	Construction and/or long-term operation and maintenance of the Proposed Project would not represent an incompatible land use within the AIA of the Marine Corp Air Station AICUZ/Air Installation Compatibility Use Zones. The Mira Sorrento Substation would be unmanned and remotely operated, and Project components are not anticipated to exceed an overall height of 30 feet above ground surface. Therefore, the Proposed Project is considered to be consistent with this goal.
Policies: LU-G.5. Implement the height standards used by the Federal Aviation Administration (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 the boundary of the FAA Height Notification Area. The tallest component of the Mira Sorrento Substation Project would be the standard steel rack, which will reach approximately 30 feet above ground surface. Although a determination would be required from the FAA, the Proposed Project is not anticipated to conflict with FAA height standards. The Proposed Project would be consistent with this policy.
LU-G.9. Coordinate with the Navy and Marine Corps to ensure that future land use and General Plan community plan, specific plan, development regulations and zoning ordinances amendments are consistent with the Air Installation Compatible Use Zone study for military air installations.	Yes	The Proposed Project would not result in a change to the existing General Plan land use designation of the site proposed for the Mira Sorrento Substation or lands affected by other Project components. SDG&E will continue to coordinate with the City, and the Marine Corps as appropriate, to ensure that the Proposed Project is compatible with operations at MCAS Miramar. The Proposed Project would be consistent with this policy.

Table 4.8-2, Applicable Land Use Plans and Policies Consistency Analysis, cont'd

Plan or Policy	Consistent? (Yes/No)	Explanation
Public Facilities, Services, and Safety Element		
Goals: M. Public Utilities Public utility services provided in the most cost-effective and environmentally sensitive way.	Yes	The Proposed Project is intended to effectively meet the area's electric capacity needs; provide improved substation and circuit reliability with added tie capacity; and, reduce area substation loading to optimum operating conditions. In addition, the Proposed Project has been designed to reduce potential environmental impacts to less than significant or to avoid impacts to sensitive resources if possible. The Proposed Project would be consistent with this goal.
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 above, the Proposed Project is intended to effectively meet the area's electric capacity needs; provide improved substation and circuit reliability with added tie capacity; and, reduce area substation loading to optimum operating conditions. The proposed use would be consistent with surrounding industrial-type land uses and would be designed to avoid impacts to sensitive resources to the extent possible; refer also to Section 4.1, *Aesthetics*, for additional discussion of potential visual effects resulting from the Proposed Project. The Proposed Project would be consistent with this goal.
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. 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 above, the Proposed Project is intended to effectively meet the area's electric capacity needs; provide improved substation and circuit reliability with added tie capacity; and, reduce area substation loading to optimum operating conditions. SDG&E has coordinated with the City (over the past several years) to identify an appropriate location for the Mira Sorrento Substation to meet these intended objectives. In addition, the Proposed Project has been designed to minimize or avoid potential environmental impacts and is proposed in an area with similar industrial-type uses. Only a portion (approximately 1.4 acres) of the approximately 3.7-acre site would be permanently occupied by the Substation. The existing 200-foot wide SDG&E utility easement to the north and the undeveloped area to the east would remain in their present states. No residential uses are located within the immediate area of the Proposed Project or associated Project components. The Proposed Project would be consistent with these policies.

Table 4.8-2, Applicable Land Use Plans and Policies Consistency Analysis, cont'd

Plan or Policy	Consistent? (Yes/No)	Explanation
Mira Mesa Community Plan		
Industrial Land Use		
Goals: Preservation of an adequate supply of industrial land.	Yes	The Proposed Project would not change the existing Industrial Employment General Plan land use designation, and would therefore, not remove any acreage from the City's supply of land designated for industrial use. The Proposed Project would develop the Substation site consistent with the (industrial) land use intended by the City. The Proposed Project would be consistent with this goal.
A reduction in traffic conflicts and congestion in industrial areas.	Yes	Limited short-term traffic impacts may occur with the Proposed Project during the construction phase; however, no long-term effects on traffic would occur with operation and maintenance of the Substation or the associated facilities, as the facilities would be remotely controlled and maintenance would require an average of less than one vehicle trip per day. No roadway improvements are required or proposed with the Proposed Project, as no Project-related impacts would occur on the existing roadway system. The Proposed Project would be consistent with this goal.
Improvement of the visual quality of industrial development in the community	Yes	The project design includes a 10-foot screen wall around the perimeter of the proposed substation to screen most of the substation equipment. The proposed screen wall has been designed to have some articulation to soften its appearance and provide some visual relief. Landscaping, including some street trees, will be provided along portions of the street frontage. The landscaping will provide a visual and physical buffer between the substation wall and the sidewalk. Landscaping will also be provided around the retaining walls to soften views from the south and west. The substation will not adversely affect other industrial properties in the area by constructing a project that would visually detract from the existing buildings. The project has been designed to avoid wetland impacts and keep the existing drainage intact. Therefore, the Proposed Project is consistent with this goal.
Compliance with the Airport Land Use Compatibility Plan for MCAS Miramar	Yes	The Proposed Project does not propose a land use or a structure that conflict with the Airport Land Use Compatibility Plan for MCAS Miramar. The maximum height is 30 feet which will not pose a risk to aviation. Other existing buildings and structures in the surrounding area are at a higher elevation than the Proposed Project. Table MIR-2 of the ALUCP for MCAS Miramar specifically identifies that electrical substations are compatible in the Accident Potential Zone II, which is where the Proposed Project is located. There are ongoing discussions between the City, the Airport Authority and MCAS Miramar regarding

Table 4.8-2, Applicable Land Use Plans and Policies Consistency Analysis, cont'd

Plan or Policy	Consistent? (Yes/No)	Explanation
		language in the applicable Airport Land Use Compatibility Plan (ALUCP) concerning the ability to construct new electrical substations on the Proposed Project site. An amendment to the Airport Authority's ALUCP to clarify that new substations are allowed on that site is expected to be approved by the Airport Authority no later than December 2011.
Policies: The City shall preserve an adequate supply of industrial land for manufacturing uses; The City shall ensure that all projects within the Airport Influence area are reviewed for conformance with the Airport Land Use Compatibility Plan	Yes	The Proposed Project, located on approximately 3.7 acres of land currently owned by SDG&E for the purpose of constructing a distribution substation, does not remove a substantial amount of industrial land from future manufacturing uses. The substation will provide additional electrical capacity and reliability to the manufacturing uses in the area and to future manufacturing uses in Sorrento Valley. As such, the Proposed Project is consistent with this policy. As noted in the discussion above, the Proposed Project does not conflict with the Airport Land Use Compatibility Plan for MCAS Miramar. The Proposed Project does not propose a use that would conflict with the noise, safety, airspace protection, or overflight policies of the plan. As an unmanned substation, the Proposed Project will not expose people (military or civilian) to health and safety risks that are not common to all existing and future development in the area. Therefore, the Proposed Project is consistent with that plan. There are ongoing discussions between the City, the Airport Authority and MCAS Miramar regarding language in the applicable Airport Land Use Compatibility Plan (ALUCP) concerning the ability to construct new electrical substations on the Proposed Project site. An amendment to the Airport Authority's ALUCP to clarify that new substations are allowed on that site is expected to be approved by the Airport Authority no later than December 2011.
Marine Corps Air Station Miramar Air Installations Compatible Use Zone (AICUZ) Study		
Policy: Protecting the health, safety, and welfare of civilians and military personnel by encouraging land use which is compatible with aircraft operations.	Yes	The Proposed Project does not conflict with the AICUZ for MCAS Miramar because the electrical substation will not change or alter the existing land use pattern, introduce a new land use that would pose a threat to military or civil aviation, or propose to construct a structure that would pose a threat to current or future military aircraft operations at MCAS Miramar. The Proposed Project is located approximately 2 miles from MCAS Miramar and would not limit or hinder existing or future military operations. The unmanned substation would not expose people (military or civilian) to conditions that would adversely affect their health, safety, and welfare. As such, the Proposed Project is consistent with this policy.

City of San Municipal Code

The City of San Diego Municipal Code is intended to guide both existing and future development on lands within the jurisdiction of the City. The site proposed for the Substation is currently zoned RS-1-8 (residential). SDG&E is currently working with City staff to changes the zoning on the property to IL-2-1 (Light Industrial). City staff has determined that the RD-1-8 zone was erroneously applied to the property during the City's last update of the Zoning Ordinance in 2002. The IL-2-1 zone is consistent with the surrounding existing light industrial land uses, the site's adjacency to several major roadways.

No changes to the existing zoning are proposed with the Proposed Project at the Mira Sorrento Substation site or other lands affected by the Project components. The Proposed Project does not propose a use that would be inconsistent with that intended by the City for the properties affected by the improvements.

The Proposed Project site is within the City's Airport Environs Overlay Zone, due to its proximity to MCAS Miramar. The purpose of this overlay zone is to provide supplemental regulations for properties surrounding MCAS Miramar, among other airports, to ensure that land uses are compatible with operation of the airport (Sections 132.0301 – 132.0310, San Diego Municipal Code).

For the above reasons, it is anticipated that the Proposed Project would not conflict with the Municipal Code, and that no impacts would occur.

SDG&E's Subregional Natural Community Conservation Plan

The NCCP, the USFWS, and the CDFG work to protect and preserve animals and their habitats, natural communities, a variety of plants, and other biological resources. The NCCP is intended to establish and implement an agreement between SDG&E, the USFWS, and the CDFG for the long-term preservation of sensitive habitat and animal species, while allowing SDG&E to develop, operate, and maintain its facilities.

The NCCP applies to new electric substations that result in less than 20 acres of habitat disturbance. The Proposed Project is covered by the NCCP and would be evaluated by the NCCP standards. Avoidance and minimization measures partially based on the NCCP and proposed for implementation with the Proposed Project are provided in Section 4.3, *Biological Resources*. The Proposed Project would be developed consistent with the NCCP standards, and no impacts would occur.

City of San Diego Multiple Species Conservation Program

The purpose of the City's MSCP is to provide protection of sensitive habitat and open space while preserving natural biodiversity. The MSCP is intended to preserve native vegetation and to meet the habitat needs of a variety of species. The MSCP was developed in

coordination with wildlife agencies, property owners, and other representatives of the development industry and environmental groups.

As previously stated, the Proposed Project lies within the boundaries of the City's MSCP Subarea Plan. The Proposed Project would be developed consistent with the MSCP, as appropriate, in combination with SDG&E's NCCP standards. No impacts would occur.

Marine Corps Air Station Miramar Air Installations Compatible Use Zone Study

The MCAS Miramar AICUZ identifies the Proposed Project Site within the safety zone identified as Accident Potential Zone (APZ) II. The APZ is the area along the military flight corridor surrounding a military base (in this case the Seawolf corridor for MCAS Miramar) where some level of risk for aviation accidents. The APZ II is determined to have less risk than the clear zone or APZ I.

The Proposed Project would not result in any of the following conditions:

- Objects that would require a permanent change to MCAS Miramar flight operations, approach minimums or arrival/ departure routes.
- Uses which release into the air any substance that would impair visibility or otherwise interfere with the operation of aircraft such as dust, smoke or steam.
- Uses that emit or reflect light which would interfere with aircrew vision.
- Uses which produce emissions which would interfere with aircraft communication, navigation or electrical systems.
- Uses which would attract birds or waterfowl and the growing of certain types of vegetation.

Table MIR-2 of the ALUCP for MCAS Miramar specifically identifies that electrical substations are compatible in the Accident Potential Zone II, which is where the Proposed Project is located.

There are ongoing discussions between the City, the Airport Authority and MCAS Miramar regarding language in the applicable Airport Land Use Compatibility Plan (ALUCP) concerning the ability to construct new electrical substations on the Proposed Project site. An amendment to the Airport Authority's ALUCP to clarify that new substations are allowed on that site is expected to be approved by the Airport Authority no later than December 2011. Therefore, no conflicts have been identified between the Proposed Project and the AICUZ.

Question 4.8c – Habitat Conservation Plan or Natural Community Conservation Plan Conflicts – No Impact

None of the improvements associated with the Proposed Project would result in a significant impact due to an inconsistency with adopted plans or policies intended for the protection of

biological resources; refer also to the response to Question 4.8b, above. As described in Section 4.3, *Biological Resources*, the Proposed Project is required to comply with biological and habitat-related provisions and policies given in the SDG&E Subregional NCCP and the City of San Diego MSCP, as appropriate. Construction, operation, and maintenance of the Proposed Project would not conflict with SDG&E's Subregional NCCP or the City of San Diego's MSCP. With implementation of SDG&E's NCCP (particularly avoidance of resources) and implementation of SDG&E's Applicant Proposed Measures (APMs) to reduce potential impacts on biological resources, no impact would occur. Refer also to Appendix C, *Biological Technical Report*, and Section 4.3, *Biological Resources*, for additional discussion.

4.8.5 Applicant Proposed Measures

No conflicts with applicable land use plans or policies would occur with implementation of the Proposed Project, and the Proposed Project would not divide an established community. As such, no avoidance or minimization measures are required or proposed.

4.8.6 References

CPUC. 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 CEQA. CEQA Guidelines.

City of San Diego General Plan – City of Villages. Adopted March 10, 2008.

City of San Diego General Plan – City of Villages, Environmental Impact Report. Certified March 10, 2008.

City of San Diego General Plan Land Use Map, 2007. Online. http://www.sandiego.gov/planning/genplan/. Site visited July 12, 2010.

City of San Diego Multiple Species Conservation Program. Online. http://www.sandiego.gov/planning/mscp/. Site visited July 12, 2010.

City of San Diego Municipal Code. Chapter 13 of the Municipal Code. Online. http://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni.shtml. Site Accessed July 12, 2010.

Google. Google Earth Version 2.0. Software. Program used July 9, 2010.

Marine Corps Air Station (MCAS) Miramar –Air Installations Compatible Use Zones (AICUZ)

Mira Mesa Community Plan. Adopted December 1994. Last Amended April 2011.

Multiple Species Conservation Program – City of San Diego Subarea Plan. Approved 1997.

San Diego County Street Guide. 2008. The Thomas Guide.

San Diego Gas & Electric. Subregional Natural Communities Conservation Plan. 1995.

4.9 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. 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?	☐	☐	☒	☐
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. Lie within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. Lie in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.9.1 Introduction

The purpose of this Section is to document existing noise conditions in the area proposed for location of the San Diego Gas and Electric Company (SDG&E) proposed Mira Sorrento Substation and to assess potential noise impacts that may result from project implementation, particularly with regards to short-term construction activities and long-term operation. In addition, this Section is intended to evaluate the Proposed Project for potential noise impacts resulting from inconsistency with applicable noise-related policies or incompatibility with surrounding land uses.

Operation of the proposed Mira Sorrento Substation would not substantially alter existing noise levels in the surrounding area, which consists of Interstate 805, commercial developments, and residential and hotel uses; however, potential short-term noise impacts may result from Proposed Project construction at the proposed Mira Sorrento Substation site. With implementation of SDG&E's Applicant Proposed Measures (APMs) (refer to Section 4.9.5 – *Applicant Proposed Measures*), noise impacts relative to the Proposed Project would be less than significant.

4.9.2 Methodology

Information regarding existing noise sources and standards was obtained from local, regional, state, and federal literature reviews to establish the noise standards for the location in which the Proposed Project is located. Evaluation of potential noise impacts from the Proposed Project included measuring existing noise levels at the Proposed Project site and in the vicinity, characterizing the existing noise environment, calculating noise generation from the proposed transmission substation equipment based on the performance of the equipment at other locations, and examining typical noise levels resulting from construction and operation activities. The noise analysis focuses on the improvements at the proposed Mira Sorrento Substation site and the surrounding area, where grading of the site and use of heavy equipment for construction of the proposed Mira Sorrento Substation would occur. APMs have been included to reduce the degree of potential noise impacts at the proposed Mira Sorrento Substation site.

4.9.3 Existing Conditions

Regulating noise is generally the responsibility of local governments. Federal and State publications recommend noise levels depending on certain criteria. The noise analysis was conducted in accordance with federal, state, and local criteria, as described in the following sections.

4.9.3.1 Regulatory Background

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) offers guidelines for community noise exposure in the publication *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*. These guidelines consider occupational noise exposure as well as noise exposure in homes. The EPA recognizes an exterior noise day-night level of 55 decibels (55 dB Ldn) as a general goal to protect the public from hearing loss, activity interference, sleep disturbance, and annoyance. The EPA and other federal agencies have adopted suggested land use compatibility guidelines that indicate that residential noise exposures of 55 to 65 dB Ldn are acceptable. The EPA notes that these levels are not regulatory goals, but are levels defined by a negotiated scientific consensus without concern

for economic and technological feasibility or the needs and desires of any particular community.

State of California

The State of California Office of Planning and Research (OPR) Noise Element Guidelines recommend exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The OPR Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the community noise equivalent level (CNEL). A noise environment of 50 to 60 CNEL is considered to be normally acceptable for residential uses. The OPR recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by five to ten dB to reflect their lower existing outdoor noise levels in comparison with urban environments.

City of San Diego General Plan Noise Element

The City of San Diego has adopted noise compatibility guidelines for various land uses that are contained in the Noise Element of the General Plan. As shown in Table 4.9-1*, Land Use – Noise Compatibility Guidelines (City General Plan Noise Standards)*, the City of San Diego General Plan considers a noise environment of up to 65 Ldn compatible for office uses which is the category most similar to the Substation. A noise environment of up to 75 Ldn is allowed for new development of these types of uses only when a detailed analysis of noise reduction requirements has been conducted and the best practicable and available noise insulation features have been incorporated into the Project design. These features for a substation typically will involve construction with solid screening walls.

Table 4.9-1: Land Use – Noise Compatibility Guidelines (City General Plan Noise Standards)

	Exterior Noise Exposure				
Land Use Category	**60**	**65**	**70**		**75**
Open Space and Parks and Recreational					
Community & Neighborhood Parks, Passive Recreation					
Regional Parks, Outdoor Spectator Sports, Golf Courses, Athletic Fields, Outdoor Spectator Sports, Water Recreational Facilities, Horse Stables,					
Agricultural					
Crop Raising & Farming, Aquaculture, Dairies, Horticulture Nurseries & Greenhouses, Animal Raising, Maintain & Keeping, Commercial Stables					
Residential					
Single Units, Mobile Homes, Senior Housing		45			
Multiple Units, Mixed-Use Commercial/Residential, Live Work, Group Living Accommodations, **For uses affected by aircraft noise, refer to*		45	45*		
Institutional					
Hospitals, Nursing Facilities, Intermediate Care Facilities, Kindergarten through Grade 12 Educational Facilities, Libraries, Museums, Places of		45			
Vocational of Professional Educational Facilities, Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or		45	45		
Cemeteries					
Sales					
Building Supplies/Equipment, Food, Beverages & Groceries, Pets & Pet Supplies, Sundries, Pharmaceutical, & Convenience Sales, Wearing			50	50	
Commercial Services					
Building Services, Business Support, Eating & Drinking, Financial Institutions, Assembly & Entertainment, Radio & Television Studios, Golf			50	50	
Visitor Accommodations		45	45	45	
Offices					
Business & Professional, Government, Medical, Dental & Health Practitioner, Regional & Corporate Headquarters			50	50	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair & Maintenance, Commercial or Personal Vehicle Sales & Rentals, Vehicle Equipment & Supplies Sales &					
Wholesale, Distribution, Storage Use Category					
Equipment & Materials Storage Yards, Moving & Storage Facilities, Warehouse, Wholesale Distribution					
Industrial					
Heavy Manufacturing, Light Manufacturing, Marine Industry, Trucking & Transportation Terminals, Mining & Extractive Industries					
Research & Development				50	

Table 4.9-1: Land Use – Noise Compatibility Guidelines (City General Plan Noise Standards), continued

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level. Refer to Section 1.
		Outdoor Uses	Activities associated with the land use may be carried out.
	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas. Refer to Section 1.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated make the outdoor activities acceptable. Refer to Section 1.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

The City's General Plan recognizes noise pollution as a significant source of environmental degradation. The City's General Plan policy document identifies community noise goals and establishes policies to reduce noise pollution. Many of the goals and policies address new residential development. The general plan goals and policies that apply to the Project are summarized below.

Goal

Consider existing and future noise levels when making land use planning decisions to minimize people's exposure to excessive noise.

Policies

- NE-A.1. Separate excessive noise-generating uses from residential and other noise-sensitive land uses with a sufficient spatial buffer of less sensitive uses.
- NE-A.2. Assure the appropriateness of proposed developments relative to existing and future noise levels by consulting the guidelines for noise-compatible land use (shown on Table 4.9-1) to minimize the effects on noise-sensitive land uses.
- NE-A.3. Limit future residential and other noise-sensitive land uses in areas exposed to high levels of noise.
- NE-A.4. Require an acoustical study consistent with Acoustical Study Guidelines for proposed developments in areas where the existing or future noise level exceeds or would exceed the "compatible" noise level thresholds as indicated on the Land Use - Noise Compatibility Guidelines (Table 4.9-1),

so that noise mitigation measures can be included in the Project design to meet the noise guidelines.

- NE-A.5. Prepare noise studies to address existing and future noise levels from noise sources that are specific to a community when updating community plans.

City of San Diego Noise Ordinance

Chapter 5 of the *City of San Diego Municipal Code* regulates sound level limits from stationary noise sources within the City. Specifically, Section 59.5.0401 of the Municipal Code states the following with respect to stationary noise sources:

> *(a) It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit given in the following table, at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced.*

Section 49.5.0401 (c) provides additional direction with regard to utility substations:

> *Fixed- location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level of part (a) of this section, measured at or beyond six feet from the boundary of the easement upon which the equipment is located.*

Table 4.9-2, *San Diego Municipal Code-Stationary Noise Limits*, summarizes acceptable sound levels with respect to various land uses. For clarity, the following table has been modified from a larger table contained within the Municipal Code. Section 59.5.0401(a) of the San Diego Municipal Code identifies the sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. The site is zoned residential, but is adjacent to an industrial zone, and therefore is subject to the arithmetic mean of those two zones.

Table 4.9-2: San Diego Municipal Code-Stationary Noise Limits

Land Use Zone	Time of Day	One-Hour Average Sound Level (dBA)
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
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	60
Industrial or Agricultural	7:00 a.m. to 7:00 p.m.	75
	7:00 p.m. to 10:00 p.m.	75
	10:00 p.m. to 7:00 a.m.	75

Table 4.9-2: San Diego Municipal Code-Stationary Noise Limits, cont'd

Land Use Zone	Time of Day	One-Hour Average Sound Level (dBA)
Project Site*	7:00 a.m. to 7:00 p.m.	62.5
	7:00 p.m. to 10:00 pm	60.0
	10:00 p.m. to 7:00 a.m.	57.5

Source: San Diego Municipal Code, Chapter 5, Public Safety, Morals and Welfare.

*Per Section 59.5.0401(a) of the San Diego Municipal Code, the Project site is subject to the arithmetic mean of the single family residential and industrial sound levels.

Section 59.5.0404, of the City's Municipal Code permits construction noise as long as it occurs between the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, and not on legal holidays. Section 59.5.0404, of the City Municipal Code further states that construction activity at or beyond the property lines of any property zoned residential are prohibited to cause, an average sound level greater than 75 decibel from 7:00 a.m. to 7:00 p.m.

4.9.3.2 Environmental Setting

The major sources of noise in the area are associated with Mira Mesa Boulevard, Vista Sorrento Place, Mira Sorrento Place, and I-805. The site is bordered by Vista Sorrento Parkway to the southwest, Mira Sorrento Place to the northwest, a 200-foot SDG&E utility easement to the north and an undeveloped area to the east with a drainage channel that trends from northwest to southeast. Other surrounding land uses include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the northeast across the drainage. The Marriott Courtyard and Water Ridge condominium complexes are located north of the site at distances of approximately 800 and 1,000 feet, respectively.

Sensitive Receptors

Sensitive noise receptors are uses such as schools, hospitals, rest homes, long-term care and mental healthcare facilities, and residential areas where excessive noise would be a nuisance. Some jurisdictions may identify other noise-sensitive uses such as churches, libraries, and parks. Insensitive noise receptors typically include uses that generate significant noise levels and uses of low-level human occupancy. Refer to Table 4.9-3, *Sensitive Receptors*, for a list of sensitive noise receptors within one mile of the Proposed Project site. A one-mile radius represents a reasonable distance where sensitive noise receptors could potentially experience impacts because most typical construction equipment noise attenuates to less than 70 dBA at 800 feet and would not be discernable at a distance of one mile.

Existing Noise Measurements

Existing noise levels were measured at four locations in the surrounding area of the Project site. These four sites were selected because they represent nearby business with very similar exposure to traffic noise from the adjacent roadways as the Proposed Project site. Please see Figure 4.9-1, *Noise Measurement Locations*. Traffic noise is the major contributor to ambient

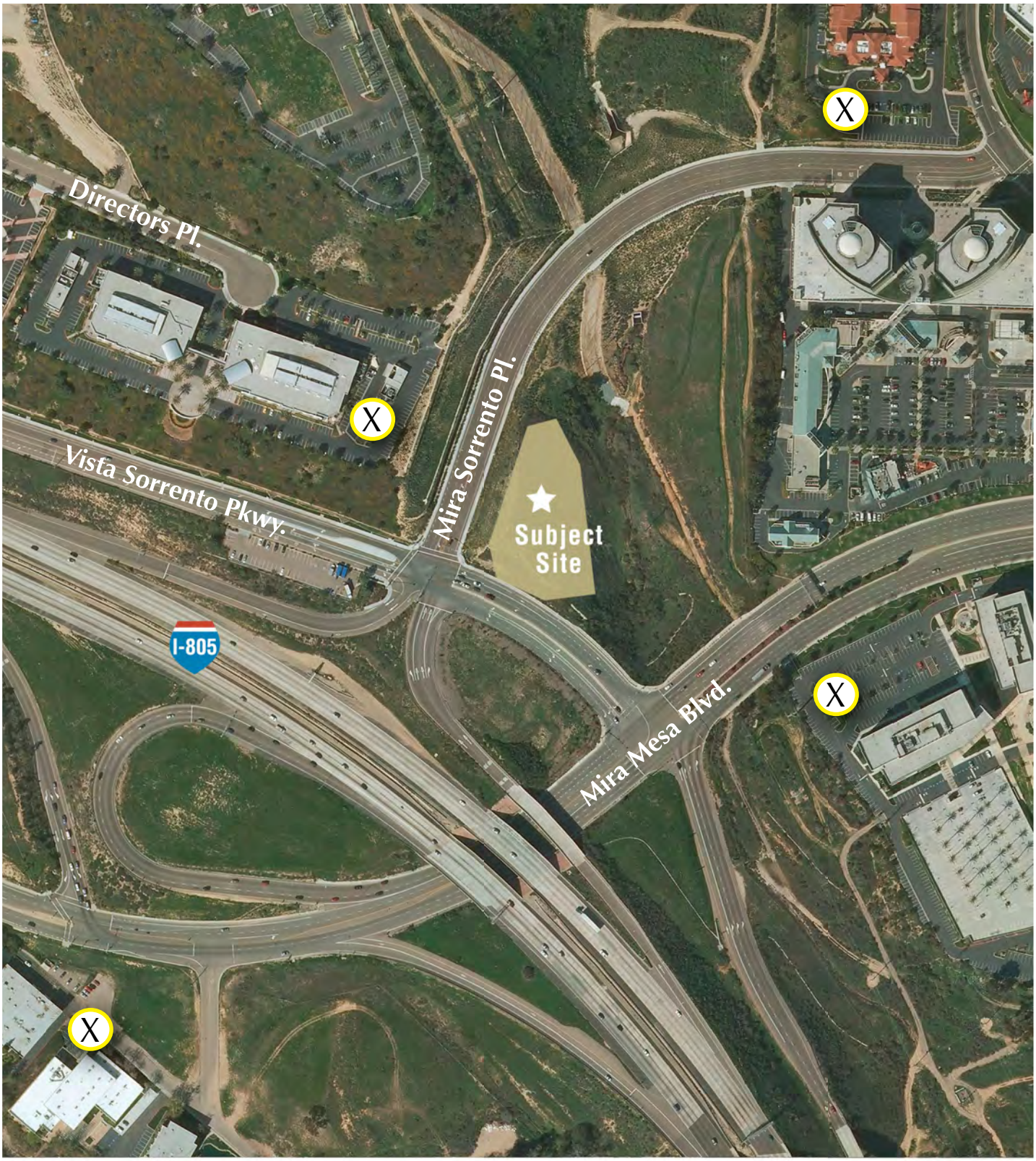
noise levels in the area. Providing noise information at these sites will provide a baseline as to how these nearby sites may be affected by the Proposed Project. Noise monitoring equipment used for the ambient noise survey consisted of a Bruel & Kjaer (B&K) Hand-held Analyzer Type 2250 equipped with a 4189 pre-polarized freefield microphone. The instrumentation was calibrated prior to use with a B&K Type 4231 acoustical calibrator to ensure the accuracy of the measurements and compliance with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. Table 4.9-4, *Noise Measurements*, provides a summary of the results of the noise monitoring survey (refer to Appendix A - *Noise Measurements*).

Table 4.9-3: Sensitive Receptors

Type	Name	Distance From Project Site (miles)	Direction from Project Site
Proposed Mira Sorrento Substation (City of San Diego)			
Residential	Water Ridge Condominium Complex	0.3	North
Hotels	Marriott Courtyard	0.1	North
	Country Inn and Suites	0.7	East
	Woodfin Hotel	0.9	East
	Homestead San Diego	1.0	East
	Holiday Inn Express	0.7	East
Schools	San Diego College of Ayurveda	0.3	West
	Children's World Living Center	1.0	Northeast
	San Diego Chinese Institute	0.7	East
	Star Specialties	0.6	Northeast
Hospitals	Sharp Medical Offices	0.3	West
Places of Worship	Bread of Life Christian Church	0.6	Northwest
	The Celebration Center for Spiritual Living	0.6	East
Parks	San Diego Wildlife Refuge	1.0	South

1. Sensitive receptor populations utilized in this analysis are those within a one-mile radius of the proposed Mira Sorrento Substation site.

Source: http://maps.google.com



Scale 1:400
Source: Google Earth 2011

Mira Sorrento Substation
Proponent's Environmental Assessment

NOISE MEASUREMENT LOCATIONS

SD Mac: 25103691EIRLetterPortrait.indd

Figure 4.9-1

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Table 4.9-4: Noise Measurements

Site No.	Location	Leq	Time	Time/Comments
1	Back parking lot off Director's Place	73.6	11:52 am – 12:02 pm	Sunny, mild winds
2	Sorrento Valley – Scripps Clinic	57.6	12:42 pm – 12:52 pm	Sunny, mild winds
3	Mira Mesa – Canon Building	67.8	1:41 pm – 1:51 pm	Sunny, mild winds
4	Scranton – Courtyard Hotel	56.4	2:05 pm –2:15 pm	Sunny, mild winds

4.9.4 Impacts

4.9.4.1 Significance Criteria

In general, any noise that exceeds the local jurisdiction's adopted standards will be considered potentially significant. In accordance with significance criteria established by Appendix G of the State California Environmental Quality Act (CEQA) Guidelines and the City of San Diego, a significant impact could occur if the Proposed Project would:

- Result in exterior noise levels that exceed 65 CNEL in residential areas and outdoor recreational areas including parks, and 70 CNEL in office districts, and 75 CNEL in commercial and industrial districts;
- Result in interior noise levels that exceed 45 CNEL for single-family and multi-family residential homes;
- Create a substantial or periodic increase in ambient noise levels in the project vicinity above levels existing without the Proposed Project; or,
- Result in noise levels that violate the City's Noise Ordinance (Section 59.5.0401 Sound Level Limits of the Municipal Zoning Code).

The following thresholds of significance for operational noise have been developed for Proposed Project-related increases at noise-sensitive receptor locations to help define what constitutes a substantial increase in ambient noise levels when the ambient noise level currently exceeds the City's sound level limits:

- Less than 3 dB will be considered not discernable and not significant.
- Increases above 3 dB will be considered noticeable, but not significant if noise levels remain below the City of San Diego Sound Level Limits.
- Noise increases will be considered significant if the noise meets or exceeds the City of San Diego Sound Level Limits.

Ground-Borne Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity or the root mean square velocity is usually used to describe vibration amplitudes. The peak particle velocity is defined as the maximum instantaneous peak or vibration signal, while the root mean square is defined as the square root of the average of the squared amplitude of the signal. The peak particle velocity is typically used for evaluating potential building damage, whereas the root mean square is typically more suitable for evaluating human response. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source.

Both construction and operation of development projects can generate ground-borne vibration. In general, demolition of structures preceding construction generates the highest vibrations. Construction equipment, such as vibratory compactors or rollers, pile drivers, and pavement breakers, can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight, and pavement conditions.

Question 4.9a – Noise in Excess of Standards

Construction Noise – Less Than Significant

Construction noise is generally of relatively short duration, lasting from a few days to a period of several months. Noise impacts associated with construction activities would typically occur in several distinct phases, each with its own noise characteristics. All construction equipment, vehicles, personnel, and material staging areas would be accommodated within the property lines of the proposed substation property. Access to the property would be along Mira Sorrento Place. The first phase, site preparation, is generally the noisiest. Activities that occur during this phase include earthmoving and compacting of soils. High noise levels are created during this phase from the operation of heavy-duty trucks, backhoes and front-end loaders.

During construction, operation of construction equipment will generate noise. Typical noise levels of construction equipment at a distance of 50 feet from the source range from 81 to 101 dBA Leq; refer to Table 4.9-5, *Typical Noise Levels*. As indicated in Table 4.9-3, *Sensitive Receptors*, the Courtyard Hotel is the closest sensitive receptor to the Project site, located approximately 528 feet north of the Project site. Based on existing noise levels in the Proposed Project area and the distance between the Proposed Project site and the sensitive receptor, construction noise would not exceed the City of San Diego threshold of 65 CNEL for exterior residential land uses. In addition, the noise from construction equipment could be appreciable during the construction phase of the Project. Because all equipment would not be operating on most days during construction, actual noise levels would, on many days, be

lower than present in Table 4.9-5. Worker commute vehicles and construction equipment would utilize Interstate 805 and Mira Mesa Boulevard, a major roadway. The increase in vehicles on these roadways would be negligible and therefore, the noise contribution from associated with the trips will temporary and small.

Table 4.9-5: Typical Noise Levels from Construction Equipment

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	78
Pile Driver	101
Front Loader	79
Scraper	88
Grader	85
Backhoe	85
Building Assembly -hammering on beams	85

Source: Cunniff, Environmental Noise Pollution, 1977 and U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.

Construction activities associated with the Proposed Project would occur in six distinct phases over a two-year period. The six construction phases and required equipment are provided in Table 4.9-6, *Estimated Building Construction Vehicle Types and Duration of Use*. During the site grading phase, a total of 1.8 acres would be graded at a maximum of 0.50 acres per day. The Proposed Project would require approximately 65,500 cubic yards of cut and 67,000 cubic yards of fill for the grading, retaining wall backcut, and retaining wall backfill.

Portable cranes and heavy hauling trucks would be employed for equipment delivery and installation. Concrete trucks, backhoes, crew trucks and pick-up trucks would be coming and going to the site during the installation of the foundations, ground grid, and underground ducts. Crew trucks, boom trucks, and pick-up trucks would be going to and from the site daily for the balance of the construction activities, testing and check-out, final transmission tie-ins, and circuit cabling until the station is energized.

Table 4.9-6: Estimated Building Construction Vehicle Types and Duration of Use

Total Estimated Vehicles Used	Hours Operating at Site/Day (per vehicle)	Daily Worst Case Vehicle Usage
Verdura Retaining Wall Construction (approximately 1½ months, concurrent with grading) (Note: The Verdura retaining wall construction assumes a 12 man crew: 1 superintendent, 4 operators, 8 laborers)		
3 – Front End Loader IT28	9	3
1 – Excavator	9	1
1 – Water truck	9	1
1 – Compactor (563 Ride-On)	9	1
1 – Motor Grader (blade)	9	1
3 – Walk Behind Compactors	9	3
5 – Cars/pickup trucks	1	5
3 – Delivery trucks	1	3
1 – Maintenance Truck	3	1
Site Development and Grading Construction (approximately 6 months):		
4 – Scrapers	7	4
2 – Front End Loader	6	2
25 – Dump Trucks (12 cubic-yard)	7	25
2 – Dozer (D6 or D8 or D9)	6	2
1 – Excavator	6	1
1 – Water Truck	7	1
2 – Compactor (824 or 834)	7	2
2 – Skid Steer Loader	3	2
2 – Back Hoe	6	2
1 – Ditch Witch	6	1
2 – Maintenance Truck	1	2
1 – Paver	6	1
8 – Asphalt Trucks	1	8
2 – Drum Roller Compactor	6	2
15 – Cars/Pickup Trucks	0	
CMU Retaining Wall, CMU Screen Wall, and Gate Construction (approximately 1½ months):		
2 – Forklift	6	2
1 – Back Hoe	7	1
1 – Ditch Witch	6	1
2 – Delivery Truck	1	2

Table 4.9-6: Estimated Building Construction Vehicle Types and Duration of Use, continued

Total Estimated Vehicles Used	Hours Operating at Site/Day (per vehicle)	Daily Worst Case Vehicle Usage
1 – Excavator	7	1
1 – Water Truck	4	1
2 – Walk Behind Compactors	4	2
2 – Mobile Cement Mixer	5	2
2 – Maintenance Truck	1	2
6 – Concrete Trucks	0.5	6
1 – Concrete Pump	4	1
1 – Mobile Generator	8	1
1 – Spray Pump (wall waterproof)	6	1
10 – Cars/Pickup Trucks	0	
SUBSTATION BELOW GRADE - 6 MONTHS		
2 - Back Hoe	6	1
2 -Loader	6	2
2 - Truck (20 cubic-yard end dump)	3	2
2 – Skid Steer Loaders	4	1
1 – Water truck	3	1
15 – Concrete trucks	0.5 (2 days/wk for 4 months)	
1- ditch witch	6	
15 – cars/pickup trucks	0	
SUBSTATION CONSTRUCTION - 13 MONTHS		
5 – Substation Crew	0	4
2 –Boom truck	6	2
1- Manlift	6	1
4– Bucket trucks	5	2
8 – Pickup/vans/car	0	4
2 – Underground line	4	0
1 – Cable dolly (trailer)	0	1
2 – Stringing rigs (trailer)	0	2
1 – Oil Rig (trailer w/generator)	24 (10 days for xmfr setup)	
1 – Water truck	2	1
TOTAL TRANSMISSION CONSTRUCTION: 2-4 MONTHS		
1 - Back Hoe	6	1
1 - Truck (20 cubic-yard end	4	1

Table 4.9-6: Estimated Building Construction Vehicle Types and Duration of Use, continued

Total Estimated Vehicles Used	Hours Operating at Site/Day (per vehicle)	Daily Worst Case Vehicle Usage
dump)		
1 - Skid Steer Loaders	4	1
4 - Concrete trucks	1 (2days/wk for 1 month)	2
1- Ditch Witch	2	1
3 - cars/pickup trucks	N/A	3
2 - Underground Line Trucks	2	2
1 - Cable Reel Trailer	2	1
1- Crane	0.5	1
1- Drill Rig	0.5	1

Source: San Diego Gas & Electric, 2010.

Notes: * - Number equipment operating concurrently for worst-case scenario.

Project construction activities would temporarily increase local noise levels in the Project site. As indicated in Table 4.9-7, *Projected Construction Equipment Noise*, the closest receptor is the Marriott Courtyard, approximately 528 feet north of the Proposed Project site. Modeled construction noise levels were highest at this location and were projected to be 70.2 dBA. Although the Marriott Courtyard is not zoned residential, to provide for a more conservative analysis the residential threshold was utilized to determine construction noise impacts to this sensitive use. The projected noise level of 70.2 dBA at this location would not exceed the City's noise standard limiting construction activity at or beyond the property lines of any property zoned residential to an average sound level greater than 75 decibel from 7:00 a.m. to 7:00 p.m. Therefore, construction noise impacts were determined to be less than significant.

Table 4.9-7: Projected Construction Equipment Noise

Approximate Sensitive Receptor Distance to Project Site	Direction from Proposed Project Site	Project Noise Level
528 feet	North	70.2
5,280 feet	South	50.2
3,168 feet	East	54.6
1,584	West	60.6

Notes: * - Number equipment operating concurrently for worst-case scenario. ** - For the purpose of the construction noise analysis, due to the relatively small area of the project site, it was assumed that only two scrapers would be able to operate concurrently. *** - For the purpose of the construction noise analysis, due to the relatively small area of the project site, it was assumed that only three dump trucks would be able to operate concurrently. **** - For the purpose of the construction noise analysis, due to the relatively small area of the project site, it was assumed that only one asphalt truck would be able to operate.

Use to the north of the project site is residential; to the south is the San Diego Wildlife Refuge; to the east are hotels, schools, and churches; to the west are a hospital and school.

Distance is from the nearest receptor to the construction activity area of the project site, in feet.

Derived from the Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054),* January 2005; refer to Appendix A, Noise Data.

Construction noise in San Diego is governed by the Municipal Code. Construction is normally limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday. The Municipal Code identifies the maximum noise level for construction noise at 75 dBA Leq at residential property line.

The major pieces of heavy equipment are expected to be moved on to the site once during each construction phase and would have a less than significant short-term effect on noise levels. It is anticipated that approximately 12 workers could be employed for the Verdura Retaining Wall Construction phase of the Proposed Project. Eight to fifteen workers could be on-site during the balance of construction of the transmission, substation, and distribution infrastructure until just prior to control wiring checkout and testing. At this stage of construction, approximately four to six electricians would be on-site. Final activities, including final tie-ins and energizing the station, would utilize about six to eight electricians and two to four engineers. Total construction time including testing and energizing is expected to take approximately 24 months. Daily transportation of construction workers is not expected to cause a significant effect since this traffic would not be a substantial percentage of current daily volumes in the area and would not be anticipated to increase traffic noise levels by more than 1 dBA over existing noise levels.

Construction activities would be done in a manner that maintains uninterrupted electric service to customers. On occasion, construction activities may be required at night or on weekends in order to minimize impacts on schedules and facilitate cutover work. Depending on loading requirements, construction activities may need to occur after normal business hours or on the weekends and/or at night. On occasion, construction activities may need to extend beyond these typical hours, such as concrete pours transformer oil filling, transmission splicing, and SDG&E's need to perform transfers which are performed at night

to limit the number of customers that could be affected by unintentional outage. If construction activities are necessary outside the normal construction hours (7:00 A.M. and 7:00 P.M), SDG&E's standard construction practices require advance notice to all property owners within 300 feet of construction.

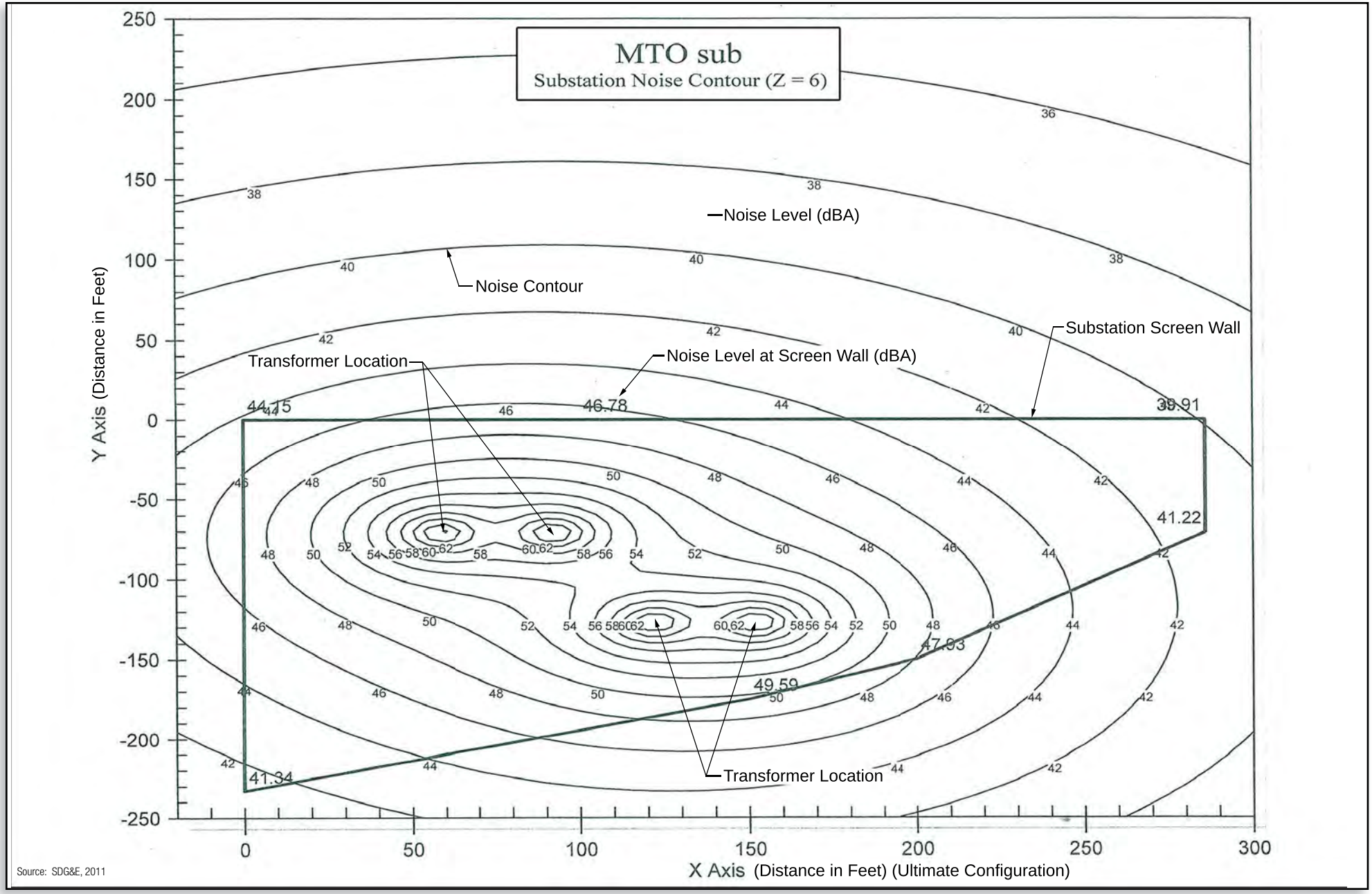
All construction activities would comply with the City of San Diego Municipal Code, occur within the City's allowable hours, and property owners within 300 feet of the construction limits of the details of construction activities would be notified. Therefore, potential construction noise levels are considered less than significant.

Operation and Maintenance – Less Than Significant Impact

Equipment Noise

The pieces of equipment that would be responsible for the majority of the noise emissions from the Proposed Project would be the 69/12kV distribution transformers (two initially and four ultimate). A site specific noise study of the distribution transformers at the Proposed Project site was prepared by SDG&E substation engineers. By policy, SDG&E utilizes distribution transformers, which reduce operational sound levels by approximately 12 dBA below the National Electrical Manufacturers Association standards for test methods, test codes, and properties of liquid-immersed transformers (NEMA TR-1). The units and cooling apparatus are designed not to exceed 58/60/61 dBA for oil cooled with air (OA)/forced air cooled with fans (FA) ratings. The distribution transmission banks proposed for the Mira Sorrento Road Substation would be furnished with FA transformer cooling equipment. Based upon manufacturer specifications, the maximum sound levels are 61 dBA for the distribution transformers at a distance of three feet from the source. The electrical substation equipment would be positioned approximately 70-feet from the western wall, 59-feet from the southern wall, 60-feet from the western property line and 220-feet from the northern wall. A sound analysis was performed for the ultimate substation configuration which will four 69/12kV transformers – each transformer is a noise source with a maximum sound level of 61 dBA. The noise sources for these transformers are typically 60-cycle vibration and cooling fans. These cooling fans operate in stages as the main tank oil temperature increases due to increased loading. The noise level used in the sound analysis was 61dBA for each transformer. This is a conservative estimate in that 61dBA is the highest sound level permitted by the transformer with its cooling fans on. This is not a normal operation during off-peak hours and night. Based on the study, the noise would range from 39.9dBA to 49.6 dBA at the screen wall. Noise level contours with all four transformers operating are shown in Figure 4.9-2, *Distribution Transformer Noise Contours (Ultimate Configuration).*

Standard fundamentals for noise propagation maintain that for each doubling of distance from a point noise source, the sound level will decrease by approximately 6 dBA. In other words, if a person is 100 feet from a machine and moves to 200 feet from that source, sound levels will drop by approximately 6 dBA. Given the setback distance and reduced operational



Source: SDG&E, 2011

Mira Sorrento Substation
Proponent's Environmental Assessment

DISTRIBUTION TRANSFORMER NOISE CONTOURS (ULTIMATE CONFIGURATION)

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Figure 4.9-2

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sound levels of the proposed equipment, by applying the noise propagation fundamentals just described, it can be assumed that average operational noise levels associated with the proposed cooling fans would be approximately 46 dBA with both cooling units running.[1]

As previously mentioned, the Project proposes to incorporate a screening wall (10 feet high) to prevent unassisted and unauthorized entrance. Screening walls may provide between 5 dBA and 10 dBA sound attenuation depending on wall height, location and length. The exact degree of noise attenuation depends also on the composition of the wall. The proposed concrete wall is a solid concrete block wall with no gaps or openings except for two entry gates along along Mira Sorrento Place. Although not accounted for in the noise contour calculations it can be assumed that the proposed perimeter wall would provide a minimum of 5 dBA noise reduction because of the solid wall material, which would help to offset normal facility conditions and anticipated full fan operational conditions noise levels.

SDG&E would meet the City's Municipal Code one-hour average sound level standards related to stationary noise sources for the Proposed Project (75 dBA for manufacturing and industrial uses). Therefore, the combination of noise muffling devices provided on the cooling equipment and the noise attenuation provided by the screening wall would result in an average maximum noise level of approximately 50 dBA at the screening wall, which is well below the 75 dBA noise standard established by the City's Noise Ordinance. Therefore, potential noise impacts as a result of operation of the Proposed Project are considered less than significant.

Maintenance Activity Noise Sources

The Substation would be unmanned and electric equipment within the Substation would be controlled from SDG&E's central operations facilities. Entry to an operational substation would be restricted to authorized personnel only. Maintenance includes equipment testing, equipment monitoring and repair as well as emergency and routine procedures for service continuity and preventive maintenance. Routine maintenance is expected to occur approximately six trips per year by a two- to four-person crew. Routine operations will require one or two workers in a light utility truck to visit the Substation on a weekly or daily 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 to complete. Nighttime maintenance activities are not expected to occur more than once a year. It is anticipated that the transmission circuits that loop into the Substation will be inspected once per year. The non-emergency major maintenance required may potentially include the replacement of insulators damaged by either vandals or line-surge and flashovers. Maintenance crews may consist of as many as four people and may require a tool truck, an

[1] When adding decibels, if the difference is greater than 8 dBA, the resulting dBA is the same as the higher decibel. Therefore, when adding the 36 dBA from the distribution transformers and 46 dBA from the transmission transformers, experienced at 48 feet from the sources, the resulting noise level is 46 dBA.

assist truck, and a large bucket lift truck. Because of the presence of conductive particles in the air that exist in coastal regions, insulators may require washing up to three times a year to prevent flashovers, equipment damage and outages. Based on the similar maintenance activities at other SDG&E distributions these maintenance activities do not generate a significant amount of noise and potential impacts are considered less than significant.

Question 4.9b – Groundborne Vibration and Noise

Construction – No Impact

No residences are within 100 feet of the any of the Proposed Project components and no residential structures will be within 25 feet of construction activities; therefore, no impact from construction vibration will occur.

Operation and Maintenance – No Impact

Increases in vibration from normal operation and maintenance, beyond those described for the construction activities, are not anticipated. The operation and maintenance activities associated with the Proposed Project will involve minimal earthwork; most of the activities will involve upkeep of existing equipment. None of the Proposed Project facilities generate vibration as a result of their operation. Thus, no impacts due to vibration from operation and maintenance will occur.

Question 4.9c – Permanent Noise Increases

Construction – Less Than Significant

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 4.9a, the primary source of operational noise at the Mira Sorrento substation would be its transformers and their associated cooling fans. Please see the analysis under Question 4.9a, Operation and Maintenance, regarding the noise generated from the operation of the substation. Potential impacts are considered less than significant.

Question 4.9d – Temporary or Periodic Ambient Noise Level Increases

Construction – Less than Significant Impact

Temporary construction noises have been evaluated in the response to Question 4.9a. Noise-sensitive receptors will not experience a temporary or periodic increase that exceeds 75 dBA L_{eq} during construction activities, as previously described. Construction activities would be limited to the hours and sound levels permitted by the City of San Diego Noise Ordinance,

except in those cases were continuous work would be requires such as concrete pours, transformer filling, or to minimize power outages during power transfers and require that all property owners be notified prior to construction activities extending past 7:00 pm,. As a result, potential temporary noise impacts are considered less than significant.

Operation and Maintenance – Less-than-Significant Impact

Temporary noise from operation maintenance activities was evaluated in question 4.9a. A temporary or periodic increase in noise may result from maintenance crews visiting the substation on a weekly or daily basis, as well as from the annual maintenance inspection that will take place annually; however, no noise-sensitive receptors will experience a temporary or periodic increase in noise that exceeds 75 dBA L_{eq}; therefore, impacts are considered less than significant less than significant.

Question 4.9e – Air Traffic Noise from Public Airports

Construction – No Impact

The Proposed Project site is not located within two miles of a public airport. As such, construction workers would not be exposed to excessive noise levels associated with public airport activities. Therefore, no impacts have been identified.

Operation and Maintenance – No Impact

The Proposed Project site is not located within two miles of a public airport or within two miles of the airport at Miramar Marine Corps Air Station. As such, maintenance workers would not be exposed to excessive noise levels associated with public airport activities. In addition, operation and maintenance activities associated with the Proposed Project would not result in an increase in demand of public airport use. Therefore, no impacts have been identified.

Question 4.9f – Air Traffic Noise from Private Airstrips – No Impact

The Proposed Project is not within two miles of a private airstrip. Therefore, noise impacts from a private airstrip are considered less than significant.

4.9.5 Applicant Proposed Measures

No construction or operational noise impacts were identified. Project construction would be within the limits identified in the City of San Diego Municipal Code. No avoidance or minimization measures are required or proposed.

4.9.6 References

29 Code of Federal Regulations [CFR] 1910.95. 1970. *Occupational Health and Safety Act of 1970*.

California Code of Regulations. Guidelines for Implementation of CEQA, Appendix G, Title 14, Chapter 3 §15000-15387 and 21000-21178.

California Health and Safety Code. 1973. *California Noise Control Act of 1973* 46000-46080.

California Code of Regulations. State Building Code, Part 2, Title 24, Appendix Chapter 35; *Noise Insulation Standards for Multifamily Housing*.

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

Caltrans, Noise, Vibration, and Hazardous Waste Management Office. *Transportation- and Construction-Induced Vibration Guidance Manual*. 2004.

City of San Diego Municipal Code, Chapter 5, Article 9.5, Division 4, §59.5.0401

FHWA. FHWA Roadway Construction Noise Model User's Guide, January. 2006.

National Electrical Manufacturers Association, Standards for Transformers, Regulators, and Reactors; NEMA TR 1-1993 (R2000); http://www.nema.org/stds/tr1.cfm

San Diego Gas and Electric, Noise Study, Mira Sorrento 69/12 kV Substation, June 29, 2011

4.10 Population and Housing

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Measures	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?				

4.10.1 Introduction

This Section identifies existing population and housing trends in the vicinity of the Proposed Project. The Proposed Project site is located within a highly urbanized area in the City of San Diego, within the community of Mira Mesa. The Proposed Project is intended to accommodate existing and planned growth in the vicinity; meet the area electric capacity needs; provide improved substation and circuit reliability with added tie capacity; and reduce area substation loading to optimum operating conditions. The Proposed Project would not extend service into new areas and would therefore not have a significant impact on the local or regional population by inducing growth. In addition, the Proposed Project would not require the displacement of housing or people. As such, impacts with regard to population and housing would be less than significant.

4.10.2 Methodology

Data used to conduct demographic and economic analyses was 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 conducted which included City of San Diego publications, supplemented by Internet searches of government websites, including the San Diego Association of Governments (SANDAG).

4.10.3 Existing Conditions

4.10.3.1 Population

Table 4.10-1, *Project Area Population Totals and Trends*, identifies population totals and trends within the City of San Diego and the Mira Mesa Community Plan Area, where the Proposed Project is located. In the year 2009, the City of San Diego[1] had an estimated population of 1,353,993 residents, or approximately 44 percent of the 3,053,793 total population of the County of San Diego and approximately 3.6 percent of the 36,961,664 total population of the State of California. In 2006, the Mira Mesa Community Plan Area had a population of 75,108. Population within the City of San Diego continues to grow, as demonstrated by an 11 percent increase in population between 2000 and 2009.

Table 4.10-1: Project Area Population Totals and Trends

County/City	2000 Census Total	2009 Census Total	Percent Increase 2000 to 2009	Projected Population 2020
City of San Diego	1,223,400	1,353,993	11	1,542,528
Mira Mesa Community Planning Area	72,005	76,822	7	N/A

Source: SANDAG, September 2009

4.10.3.2 Housing

Table 4.10-2, *2008 Project Area Total 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 2008, the U.S. Census Bureau estimated that San Diego County had 1,132,383 housing units with a vacancy rate of 8.1 percent. In January 2009, the City of San Diego had an estimated 510,726 housing units with a vacancy rate of 6.0 percent. In 2008, the Mira Mesa Community Planning Area had 24,964 housing units.

In 2008, approximately 51.6 percent of the total housing units in San Diego County were detached, single-family homes. In 2008, the majority of the 508,436 housing units in the City of San Diego were also detached, single-family homes (278,229 units or approximately 55 percent); multi-family units totaled 224,646, or approximately 44 percent of the total housing units for the same year.[2]

Table 4.10-2: 2008 Project Area Total Housing Units and Vacancy Rates

County/City	Total Housing Units	Percent Vacant
County of San Diego	1,132,383	8.1
City of San Diego	503,941	7.8

Source: U.S. Census Bureau

[1] City of San Diego Metropolitan Statistical Area (MSA) includes San Diego, Carlsbad, and San Marcos.
[2] U.S. Census Bureau, Fact Finder: San Diego County and City of San Diego, California. Online. Accessed July 2010.

Temporary Housing

Several hotels are located within one mile of the Proposed Project site, partially due to the adjacency of I-805 and the presence of a number of large corporations located within the Mira Sorrento and Sorrento Valley areas. These include the Marriott Courtyard, Country Inn and Suites, Homestead San Diego, Woodfin Hotel, and Holiday Inn Express.

In 2009, the San Diego Convention and Visitors Bureau reported that there were approximately 458 hotel and motel properties with over 56,625 rooms available to visitors. The total average occupancy rate for these lodging establishments was approximately 63.3 percent.[3]

4.10.3.3 Employment and Income

Table 4.10-3, *Project Area Employment Figures and Unemployment Range*, identifies the total employment and unemployment rates for the Proposed Project area. In June 2010, the unemployment rate for the County of San Diego was 10.5 percent. An estimated 164,900 people of the total 1,571,500 available labor force were unemployed. The City of San Diego had the same unemployment rate of 10.5 percent for June 2010, with an estimated 73,600 of the 701,500 total labor force unemployed.

Table 4.10-3: Project Area Employment Figures and Unemployment Range

County/City	Total Employment (Number Employed)	Total Unemployed	Unemployment Rate (Percent)
County of San Diego	1,406,600	164,900	10.5
San Diego MSA	627,900	73,600	10.5

Source: State of California EDD, June 2010

According to U.S. Census Bureau data, the median annual household income was $62,820 for San Diego County in 2008; for the City of San Diego, the median annual household income was $63,181 in 2008. In 2009, the median household income in the Mira Mesa Community Plan Area was $70,149.[4]

4.10.4 Impacts

4.10.4.1 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 potentially significant if they:

- Induce substantial population growth;
- Displace a substantial number of housing units; or,

[3] San Diego Convention and Visitors Bureau. July 2010.
[4] U.S. Census Bureau, Fact Finder: San Diego County and City of San Diego, California. Online. Accessed July 2010.

- Displace a substantial number of people.

4.10.4.2 Impact Analysis

Question 4.10a – Population Growth

Construction – Less than Significant Impact

It is anticipated that most of the construction workers for the Proposed Project would reside within San Diego County, outside the immediate vicinity of the Proposed Project. Due to the scope of the proposed improvements, construction of the Proposed Project 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, impacts on population growth from construction of the Proposed Project would be less than significant.

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 would be unstaffed and remotely operated, and visits to the substation site would be no more than once a week, and would not require dedicated, full-time personnel.

The Proposed Project is being built to meet the electrical needs of the area and therefore would not induce substantial population growth in the area either directly or indirectly. Additionally, long-term operation and maintenance activities for the Proposed Project would not result in the demand for new residential units or significantly increase the desirability or affordability of the surrounding area. Similarly, it would 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 with regard to population growth would occur.

Question 4.10b – Displacement of Existing Housing – No Impact

The Proposed Project would result in the construction of the Mira Sorrento Substation and the TL665 loop-in. The Mira Sorrento Substation would be located on land owned and acquired by SDG&E. The loop-in would be located on land acquired for the new Substation and within SDG&E's existing right-of-way (ROW). As no housing units are present on any of the affected lands or within the immediate area, no existing housing would be displaced with Project implementation. As such, no impact would occur.

Temporary work areas would generally be located on the Substation site or within SDG&E-owned ROW. No housing units are located on or in proximity to the temporary work areas. Staging of construction equipment and vehicles would occur at offsite staging areas where SDG&E substation facilities presently exist, and therefore, no housing units are located on

these properties. As such, no existing housing units would be displaced by the required temporary work areas or staging areas. Therefore, there would be no impact.

Operation and maintenance of the proposed facilities would include regular inspection, repair work, and vegetation removal activities, as needed. These activities currently occur for the existing SDG&E facilities in the area and would generally remain the same for the Mira Sorrento Substation and associated components. As there are no housing units located on the proposed Substation site or the within the existing transmission line ROW, regular operation and maintenance practices required for the proposed facilities would not displace any existing housing. Therefore, there would be no impact.

Question 4.10c – Displacement of People – No Impact

The Proposed Project would be constructed, operated, and maintained within a highly developed area within the City of San Diego where surrounding lands generally support light industrial and commercial uses, with limited residential uses. The Proposed Project would be constructed on lands owned or acquired by SDG&E, or within SDG&E-owned ROW. The site is presently undeveloped, and therefore, construction, operation, and/or maintenance of all components of the Proposed Project would not displace any existing housing units, as discussed previously in the response to Question 4.10b, above. As such, no people would be displaced with implementation of the Proposed Project. Therefore, there would be no impact.

4.10.5 Applicant Proposed Measures

Because the Proposed Project's impacts on population and housing would be less than significant, no applicant-proposed measures are proposed.

4.10.6 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.

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San Diego Convention and Visitors Bureau. Online. http://www.sandiego.org/nav/Media/ResearchAndReports. Site visited July 2010.

United States Census Bureau. Fact Finder: San Diego County, California. Online. http://factfinder.census.gov/servlet/ACSSAFFFacts?_event=ChangeGeoContext&geo_id=05000US06073&_geoContext=&_street=&_county=san+diego&_cityTown=san+diego&_state=04000US06&_zip=&_lang=en&_sse=on&ActiveGeoDiv=&_useEV=&pctxt=fph&pgsl=010&_submenuId=factsheet_1&ds_name=ACS_2008_3YR_SAFF&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry=. Site visited July 29, 2010.

United States Census Bureau. Fact Finder: City of San Diego, California. Online. http://factfinder.census.gov/servlet/ACSSAFFFacts?_event=ChangeGeoContext&geo_id=16000US0666000&_geoContext=&_street=&_county=san+diego&_cityTown=san+diego&_state=04000US06&_zip=&_lang=en&_sse=on&ActiveGeoDiv=&_useEV=&pctxt=fph&pgsl=010&_submenuId=factsheet_1&ds_name=ACS_2008_3YR_SAFF&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry=. Site visited July 29, 2010.

4.11 Public Services

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Measures	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 or the 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?	☐	☐	☐	☒

4.11.1 Introduction

The purpose of this Section is to describe local public services in the area proposed for location of the Proposed Project and to evaluate potential Project effects on such existing (and future) services. Fire and emergency services, police and protective services, hospitals, schools, and other public services are addressed, and the potential effects resulting from Project construction, operation, and maintenance are evaluated. Through this analysis, it was determined that the Proposed Project will have no impacts on public services.

4.11.2 Methodology

Information regarding local public services was mainly obtained through utilization of the Internet for the purpose of researching local planning agencies. Data regarding fire, police, and emergency services was obtained from the City of San Diego website and individual web pages for the fire and police departments. Data pertaining to local area schools was obtained from various internet searches, as well as the San Diego Unified School District website. Statistics pertaining to local hospitals, area recreational amenities, and public libraries were also obtained through internet research.

4.11.3 Existing Conditions

4.11.3.1 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

1,307,402 (2010 U.S. Census) and a service area of approximately 331 square miles. The SDFD operates 47 stations with 1,036 uniformed personnel and 126 civilian personnel.[1]

The Proposed Project will be served by Fire Station #41, located at 4914 Carroll Canyon Road, approximately 0.3 mile to the southeast of the Project site. The station provides both fire protection and medical/rescue services. Additionally, Fire Station #35, located at 4285 Eastgate Mall, can serve the Project site. The station is located approximately 1.2 miles to the southwest of the Project site. The station provides both fire protection and medical/rescue services.

4.11.3.2 Police and 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 12.5 miles southeast of the Project site. In addition to police protection services, the Department operates a number of specialized units that include the Domestic Violence, Financial Crimes, Forensic Science, and Traffic Divisions.

The Proposed Project site is served by the Department's Northeastern Division, which serves the communities of Carmel Mountain, Miramar, Miramar Ranch North, Mira Mesa, Rancho Bernardo, Rancho Encantada, Rancho Penasquitos, Sabre Springs, and Scripps Ranch. The Northeastern Division is headquartered at 13396 Salmon River Road, approximately 6.9 miles to the northeast of the site, and serves a population of 227,590 people with a service area of approximately 103 square miles.[2]

The Proposed Project site will be served by the Mira Mesa/Scripps Ranch Storefront Station, located at 8450#A Mira Mesa Boulevard. The station is located approximately 4.0 miles to the northeast of the Project site.

4.11.3.3 Hospitals

The two closest major medical facilities to the Proposed Project site are the Scripps Memorial Hospital in La Jolla, located at 9888 Genesee Avenue, approximately 1.2 miles to the southwest of the site, and Thornton Hospital at the University of California San Diego Campus, located at 9300 Campus Point Drive, approximately 1.1 miles to the southwest of the Project site. Additionally, the Scripps Green Hospital is located at 10666 North Torrey Pines Road, approximately 2.3 miles to the northwest of the Project site.

[1] City of San Diego website. San Diego Fire-Rescue Department – Overview. http://www.sandiego.gov/fireandems/about/overview.shtml. Accessed March 2011.

[2] City of San Diego Website. San Diego Police Department – About SDPD. http://www.sandiego.gov/police/about/index.shtml. Accessed March 2011.

4.11.3.4 Schools

The Proposed Project area lies within the City of San Diego Unified School District. The site will be served by the Sanburg Elementary School (grades K-5), located at 11230 Avenida del Gato, approximately 4.0 miles to the northeast, and the Challenger Middle School (grades 6-8), located at 10810 Parkdale Avenue, approximately 3.2 miles to the northeast. In addition, the Mira Mesa Senior High School (grades 9-12), is located at 10510 Reagan Road, approximately 4.1 miles to the northeast, and will serve the Proposed Project site.

4.11.3.5 Other Services

The City of San Diego North University Branch Library is located at 8820 Judicial Drive, approximately 1.7 miles to the southeast of the Proposed Project site; the City of San Diego Mira Mesa Branch Library is located at 8405 New Salem Street, approximately 4.0 miles to the northeast of the site; and, the Carmel Valley Branch Library is located at 3919 Townsgate Drive, approximately 4.3 miles to the northwest of the site. Additionally, the San Diego County Library is located at 5555 Overland Avenue, approximately 5.7 miles southeast of the Project site.

Several regional, County, and State parks can be found in and around the City of San Diego. The Lopez Canyon Open Space is located approximately 1.14 miles to the north/northeast of the Proposed Project site; Los Penasquitos Canyon Preserve, approximately 1.17 miles to the north/northeast; Winterwood Community Park, approximately 2.8 mile to the northeast; and, Lopez Ridge Park, approximately 2.9 miles to the northeast of the Proposed Project site. Additionally, Torrey Pines State Reserve and Torrey Hills Neighborhood Park are located approximately 1.9 miles and 2.0 miles to the northwest of the site, respectively.

4.11.4 Impacts

4.11.4.1 Significance Criteria

Appendix G of the California Environmental Quality Act Guidelines was consulted for significance criteria pertaining to public services. Impacts to public services are generally considered potentially significant if they would result in substantial adverse physical impacts associated with 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 similar performance objectives. Public services are generally considered to include police and fire protection services, emergency services, hospitals, schools, and other public facilities.

4.11.4.2 Impact Analysis

Construction – No Impact

The Proposed Project components will be constructed at the proposed Mira Sorrento Substation site within the City of San Diego. Due to the nature of the Project, construction of the proposed facilities is not likely to adversely affect the use or operation of any public services or facilities within the immediate area, including schools, fire or police protection services, emergency services, hospitals, or other services (i.e. libraries). The Proposed Project will not generate the need for new or additional provision of public services, as it will not result in construction of residential or other land uses that will directly or indirectly induce area population growth; refer also to Chapter 5.0 – *Detailed Discussion of Significant Impacts,* for additional discussion of growth-inducing impacts. No impacts will occur with construction of the Proposed Project.

Fire and Police Protection

Several emergency providers are located in the vicinity of the proposed Mira Sorrento Substation site; however, none are located within approximately 0.25 mile of the Proposed Project site. The closest emergency service provider is Fire Station #41, which is located approximately 0.3 mile southeast of the site, south of Mira Mesa Boulevard. As Project construction activities will occur within proximity to Vista Sorrento Parkway and Mira Sorrento Place in the north/northwestern portion of the Proposed Project site, distanced from Mira Mesa Boulevard, construction activities are not anticipated to interfere with operations at this station. Therefore, construction of the proposed facilities will not directly interfere with operations of fire protection, police, 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 perceptibly increase area population or demands for housing. Although the need for emergency services may occur during the construction phase of the Mira Sorrento Substation facilities, such a need would not significantly affect the provision of existing emergency services or require the provision of service beyond existing capacities. Construction is not anticipated to affect response times, as any lane or road closures, if necessary, will be temporary and will still allow for emergency access, should it be required. Therefore, no impacts on fire or police protective services are anticipated.

Schools

Construction activities associated with the Proposed Project will not result in the direct or indirect increase in the demand for school enrollment or educational services, as such activities will not perceivably increase local population during the construction phase. It is anticipated that the majority of construction crew members will be hired from the local

operators union and local electrical workers union, and therefore, Project construction will not create a significant new workforce that will result in a new or increased demand for school services. Limited employment needs will be required for operation and maintenance of the Proposed Project, and therefore, a significant new workforce that may require educational services is not anticipated. Therefore, construction of the Proposed Project will not significantly impact local school enrollment or generate the need for new or expanded educational facilities. As a result, no impacts to schools or educational services are anticipated.

Parks

As stated above, various open space and recreational facilities are found within the vicinity of the Proposed Project site and include the Lopez Canyon Open Space, Los Penasquitos Canyon Preserve, Winterwood Community Park, Lopez Ridge Park, Torrey Pines State Reserve, and Torrey Hills Neighborhood Park. Due to the nature of the proposed use, construction of the Mira Sorrento Substation facilities will not significantly increase local population growth, nor will it cause a reduction in the availability of area recreational resources, including park facilities. As such, construction will not result in the need for new parks or the expansion of existing parks. Therefore, no impacts to parks or other recreational facilities will result with construction of the Proposed Project.

Other Public Facilities

No other public facilities are located within close proximity to the Proposed Project components. Construction of the Proposed Project will not directly or indirectly result in an increase in the local population or otherwise alter or expand existing public services. As a result, no impacts are anticipated.

Operation and Maintenance – No Impact

Following construction of the Mira Sorrento Substation, the Substation will operate as an unmanned facility. Long-term operation and maintenance activities for the facilities will not interfere with existing public services or create a new demand for such services, as they will be limited to intermittent visits to the site for maintenance purposes. It is anticipated that an operator will visit the proposed Substation several times a week for monitoring purposes. Maintenance of the Substation facilities will be limited to a few times per year and for no more than a few days at a time, as needed. As such, there will be no impacts to public services resulting from the long-term operation and maintenance of the Proposed Project.

4.11.5 Applicant Proposed Measures

No potentially significant impacts relative to public service systems will result with the Proposed Project. As such, no APMs are proposed or required.

4.11.6 References

City of San Diego Unified School District. http://www.sandi.net/sandi/site/default.asp. Accessed March 2011.

City of San Diego Fire Department. http://www.sandiego.gov/fireandems/. Accessed March 2011.

City of San Diego General Plan

City of San Diego Police Department. http://www.sandiego.gov/police/. Accessed March 2011.

City of San Diego Public Libraries. http://www.sandiego.gov/public-library/. Accessed March 2011.

Google. Google Earth Version 5.0 Software. Program used March 2011.

Thomas Guide – San Diego County Street Guide. Rand McNally. 2006.

4.12 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in substantial safety risks caused by a change in air traffic patterns, including either an increase in traffic levels or a change in location?	☐	☐	☐	☒
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. Result in inadequate parking capacity?	☐	☐	☒	☐
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

4.12.1 Introduction

The purpose of this Section is to describe the existing transportation and traffic conditions within the Proposed Project area and to evaluate potential Project-related transportation and traffic impacts. A summary of existing area roadways, transit and rail service, airports, and bicycle facilities, as well as a description of the regulatory setting for transportation and traffic are presented.

An analysis of transportation and traffic impacts that would result from implementation of the Proposed Project is also provided. The Proposed Project will cross one local public

roadway (Mira Sorrento Place) via underground trench; however, the Proposed Project would not result in significant impacts on area transportation or traffic, nor would it conflict with any adopted alternative transportation plans or policies.

The City of San Diego only requires a traffic study be prepared when a project that is consistent with the community plan's Land Use and Transportation Elements generates at least 1,000 average daily trips total, or at least 100 peak hour trips or, for projects not consistent with the community plan's Land Use and Transportation elements, it generates at least 500 average daily trips or at least 50 peak hour trips. The Proposed Project is consistent with the Community Plan, and would generate fewer than 50 peak hour trips, since there would be a maximum of 27 workers on-site during peak construction weeks and long-term operational trips are no more than one or two/week, generally off-peak.

4.12.2 Methodology

Data pertaining to transportation and traffic 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 Mira Mesa Community Plan, and the San Diego Association of Governments' (SANDAG) 2030 Regional Transportation Plan were reviewed. A site visit was also conducted in April 2010 to obtain a visual understanding of the traffic patterns along the public roadways that may be directly or indirectly affected by the Proposed Project.

4.12.3 Existing Conditions

4.12.3.1 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 obstruction of navigable air space. Regulations pertaining to transportation and traffic that may be applicable to the construction of electric facilities, such as the Proposed Project, are summarized below.

Federal

The Federal Aviation Administration (FAA) has jurisdiction over all airports and navigable airspace not administered by the United States Department of Defense. Standards and required notification for objects affecting navigable airspace are established by Federal Regulation Title 14 Section 77.

Per FAA regulations, elements that exceed 200 feet in height above ground level or extend at a ratio greater than 50 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 to be potential obstructions to air traffic. Notification to the FAA is required for the construction of

such obstructions. In addition, preparation and implementation of a Helicopter Lift Plan is required for planned operation of a helicopter within 1,500 feet of residential uses.

State

An encroachment permit or written authorization from the California Department of Transportation (Caltrans) may be required for the use of California State highways for activities other than normal transportation purposes. Caltrans retains jurisdiction over the State's highway system and is responsible for protecting the public and infrastructure. Encroachment permits may include specific conditions or restrictions that limit when construction activities can occur within or above roadways that are under the jurisdiction of Caltrans. All requests from utility companies that plan to conduct activities within its rights-of-way (ROW) are reviewed by Caltrans.

Local

Chapter 12, Article 9, Division 7: *Public Right-of-Way Permits*, of the City of San Diego Municipal Code addresses the use of or encroachment into public right-of-ways for private uses. The City requires approval of a Public Right-of-Way Permit for the construction of privately-owned structures or facilities within the public right-of-way.

In addition, 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 Element is aimed at creating a system wherein each mode of transportation contributes to an overall goal of providing transit services that meeting varied user needs, while implementing a strategy to reduce traffic congestion and provide increased transportation choices with consideration for varying land use types.

Additionally, SANDAG's *2030 San Diego Regional Transportation Plan: Pathways for the Future* was approved in 2007 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 for both present and future residents.

4.12.3.2 Existing Roadway Network

The Proposed Project site is located within a highly urbanized area in the City of San Diego. Figure 3-3, *Aerial Photograph*, in Chapter 3 – *Project Description* shows the location of the Proposed Project area and the existing roadway network. The Proposed Project would require crossing Mira Sorrento Place (via underground trench) for installation of the TL665 loop-in.

A list of roadways adjacent to the Proposed Project that may be utilized for the transport of construction equipment is included in Table 4.12-1, *Public Roadways Adjacent to the Proposed Project Area*. The table identifies the roadway classification, number of lanes, and Level of Service (LOS), where available.[1]

Interstate 805 (I-805) is a major north/south transportation corridor located approximately 300 feet west of the Proposed Project area. It is an eight-lane divided freeway with a posted speed limit of 70 miles per hour. I-805 would serve as the main route to and from the Proposed Project area. Construction vehicles and equipment would exit onto Mira Mesa Boulevard and travel north along Vista Sorrento Parkway to Mira Sorrento Place to access the Proposed Project site.

Within the Proposed Project area, Mira Mesa Boulevard and Mira Sorrento Place are local public streets that run east-west; Vista Sorrento Parkway is a local public street that runs north- south. Access to the Proposed Project site would be provided from two proposed driveways along Mira Sorrento Place. An existing SDG&E utility easement would provide access to the lower portions of the site for construction as well as ongoing maintenance purposes.

Table 4.12-1: Public Roadways Adjacent to the Project Area

Roadway	Roadway Segment	Classification	Number of Lanes in the Project Area	Average Weekday Traffic Volume[1]	A.M. Peak[1]	P.M. Peak[1]	LOS D[2]
Interstate 805	North/South of Mira Mesa Boulevard	Freeway	4 Lanes Each Direction	163,000[3]	N/A	N/A	70,000
Mira Sorrento Place	Vista Sorrento Parkway to Scranton Road	Collector	2 Lanes Each Direction	10,809	1,425	1,457	13,000
Scranton Road	Morehouse Dr to Mira Mesa Blvd	Collector	2 Lanes NB/3 Lanes SB	16,576	1,825	1,561	13,000
Scranton Road	Mira Mesa to Oberlin Dr	Collector	4 Lanes NB/2 Lanes SB	16,446	1,934	1,887	13,000
Scranton Road	Carroll Canyon Road to Oberlin Dr	Collector	2 Lanes NB/2 Lanes SB	11,248	1,430	1,235	13,000
Vista Sorrento Parkway	Lusk Blvd to Sorrento Valley Blvd	Major Arterial	2 Lanes NB/2 Lanes SB	14,404	2,033	1,829	35,000

[1] LOS is based on traffic congestion, measured by dividing traffic volume by roadway capacity. The resulting number, known as the volume-to-capacity (V/C) ratio, usually ranges from 0 to 1.0. The V/C ratings are divided into six LOS categories, A through F, representing conditions ranging from unrestricted traffic flow (A) to extreme traffic congestion (F).

Table 4.12-1: Public Roadways Adjacent to the Project Area, cont'd

Roadway	Roadway Segment	Classification	Number of Lanes in the Project Area	Average Weekday Traffic Volume[1]	A.M. Peak[1]	P.M. Peak[1]	LOS D[2]
Vista Sorrento Parkway	Lusk Blvd to I-805 Ramp	Major Arterial	2 Lanes NB/1 Lane SB	18,640[3]	N/A	N/A	35,000
Vista Sorrento Parkway	I-805 Ramp to Mira Mesa Blvd	Major Arterial	3 Lanes Each Direction	22,820[3]	N/A	N/A	45,000
Mira Mesa Blvd	Vista Sorrento Parkway and Scranton Road	Primary Arterial	4 Lanes Each Direction	64,000	6,061	5,103	55,000
Mira Mesa Blvd	Scranton Road and Lusk Blvd	Primary Arterial	3 Lanes Each Direction	42,943	3,527	3,188	55,000

1 All traffic data provided by City of San Diego Engineering and Capital Projects Department unless otherwise noted. Data received October 15, 2010.

2 Source: City of San Diego Traffic Impact Study Manual. Table 2 – Roadway Classifications, Levels of Service (LOS), and Average Daily Traffic (ADT). July 1998.

3 Source: I-805 HOV/Carroll Canyon Road Extension Project Initial Study/Mitigated Negative Declaration and Environmental Assessment/Finding of No Significant Impact. Prepared by CALTRANS. April 2009.

N/A = Data not available.

4.12.3.3 Railways

The Coaster rail line, owned and operated by the San Diego Metropolitan Transit System (MTS), provides rail service to the Proposed Project area. The Sorrento Valley Station is located at 11170 Sorrento Valley Road. The MTS service links North County and 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. The Station also provides public access to a number of bus lines (Routes 972, 973, 978 and 979), operated by the MTS.[2]

4.12.3.4 Airports

No private airports or airstrips are located within two miles of the Proposed Project site. Montgomery Airport is the closest public airport to the Proposed Project site, located approximately seven miles to the northeast.

The Proposed Project site is located approximately three miles northwest of Marine Corps Air Station (MCAS) Miramar, which has an adopted Air Installations Compatibility Use Zones (AICUZ). Marine air operations at the Air Station include, but are not limited to,

[2] San Diego Metropolitan Transit System. http://www.sdmts.com/ Accessed July 7, 2010.

Seawolf and Julian departures, "touch-and-gos," field carrier landing practice (FCLP), and ground control approach (GCA) box patterns for both fixed and rotary-wing aircraft.

4.12.3.5 Bus

Bus service to the Proposed Project area is provided by the San Diego MTS. Routes serving the immediate Proposed Project area include Routes 921, 971, 972, 973, 974, and 975 which provide daily bus service to the area five days per week (Monday through Friday) and varied service on Saturday/Sunday. Other bus routes are available to provide a connection to these routes to enable transport within the City.

4.12.3.6 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, Sorrento Valley Road, Vista Sorrento Parkway, Mira Sorrento Place, and Mira Mesa Boulevard (east of Scranton Road) are designated as Class II bike lanes. Bike lanes are marked along existing roadways with special regulatory signs and painted bicycle lanes and pavement.

Additionally, the portion of Mira Mesa Boulevard from Sorrento Valley Road east to Scranton Road is designated as a Class III bike route. Bike routes are suggested bicycle routes through the City. They are marked by green "bike route" signs, but have no other signs, stripes, or markings separating bicycle traffic from vehicular traffic. Scranton Road and Oberlin Drive are also designated as Class III bike routes.[3]

4.12.4 Impacts

4.12.4.1 Significance Criteria

Activities associated with construction of the Proposed Project would 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 by operation and maintenance activities of the Substation and associated components would generate minimal effects on the circulation system, as typically a limited amount of vehicular activity (less than one vehicle trip per day) would be required over the long-term. As a result, the following analysis of 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.

At this time, helicopter use is not anticipated for the Mira Sorrento Substation Project; however, consideration for potential impacts on air traffic are discussed herein, as helicopters may ultimately be used at the Mira Sorrento Substation site to deliver equipment, position poles and structures, or position aerial markers. Potential impacts caused by encroachment

[3] SANDAG. San Diego Regional Bike Map. http://www.icommutesd.com/Bike/BikeMap.aspx. Accessed July 26, 2010.

into navigable airspace, such as by a crane, wire, or tall structure, may therefore occur. Potential impacts to air traffic are described for construction as well as operation and maintenance in response to Question 4.12c.

According to Appendix G of the California Environmental Quality Act Guidelines, the Proposed Project would have a significant impact if it:

- Results in a substantial increase in traffic that affects existing traffic flows;
- Results in the exceedance of an established LOS standard;
- Causes 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;
- Results in inadequate parking capacity; or,
- Conflicts with adopted policies, plans, or programs supporting alternative transportation.

Question 4.12a – Traffic Increases

Construction – Less-Than-Significant Impact

Mira Sorrento Substation and TL665 Loop-In

Construction of the Mira Sorrento Substation and other associated components is anticipated to occur over an approximate 18-24-month period. Eight to fifteen workers could be onsite during the balance of construction of the transmission, Substation, and distribution infrastructure until just prior to control wiring checkout and testing. Final activities, including final tie-ins and energizing, would require an estimated six to eight electricians and two to four engineers. In addition, it is anticipated that approximately 12 workers would be employed for the Verdura retaining wall construction. Daily transportation of construction workers is not expected to cause a significant effect since Project-generated traffic would not represent a substantial percentage of current daily traffic volumes in the area.

Vehicle trips generated by construction personnel would 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 approximately 50 to 60 personal vehicle trips per day during peak construction times. Approximately 8 to 12 trips would arrive and depart during the peak hours. To reduce the potential number of worker-related vehicle trips to and from the site on a daily basis, SDG&E will encourage carpooling to the greatest extent possible.

Although the number of truck trips would vary based on the amount of grading that occurs per day, it is anticipated that a maximum of 40 truck trips per day would occur during the estimated six months required to complete the proposed Substation grading. Approximately two to four additional vehicle trips would be generated on a daily basis by vehicles delivering materials and equipment to the site during the 18-24 months required for overall construction of the Substation and associated components.

All construction vehicles and equipment would enter the Mira Sorrento Substation site from Mira Sorrento Place. Although some disruption to traffic flow may occur when trucks ingress or egress the Substation site, such events would 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. In addition, SDG&E would prepare and implement a Traffic Management Plan to further reduce potential impacts.

Average daily traffic volumes on area roadways in the vicinity of the proposed Mira Sorrento Substation site are generally low, with Mira Sorrento Place, Mira Mesa Boulevard, and Vista Sorrento Parkway operating at below capacity. As such, the increase in vehicle trips potentially generated by the Proposed Project during construction would add an insignificant percentage of traffic to these roadways and would not adversely affect traffic operations. As construction vehicles entering or leaving the site would be periodic and short-term, and with consideration for the existing traffic volumes on Mira Sorrento Place and adjacent roadways, potential impacts from Project-related traffic would be less than significant.

TL665 Loop-In

SDG&E anticipates that construction of the TL665 loop-in would take a total of approximately two to four months. It is estimated that trench work would take approximately four to six weeks, and cable installation would take approximately four to six weeks.

Trenching operations would be staged in intervals so that only a maximum of 300 to 500 feet of trench would be left open on each street at any one time, or as allowed by permit requirements. This would generate approximately 400 cubic yards per day of excavated material. At any one time, open trench lengths would not exceed that required to facilitate the installation of the duct bank. Steel plating would be placed over the trenches to maintain vehicular and pedestrian traffic across areas that are not under active construction.

Traffic controls would be implemented to direct local traffic safely around work areas. Refer to Figure 3-12, *Typical Underground Construction Process Within Roadway*; Figure 3-13, *Underground Trench Single Circuit in Conduit (Vertical)*; and, Figure 3-14, *Underground Trench Single Circuit in Conduit (Horizontal) with Telecommunications*, which illustrate intended construction activities associated with the Proposed Project.

As construction activities would generate minimal vehicle trips, such activities would not contribute to a substantial increase in traffic volumes along roadways affected by the Project. As such, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

The proposed Mira Sorrento Substation would be unmanned, monitored, and controlled by SDG&E's remote Control Center. Routine maintenance is expected to occur approximately six trips per year by a two- to four-person crew. Routine operations would involve one or two workers in a light utility truck visiting the Substation on a weekly or daily basis. It is anticipated that one annual major maintenance inspection would occur, requiring an estimated 10 personnel. It is anticipated that this inspection would take approximately one week to complete. Nighttime maintenance activities are not expected to occur more than once a year.

In addition, clearing of vegetation would occur on an as-needed basis for purposes of safety and/or access. Such activities would generally require the presence of one to two maintenance vehicles and one or more employees to clear and/or trim vegetation to ensure that an adequate working space is maintained around the Substation facilities.

It is anticipated that the transmission circuits that loop into the Substation would be inspected once per year. Maintenance crews may consist of as many as four people and may require a tool truck, an assist truck, and a large bucket lift truck. Because of the presence of conductive particles in the air that exist in coastal regions, insulators may require washing up to three times a year to prevent flashovers, equipment damage, and outages.

Operations and maintenance activities for the TL665 loop-in would include routine inspection, maintenance, and repair activities. Inspections may occur in the form of aerial patrol through the use of helicopters, or through ground patrols visiting the facilities. At a minimum, such routine inspections would occur annually to identify potential corrosion, equipment misalignment, loose fittings, and/or other mechanical problems.

As operation and maintenance activities would generate minimal vehicle trips and would occur on a periodic basis, such activities would not contribute to a substantial increase in traffic volumes along roadways affected by the Proposed Project. As such, impacts would be less than significant.

Question 4.12b – Level of Service Changes

Construction – Less than Significant Impact

As discussed above in Response 4.12a, construction traffic generated by the Proposed Project would generate a less-than-significant increase in the existing daily traffic volumes along area roadways. Temporary lane closures may be required during the construction period to allow for the transport of materials or to maintain public safety. SDG&E will prepare traffic control plans as required by the City of San Diego when construction activities are located within City streets. Temporary traffic delays may also occur when construction vehicles enter and exit the site along Mira Sorrento Place; however, the existing roadway system in the area

of the Proposed Project has adequate capacity to accommodate any increase in traffic resulting from construction of the Proposed Project.

As such, the Proposed Project would not cause a change to the existing LOS of any roadways in the vicinity of the Project site. No impacts would occur.

Operation and Maintenance – No Impact

As discussed above in Response 4.12a, the addition of traffic generated by Project operation and maintenance activities to the existing circulation system would be negligible. As such, the Proposed Project would not significantly impact traffic in the surrounding area or alter existing traffic patterns. Operation and maintenance of the Proposed Project would therefore not impact the existing LOS of area roadways. No impacts would occur.

Question 4.12c – Air Traffic Changes

Construction – No Impact

Temporary

At this time, helicopter use is not anticipated for the Mira Sorrento Substation Project. As such, the establishment of fly yards is not required to allow for take-off and landings, refueling, equipment storage and assembly, and other related activities. If construction methods propose using a helicopter, standard SDG&E Best Management Practices (BMPs) would be implemented to ensure that no adverse effects with regard to air quality, noise, or other issues would occur. Helicopters may be used at the Mira Sorrento Substation site to deliver equipment, position poles and structures, and position aerial markers, consistent with all applicable regulations established by the FAA. If the use of helicopters is required, SDG&E or its contractor would coordinate flight patterns with local air traffic control and the FAA prior to construction to prevent any adverse impacts due to air traffic. A Helicopter Lift Plan would also be prepared and implemented for the construction phase of the Proposed Project, consistent with FAA requirements.

In addition, cranes would likely be used to set the proposed Substation equipment. The tallest structure that would be installed as part of the Proposed Project will be the standard steel rack at the Substation site. The structure would measure approximately 30 feet above the ground surface. Per FAA requirements, elements that exceed 200 feet in height above ground level or extend at a ratio greater than 50 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 to be potential obstructions to air traffic. Because all work associated with structure installation would be below 200 feet and outside of the flight path for the MCAS Miramar, no impacts on air traffic are anticipated.

Operation and Maintenance – No Impact

SDG&E currently implements the use of helicopters for maintaining its existing facilities in the Proposed Project area. Operations and maintenance activities for the TL665 loop-in would include routine inspection, maintenance, and repair activities. Both routine preventive maintenance and emergency procedures would occur in order 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. At a minimum, such routine inspections would occur annually to identify potential corrosion, equipment misalignment, loose fittings, and/or other mechanical problems. If the use of helicopters is required in the future, SDG&E would notify the FAA and any additional local agencies, as appropriate, prior to conducting maintenance activities requiring a helicopter. Therefore, no impacts would occur.

Question 4.12d – Increase in Hazards

Construction – No Impact

Construction of the Proposed Project would not require modification of any existing public roadways in the surrounding area. Temporary road or lane closures may be required to ensure public and worker safety workers during certain activities, particularly during construction of the TL665 loop-in. The closure of roadways or encroachment into public roadways could potentially increase hazards if appropriate safety measures are not implemented (e.g. proper signage, orange cones, and flaggers). SDG&E would obtain the required encroachment permits from the City of San Diego, as applicable, and would implement appropriate traffic control measures. In addition, SDG&E would prepare and implement a Traffic Management Plan. With implementation of such measures, no impacts are anticipated.

The tallest component of the Mira Sorrento Substation Project would be the standard steel rack at a height of approximately 30 feet above the ground surface. As such, the Proposed Project would not incorporate elements that would be considered a hazard with regard to FAA height regulations. As a result, no impacts would occur.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project would occur onsite at the Mira Sorrento Substation or within the public areas or roadway right-of-way affected by the TL665. Access for operation and maintenance activities would be provided from existing public roads and the existing dirt access easement road which runs along the bottom of the slope on the proposed Substation site. Such activities would not introduce hazardous conditions due to a design feature or incompatible use. No impacts would occur.

Question 4.12e – Emergency Access Effects

Construction – Less-Than-Significant Impact

Emergency access would not be directly impacted during construction because all streets would remain open to emergency vehicles at all times throughout construction. Construction of the Substation would not require any road closures as construction would occur onsite, and no improvements to public roadways are required. Although the transport of construction materials and workers to and from the Proposed Project site may result in temporary delays along Mira Sorrento Place, Vista Sorrento Parkway, or Mira Mesa Boulevard due to vehicle speeds or maneuvering of construction vehicles, emergency access would not be affected and the affected roadways would continue to provide adequate access for emergency vehicles.

SDG&E would coordinate with local jurisdictions to secure encroachment permits, as trenching within the ROW would be required for the TL665 loop-in. Although the Proposed Project would not result in any road closures as construction would occur within public areas or roadway rights-of-way, some roads may be temporarily limited to one-way traffic at times. In such cases, one-way traffic controls would be implemented as required. Although this may indirectly impact emergency access, the increase in traffic would be less-than-significant, and emergency vehicles would be provided access even in the event of temporary lane closures. Thus, impacts would be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project would generate a minimal amount of additional traffic on area roadways, as compared to existing conditions. No temporary planned road closures would occur for maintenance of the Substation or other Proposed Project components. As such, no impacts on emergency vehicle access would occur with operation and maintenance activities.

Question 4.12f – Parking Capacity

Construction – Less than Significant Impact

Mira Sorrento Substation

No businesses, residents, or recreational facilities are immediately adjacent to the proposed Mira Sorrento Substation site. No on-street parking is permitted along Mira Sorrento Place, Vista Sorrento Parkway, or Mira Mesa Boulevard in the immediate vicinity of the Proposed Project site, and therefore, would not be disrupted during the construction phase.

The parking of crew vehicles and equipment would occur within the Substation site limits or along designated access roads or at staging areas during the construction phase. As such, offsite parking required during construction of the Substation would have a less than significant impact on existing parking capacity.

TL665 Loop-In

Similar to the Substation, construction of the TL665 loop-in may require temporary parking of some crew vehicles or equipment on the Substation site or along SDG&E easement area, depending on the construction activities being accomplished at the time; however, such parking would be minimal and would not create a significant increase in the demand for parking in the area or adversely affect surrounding land uses. In most cases, parking would occur within the substation site. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance of the Mira Sorrento Substation, TL665, and associated facilities and equipment would not require any additional offsite parking spaces as compared to parking conditions prior to construction of the Proposed Project. Therefore, no impacts would occur.

Question 4.12g – Alternative Transportation Conflicts

Construction – No Impact

The Proposed Project is located in a highly urbanized area. Construction would occur within the public right-of-way and on SDG&E-owned land. The Proposed Project would not involve any activities that would conflict with alternative transportation policies, plans, or programs, including bus transportation in the area. SDG&E would obtain encroachment permits to conduct work within the public ROW and would ensure that access for motorists and bicyclists remains open during construction. As the Coaster rail line is located approximately 0.35 mile to the southeast of the Proposed Project site, operations would not be affected by construction activities. Therefore, no impacts on alternative transportation modes are anticipated.

Operation and Maintenance – No Impact

The Proposed Project is located in a highly urbanized area with limited alternative transportation corridors. The operation and maintenance of the Proposed Project would generate less than one vehicle trip per day on average. As such, no offsite rail, bus, or bicycle traffic or circulation patterns would be altered or adversely affected by long-term operation and maintenance activities. Therefore, no impacts would occur.

4.12.5 Applicant Proposed Measures

The Proposed Project would not result in significant impacts with regard to traffic or transportation resources. Therefore, no avoidance or minimization measures are proposed.

4.12.6 References

MCAS AICUZ.

California Public Utilities Code. 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.

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City of San Diego Engineering and Capital Projects Department. Traffic data received October 15, 2010.

Congestion Management Program Update. Prepared by SANDAG. 2008.

Interstate 805 High-Occupancy Vehicle/Carroll Canyon Road Extension Project Initial Study/Mitigated Negative Declaration and Environmental Assessment/Finding of No Significant Impact. Prepared by CALTRANS. April 2009.

Mira Mesa Community Plan – City of San Diego. Adopted December 6, 1994. Last Amended April 2011.

2030 San Diego Regional Transportation Plan: Pathways for the Future. Prepared by SANDAG. Approved 2007.

4.13 Cumulative Analysis

4.13.1 Introduction

This chapter identifies and evaluates cumulative impacts potentially resulting from the construction and operation of the proposed Mira Sorrento Substation Project (Proposed Project). The Proposed Project is intended to provide new facilities to accommodate regional energy needs and provide for future transmission and distribution load growth, as discussed in Chapter 2.0, *Project Purpose and Need*. Implementation of the Proposed Project will not result in a significant cumulative environmental impact in any resource area considered under the California Environmental Quality Act (CEQA).

4.13.2 Significance Criteria

The California Environmental Quality Act (CEQA) Guidelines, Section 15355, identifies cumulative effects as "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The Guidelines further state that a project may have cumulatively considerable environmental impacts when "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effect of current projects, and the effects of probable future projects [CEQA Guidelines Section 15065(a)(3)]. In addition, Section 15064(h)(1) requires that the lead agency consider whether a cumulative impact is significant and whether the effects of the project are cumulatively considerable. The CEQA Guidelines states that "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" (CEQA Guidelines § 15064(h)(4)).

4.13.3 Timeframe of Analysis

The cumulative impacts analysis considers the construction duration and post-construction operation and maintenance periods. Construction of the Proposed Project is anticipated to take approximately 24 months from initial site development through energization and testing. Construction of the Mira Sorrento Substation is anticipated to begin in January 2011 and energization in December 2013 (refer to Section 3.7.7 in Chapter 3.0, *Project Description*, for additional information).

4.13.4 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). The analysis of

potential cumulative impacts was limited to within one mile of the Proposed Project components because this distance was estimated to be the furthest that the Proposed Project impacts would extend.

4.13.5 Methodology

Based on the relative small scale of the Proposed Project, a cumulative study area within a one mile radius of the Proposed Project site was considered. Present and reasonably foreseeable projects were identified for consideration in the cumulative analysis. Data on such projects was obtained through discussion with City staff, review of relevant documents available, and through a search of affected agency websites and correspondence with agency staff. The following is a list of those agencies or organizations considered with regard to current or anticipated development projects in the Proposed Project area:

- City of San Diego
- Marine Corps Air Station Miramar
- San Diego Metropolitan Transit System (SDMTS)
- California Public Utilities Commission (CPUC)
- California Independent System Operator (CAISO)
- California Energy Commission
- California Department of Transportation

4.13.6 Existing/Operating Projects

Surrounding land uses in the Proposed Project are generally light industrial and commercial retail and office uses. The Proposed Project site is bordered by Vista Sorrento Parkway to the southwest, Mira Sorrento Place to the northwest, a 200-foot SDG&E utility easement to the north, and an undeveloped area to the east with a drainage channel that trends from northwest to southeast. Interstate 805 (I-805) is located approximately 0.1 mile to the west. Surrounding land uses include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the north/northeast across the drainage. The Marriott Courtyard and Water Ridge condominium complexes are located north of the site at distances of approximately 800 and 1,000 feet, respectively. Adjacent to the northeast side of the Substation site is an existing 200-foot SDG&E utility corridor easement containing TL 13810 and TL 23013 overhead lines. Within the easement, an unimproved (dirt) access road supports operational and maintenance activities for the SDG&E facilities. Land uses in the area surrounding lands affected by the TL665 loop-in include the Sorrento Towers North office complex and Sorrento Court retail commercial service area to the north/northeast, and Vista Sorrento Parkway and I-805 to the west. As such, the existing and operating projects in the area consist mainly of commercial retail and office, light industrial, transportation

activities, utility infrastructure operation and maintenance, and ongoing maintenance to area roadways.

4.13.7 Foreseeable Projects Inventory

"Reasonably foreseeable" projects that were considered in the cumulative analysis herein are represented by projects that Federal, State, or local agency representatives were aware of at the time of preparation of the PEA that had initiated the formal application process. These projects are listed in Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site*. A total of two projects have been identified within one mile of the Proposed Project. A one-mile radius is appropriate based on the size of the Project, the Project location, and the minimal impacts associated with the Proposed Project. Given the 3.7 acre size of the Proposed Project 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 805 freeway and is physically separated from any development projects to the west. The Mira Sorrento site is surrounded by existing commercial and residential developments to the north, east, and south. These areas have been previously developed. Finally, the Project site has been previously disturbed as a result of the construction of Mira Sorrento Place. Impacts to wetland areas have been avoided. The Project site is not part of a critical habitat linkage or wildlife corridor. As an unmanned 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 one-mile radius is an appropriate distance to determine the potential for other reasonably foreseeable projects to be cumulatively considerable.

Table 4.13-1
Planned and Proposed Projects within One Mile of the Proposed Project Site

Project	Project Type	Project Description/Size	Project Location	Permitting Status/ Schedule
Mira Sorrento Light Industrial/Office Park	Light Industrial Park (IP-2-1)	Construct 538,035 s.f. light industrial/office park; 3 buildings total	Adjacent to easterly boundary of Project site; City of San Diego (APN#s 341-010-28 and 341-352-28)	In Process
Interstate 805 HOV/Carroll Canyon Road Extension*	New Roadway Construction	Construct Carroll Canyon Road from March 2011 to Winter 2012/2013	Caltrans	In Process

*Caltrans Fact Sheet, March 2011, Interstate 805 Project

4.13.8 Existing Conditions

4.13.8.1 Main Project Component – Mira Sorrento Substation

The proposed Mira Sorrento Substation site is located within the urbanized City of San Diego. A mixture of light industrial and commercial office and retail uses are present in the Proposed Project area. Additionally, a number of roadways supporting large volumes of traffic are located within the Project vicinity, including I-805 to the southwest, Vista Sorrento Parkway to the southwest, and Mira Mesa Boulevard to the southeast.

4.13.9 Impacts

4.13.9.1 Significance Criteria

The CEQA defines 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." (Guidelines § 15130(a)(1)). Impacts will be considered significant if they exceed the individual criterion established for each resource area as described in Sections 4.1 through 4.12, and, if so, the Proposed Project's contribution will be analyzed to determine whether it is cumulatively considerable (Guidelines § 15064(h)(1)).

The projects considered in the cumulative analysis were selected due to their proximity to the areas affected by construction of the proposed Mira Sorrento Substation. These projects were included in the cumulative impact analysis as they have the potential to contribute to cumulatively considerable impacts on noise (i.e. construction noise, traffic noise, operational noise), traffic, air quality, biological resources, and other such resources when considered with the Proposed Project; refer to Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site.*

4.13.9.2 Existing/Operating Projects

Main Project Component – Proposed Mira Sorrento Substation and Associated Improvements for Proposed Mira Sorrento Substation Site

As stated above, a mixture of light industrial and commercial office and retail uses are present in the Proposed Project area. Additionally, a number of roadways supporting large volumes of traffic are located within the Project vicinity, including I-805 to the southwest, Vista Sorrento Parkway to the southwest, and Mira Mesa Boulevard to the southeast. Adjacent to the northeast side of the Substation site is an existing 200-foot SDG&E utility corridor easement containing TL 13810 and TL 23013 overhead lines. Within the easement, an unimproved (dirt) access road supports ongoing operational and maintenance activities for the SDG&E facilities.

4.13.9.3 Foreseeable Future Projects

Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site*, lists projects that are either currently under construction or are reasonably foreseeable projects within approximately the same timeframe as the Proposed Project. These projects are considered to have the potential to result in cumulatively considerable short-term or long-term environmental impacts on particular resources when considered with the Proposed Project. For the purposes of this document, "reasonably foreseeable" refers to projects that local agency representatives have record or knowledge of due to pre-application meetings or the application process.

Several projects that are currently under construction in the vicinity of the proposed Mira Sorrento Substation site and affected SDG&E ROW may be completed before construction begins for the Proposed Project. Construction of other foreseeable projects near the proposed Mira Sorrento Substation site (see Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site*) could potentially result in cumulative construction-related impacts if construction occurs in close proximity and within the same timeframe as the Proposed Project. Potentially significant impacts could therefore occur as a result of Proposed Project construction when considered in conjunction with these other planned and future projects.

4.13.9.4 Potential Cumulative Impacts

This Section discusses whether, when combined with other past, present, and planned and probable future projects in the area, the Proposed Project would result in either significant short-term or long-term environmental impacts. Short-term impacts are generally associated with construction of the Proposed Project, while long-term impacts are those that result from permanent features or operation of the Proposed Project.

Aesthetics

The majority of construction equipment, vehicles, personnel, and material staging areas will be accommodated within the property lines of the proposed Substation site. Equipment staging will also occur at existing SDG&E storage and operations yards, including Kearny, Miguel, Peñasquitos Substation, and Clairemont storage facilities. Temporary parking of some vehicles along Mira Sorrento Place may be required depending on the construction activities being accomplished at the time. The site development construction to provide the substation pad for the Mira Sorrento Substation will temporarily require impacts to approximately 2.7 acres, which allows for the lay-down yard and the remedial grading of the site. Grading and clearing of vegetation will be required to allow for the lay-down yard.

Staging for the TL665 loop-in component will occur at the existing SDG&E-owned Peñasquitos Substation. This staging area would be used primarily for the storage of transmission material and related construction equipment. The footprint of the existing

staging site at Peñasquitos Substation would occupy approximately 0.60 acre. This site is considered as previously disturbed, and therefore no grading and/or slope stabilization is anticipated.

Portions of the Proposed Project site will be visible during construction; however, the site is generally located away from Mira Mesa Boulevard and I-805, thereby reducing public views to the site and reducing the potential for adverse aesthetic impacts to occur. Development of the proposed site with the proposed Mira Sorrento Substation will not contribute to a significant cumulative impact to visual resources, as surrounding lands are developed with light industrial/office and commercial uses, in addition to the existing SDG&E utility easement that runs adjacent to the Proposed Project site. Additionally, the proposed retaining wall along the southern slope will be visually consistent with other similar walls present along Vista Sorrento Parkway. Other future projects within the study area will be evaluated for their potential to contribute to a significant change to the existing visual environment, and subject to mitigation or design measures, as appropriate, to reduce potential visual impacts. Cumulative effects on aesthetics would be minimized through implementation of SDG&E's APM's AES-1 and AES-2 and would remain at a level that would be less than significant and not cumulatively considerable.

Air Quality

Future and proposed projects within proximity to the proposed Mira Sorrento Substation may contribute to cumulative air quality impacts within the study area. Pollutants generated during the construction phase of such projects will have the potential to impact ambient air quality that may overlap with construction activities resulting from the Proposed Project, if construction activities occur within close proximity and during the same time period.

Measures have been identified for the Proposed Project to minimize potential impacts on air quality (see Section 4.2 - *Air Quality*). Similarly, other cumulative 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. Greenhouse gas (GHG) emissions will also result from the construction of the Proposed Project and other foreseeable projects in the surrounding area. The use of heavy construction vehicles and other equipment will generate GHG emissions. Emissions generated during Proposed Project construction will be negligible when compared to existing baseline GHG emissions in the area, although such emissions have the potential to contribute to an overall cumulative increase in GHG; refer to Section 4.2 - *Air Quality.* SDG&E will be required to adhere to the standards and requirements established by the San Diego Air Pollution Control District (SDAPCD) to minimize the potential for Project-related construction activities to contribute to potential cumulative impacts with regard to GHG. As such, cumulative impacts are anticipated to be less than significant. Similarly, with implementation of SDG&E's

APMs, as stated in Section 4.2 – *Air Quality,* cumulative effects of such impacts will be minimized to a level that will remain less than significant and not cumulatively considerable.

In addition, a significant impact may occur if a project were inconsistent with the rules and regulations of the SDAPCD or if it would induce growth in excess of that anticipated by the SDAPCD Regional Air Quality Strategy. Long-term operation of the proposed Mira Sorrento 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. In addition, during operation, various projects may potentially contribute to GHG accumulation by emitting carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorinated carbon, and sulfur hexafluoride (SF_6). While these emissions have the potential to contribute to a cumulative increase in GHG, the Proposed Project's contribution will be minimal and will not result in a significant cumulative impact. With implementation of SDG&E's APMs, as stated in Section 4.2 – *Air Quality*, Project-related cumulative effects of potential air quality impacts, including the potential for significant GHG emissions, will be minimized to a level that would be less than significant and not cumulatively considerable.

Biological Resources

As described in Section 4.3 - *Biological Resources*, temporary construction impacts could occur with the proposed improvements in areas with the potential to support State- and/or Federally-listed species. SDG&E will consult with the applicable State and Federal agencies in accordance with the Subregional Natural Community Conservation Plan (NCCP) to determine avoidance measures, as applicable, for construction activities within sensitive habitat for threatened or endangered species.

Construction of the proposed Mira Sorrento Substation and related structures will include both permanent and temporary impacts; however, this will not be considered a significant impact to sensitive species (other than for listed or candidate species under the State and Federal endangered species acts), unless extensive areas of suitable habitat will be degraded or somehow made unsuitable, or areas supporting a large proportion of a species population will be substantially and adversely impacted. Habitat present on the proposed Mira Sorrento Substation site largely consists of developed and disturbed lands, as well as habitat of low biological value (Remnant, Restored, and Disturbed Diegan coastal sage scrub). As such, the amount of sensitive habitat disturbed as a result of construction of the proposed Mira Sorrento Substation will be relatively small (refer to Section 4.3 – *Biological Resources*) in comparison with other potential developments in the study area and will therefore not contribute significantly to overall habitat loss within the area. Furthermore, SDG&E must provide mitigation for permanent habitat loss, as required by the NCCP, which will ensure that Proposed Project impacts remain less than significant.

In addition, the Proposed Project will have the potential to impact wetlands and non-wetland waters of the U.S. from construction of the Substation and associated improvements. Due to a no-net-loss policy implemented by resource agencies, the Proposed Project has been designed to avoid jurisdictional resources to the extent practicable. If it is determined that impacts cannot be avoided, SDG&E will obtain the appropriate permits and a revegetation plan will be prepared for approval by the resource agencies, prior to any development that will impact any identified jurisdictional resources. Mitigation for impacts to jurisdictional resources will be required subject to the approval of the regulatory agencies, as appropriate, in accordance with applicable permitting criteria.

Project activities have been designed to avoid wetlands and jurisdictional waters where practicable; however, if it is determined that impacts to wetlands and jurisdictional waters are unavoidable, the following permits and authorizations may be required: 1) Compliance with the City of San Diego Resource Protection Ordinance; 2) A 404 Nationwide Permit from the USACE; 3) A 401 certification from the California Regional Water Quality Control Board (RWQCB); and/or, 4) A 1600 Streambed Alteration Agreement, completed and processed with the California Department of Fish and Game (CDFG). SDG&E will implement APMs and relevant Environmental Standards to ensure that potential impacts to wetlands are avoided or remain less than significant. These requirements will also apply to other projects considered in the cumulative analysis to ensure that impacts are less than significant. Therefore, the Proposed Project will not contribute to a significant cumulative impact on wetland habitat.

The majority of the planned or proposed projects listed in Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site*, and considered in this analysis are located in areas that are presently developed or disturbed and will therefore not have a high potential to contribute to permanent loss of large amounts of sensitive or biologically valuable habitat; refer to Section 4.3 - *Biological Resources;* however, some undeveloped lands where future development may occur may result in impacts on sensitive biological resources. As individual lands within the study area are developed over time in the future, impacts to sensitive biological resources will be required to be mitigated to less than significant, or to the extent feasible. Construction of the proposed Mira Sorrento Substation and related Project components will result in approximately 2.4 acres of permanent impacts and 0.4 acre of temporary impacts to vegetation communities; refer to Table 4.3-5, *Potential Impacts to Vegetation Communities and Proposed Mitigation Under APM BIO-1 for the Mira Sorrento Substation Project*. Permanent impacts will potentially occur to two sensitive vegetation communities, including 0.9 acre Diegan coastal sage scrub and 0.1 acre native grassland. Temporary impacts will also potentially occur to one sensitive vegetation community, which includes 0.1 acre of Diegan coastal sage scrub. Permanent impacts will result from installation of the new Substation, improvements for access, and improvements associated with the TL665 loop-in.

The Proposed Project and other projects identified in Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site*, will be required to provide measures to avoid, minimize, or reduce permanent habitat loss or impacts to sensitive species to less than significant. As such, the Proposed Project will not contribute to a significant cumulative impact on biological resources within the study area.

In addition, as part of the Proposed Project, SDG&E will implement the NCCP Operational Protocols, Environmental Standards, and Project APMs, as stated in Section 4.3 – *Biological Resources*. With implementation of these measures, cumulative effects of Project impacts on biological resources will be minimized and remain at a level that would be less than significant and not cumulatively considerable.

Cultural Resources

Construction of the proposed Mira Sorrento Substation will not contribute to the potential loss of known cultural resources, as no known cultural resources were identified on the lands affected by the proposed improvements; however, the record search performed by ASM Affiliates revealed the presence of six localities recorded within a one-mile radius of the Proposed Project site. Although no known paleontological resources have been identified on the Project site, the site is located in an area where a known abundance of fossils in the Scripps Formation and the underlying lateral equivalent Ardath Formation occurs. As such, fossils may be encountered during excavation activities for the Proposed Project.

Similarly, future projects within the cumulative study area may therefore have the potential to contain previously known cultural resources. Impacts to such resources will be mitigated through avoidance, or through measures to reduce impacts to a less than significant level, consistent with local, State, and Federal requirements. The proposed improvements at the Mira Sorrento Substation site will not impact significant cultural resources; however, for the proposed Mira Sorrento Substation Project, SDG&E's APMs, as stated in Section 4.4 – *Cultural Resources*, will be implemented to minimize potential construction-related impacts potentially resulting from the Proposed Project, thereby also ensuring that potential cumulative effects of construction-related impacts remain at a level that would be less than significant and not cumulatively considerable. No long-term impacts on cultural resources are anticipated with the Proposed Project due to the operational characteristics, and therefore, the Project would not contribute to cumulatively considerable impacts to such resources.

Potential cumulative impacts on paleontological resources from present and future development within the area of the proposed Mira Sorrento Substation will occur if the Proposed Project contributed to a cumulatively significant loss of unknown paleontological resources. Potential impacts may occur from site disturbance activities required for foundation construction, or the installation or undergrounding of associated facilities (i.e TL665 loop-in). Other planned or future projects within the study area will likely also have the potential to result in impacts on unknown paleontological resources, due to area soils and

proximity to the proposed Mira Sorrento Substation site. Mitigation measures will be required for such projects, as applicable, to reduce construction-related impacts to paleontological resources to less than significant. For the proposed Mira Sorrento Substation Project, SDG&E's APMs, as stated in Section 4.4 – *Cultural Resources*, will minimize potential construction-related impacts caused by the Proposed Project, thereby ensuring that potential cumulative effects of construction-related impacts remain at a level that would be less than significant and not cumulatively considerable. No long-term impacts on paleontological resources are anticipated with the Proposed Project due to the operational characteristics, and therefore, the Project will not contribute to cumulatively considerable impacts to such resources.

Geology, Soils and Minerals

Potential cumulative impacts to geologic resources from present and future development within the area of the proposed Mira Sorrento Substation would involve the loss of unique geologic features or known mineral or energy resources. In addition, potential impacts may occur from substantial landform alteration of the topography, or from induced erosion or sedimentation during or following site improvements.

Construction of the proposed Mira Sorrento Substation will occur within an area that is largely disturbed or developed, and will contribute only a negligible increase to potential cumulative geologic impacts. The Proposed Project will be designed to withstand strong seismic accelerations in accordance with the 2007 CBC and the IEEE 693 "Recommended Practices for Seismic Design of Substations" 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. As such, potential impacts as the result of damage caused by strong seismic shaking or fault rupture will be reduced to less than significant. Additionally, SDG&E will implement APMs (i.e. removal of unstable soils) to minimize the potential for impacts to occur with regard to ground failure, landslides, slope instability or liquefaction.

Other planned or future projects within the study area would also have the potential for impacts relative to geologic resources, due to site improvement activities such as grading or landform modification, as well as the result of site-specific soil conditions. Mitigation and/or design measures will be required for these projects to minimize construction-related impacts to or resulting from such resources, and conformance with State and local regulations pertaining to seismic design requirements. For the proposed Mira Sorrento Substation Project, SDG&E's APMs, as stated in Section 4.5 – *Geology, Soils, and Minerals,* that will minimize construction-related impacts caused by the Proposed Project will also ensure that the potential cumulative effects of construction-related impacts remain at a level that would be less than significant and not cumulatively considerable.

Hazards and Hazardous Materials

The Phase I Environmental Site Assessment (ESA) prepared by Haley & Aldrich, Inc. for the proposed Mira Sorrento Substation site did not identify any listed sites of potential concern with regard to hazards or hazardous materials on the Proposed Project site, and therefore, the Project site would not contribute to potential cumulative impacts; however, the Phase I ESA identified a total of four sites within a one-mile radius of the Project site, one of which was identified as a Suspect Recognized Environmental Condition (SREC) related to potential soil contamination. Although this case was being processed by the Department of Environmental Health (DEH) at the time the Phase I ESA was prepared, the site is not expected to pose a risk to the Project site or to other sites within the cumulative study area. No other sites identified were determined to pose potential risk to the Project site.

As hazardous sites were identified in the ESA within the applicable ASTM radius, planned or future projects in the area surrounding the proposed Mira Sorrento Substation site may be developed on properties that contain hazardous materials or represent a potential hazard; however, cumulative projects within the vicinity of the Proposed Project that may contain hazardous materials will be required to properly contain and dispose of hazardous materials, consistent with applicable Federal and State standards to reduce potential impacts to less than significant. Similarly, other SDG&E projects located within the cumulative study area will implement SDG&E's APMs and Environmental Standards to avoid impacts associated with the handling or release of hazardous materials, thereby minimizing contributions to cumulative impacts. With implementation of SDG&E's Environmental Standards and APMs, as stated in Section 4.6 – *Hazards and Hazardous Materials*, cumulative effects of the Proposed Project's impacts relative to hazards and hazardous materials will be minimized to a level that would be less than significant and not cumulatively considerable.

The Proposed Project will also not contribute to a significant effect when considered with the projects identified in Table 4.13-1, *Planned and Proposed Projects within One Mile of the Proposed Project Site*, with regards to fire, public safety, or emergency response, as the proposed substation will be unmanned. In addition, the Proposed Project will not change or alter fire suppression policy, emergency response and evacuation plans, or create a public safety hazard at a local or regional level from implementation. Therefore, with implementation of SDG&E's Environmental Standards and APMs, as stated in Section 4.6 – *Hazards and Hazardous Materials,* cumulative effects of the Proposed Project's impacts relative to hazards and hazardous materials will be minimized and remain at a level that would be less than significant and not cumulatively considerable.

Hydrology and Water Quality

Planned and future construction projects located within close proximity to the proposed Mira Sorrento Substation site may potentially result in cumulative impacts relative to hydrology within the study area. Improvements required with these projects (such as grading or

roadway or utility improvements) may occur at the same time or within close proximity to those required for construction of the proposed Mira Sorrento Substation, thereby contributing to potential cumulative impacts on hydrology or water quality. 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 ground water. Other planned or future projects within the cumulative study area will be required to conform to City regulations and policies, as well as Best Management Practices (BMPs), intended to reduce potential construction-related (as well as long-term) impacts on hydrology and water quality to less than significant. Similarly, with implementation of SDG&E's Environmental Standards and APMs, as stated in Section 4.7 – *Hydrology and Water Quality*, cumulative effects of impacts on hydrology and water quality associated with the Proposed Project will be minimized and remain at a level that would be less than significant and not cumulatively considerable.

Land Use

The combination of construction-related activities for the Proposed Project, combined with planned expansion of present or future area roadway, utility, or other land development projects, may create significant short-term construction-related cumulative impacts, such as increased temporary noise or effects on traffic circulation. It is anticipated that cumulative impacts to existing land uses resulting from planned and future projects within the study area will be mitigated to a level of less than significant at the individual project level, by incorporating mitigation measures as appropriate, such as providing construction notification and minimizing construction disturbance. Long-term operation of the proposed Mira Sorrento Substation will not contribute to a significant cumulative impact relative to land use and planning, as the proposed land use will be consistent with that intended and planned for the site by the City. Planned and future development projects within the vicinity of the proposed Mira Sorrento Substation site will have the potential to result in cumulative impacts relative to land use displacement, compatibility of land uses, and project consistency with applicable land use policies and zoning. The Proposed Project will be located within SDG&E property and/or ROW and will therefore not contribute to cumulative land use impacts associated with inconsistencies with applicable land use policies or zoning. Therefore, cumulative effects of Project impacts relative to land use are considered to be less than significant and not cumulatively considerable.

Noise

Short-term potential noise impacts resulting from construction of the proposed Mira Sorrento Substation will be localized at the proposed site and will occur over an extended period of time during construction of the Substation and associated improvements. Noise will be generated intermittently from such activities as grading and construction. Short-term cumulative noise impacts may occur if Project construction were conducted at the same time

as other planned or future projects in the study area, thereby potentially adversely impacting surrounding sensitive uses. In addition, long-term operation of the proposed Mira Sorrento Substation will not significantly increase noise levels over that which presently exists in the area, as surrounding land uses and several roadways, including I-805 and Mira Mesa Boulevard, currently experience high volume traffic and associated vehicle noise. In addition, sensitive land uses are located a distance from the proposed site, the Project's contribution to cumulative construction and operational noise impacts will be minimal. Implementation of SDG&E's APMs, as stated in Section 4.9 – *Noise*, cumulative effects of these impacts will be remain at a level that would be less than significant and not cumulatively considerable.

Transportation and Traffic

Circulation impacts may potentially occur over the short-term if future and proposed projects were under construction simultaneously and within the same general location as the Proposed Project. Daily traffic trips associated with the proposed improvements will generally be limited to construction vehicles and workers traveling to and from the site. Daily transportation of construction workers is not expected to cause a significant cumulative effect with regards to traffic, as traffic generated will not be a substantial percentage of current daily volumes in the area, including if added to traffic generated by planned and future development projects in the study area. With implementation of SDG&E's APMs, cumulative effects of Project impacts on traffic will remain less than significant and not cumulatively considerable.

Operation of the Mira Sorrento Substation will generate few daily traffic trips. The Proposed Project will not contribute to a cumulatively significant traffic impact to area roadways, as trips generated during long-term operation are anticipated to be minimal, and will not add a significant number of vehicle trips to area roadways. With implementation of SDG&E's APMs, cumulative effects of Project impacts on traffic will remain less than significant and not cumulatively considerable.

4.13.10 Applicant Proposed Measures

While the Proposed Project would contribute to certain cumulative impacts with the level of development activity in its vicinity, its contribution to these impacts is anticipated to be minimal. A potentially adverse cumulative impact may result for certain issue areas; however, it is anticipated that the other projects within the vicinity of the Proposed Project would be required to implement avoidance and minimization measures similar to SDG&E's APMs and permit conditions. These measures would minimize potential environmental impacts, thereby minimizing the overall cumulative effects. As a result, 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) Mira Sorrento Distribution 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 Effects

Based on the findings in Chapter 4.0 – *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). SDG&E has identified 11 APMs that it plans to implement during construction and/or operation of the Proposed Project to reduce or avoid impacts. Chapter 3.0 – *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

5.2.1 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 have the potential to avoid or substantially lessen significant impacts of the Proposed Project. 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 seven alternative locations for the Mira Sorrento Substation. 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. Table 5-1, *Alternatives Considered,* lists each alternative that was considered during the alternatives evaluation process. Figure 5-1, *Alternative Substation Sites,* shows the location of each alternative on an aerial-based map. All of the site alternatives are located in the Sorrento Valley area of San Diego County. 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 Section 5.2.3, *No Project Alternative*. 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, *Substation Site Alternatives*.

5.2.2 Methodology

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 the less-than-significant level are considered to be less important. In order to properly analyze each alternative, SDG&E followed a three-step process. 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.

SDG&E then determined which alternatives attain a majority of the Proposed Project objectives. 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 can be mitigated for the Project.

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, Proposed Project objectives, and environmental constraints. This analysis resulted in the selection of a new 120 MVA 69/12 kV (kilovolt) substation (Mira Sorrento Substation), which is described in detail in Chapter 3.0 – *Project Description*.

Table 5-1: Alternatives Considered

Type of Alternative	Alternative	Evaluated or Eliminated
No Action Alternative	No Project Alternative	Eliminated
System Alternatives	Upgrading existing substations in Planning Area	Eliminated
	System Offloading	Eliminated
	New Transmission Lines	Eliminated
	Distributed Generation	Eliminated
	Demand Side Management	Eliminated
Substation Site Alternatives	Project Site	Evaluated
	Wateridge Vista	Evaluated
	Water Ridge North	Evaluated
	Water Ridge Circle	Evaluated
	Director's Place A	Evaluated
	Mira Sorrento Place	Evaluated
	Lusk Boulevard	Evaluated

5.2.3 Proposed Project Objectives

The Proposed Project is being proposed to meet several objectives identified by SDG&E. The primary objective of the Proposed Project is to construct a new substation and associated TL655 tie-in, designed to provide additional capacity to serve existing area load as well as forecasted customer-driven electrical load growth and to prevent potential long outages or disruption of service to existing customers in the SDG&E Sorrento Mesa service territory.

Basic objectives of the Proposed Project include the following:

- Meet the area's long-term electric distribution capacity needs by constructing a new substation near planned load growth thereby maximizing system efficiency;
- Provide substation and circuit tie capacity that will provide additional reliability for existing and future system needs;
- Reduce area substation loading to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the Sorrento Mesa service territory;

Additional project objectives include:

- Utilize existing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation; and,
- Meet project need while minimizing environmental impacts.

Each of these Proposed Project objectives is more thoroughly described in Chapter 2.0 – *Project Purpose and Need*.

5.2.4 No Project Alternative

The 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 Mira Sorrento Distribution Substation would not be constructed.

A new four (4) bank ultimate 120 MVA distribution substation within the Sorrento Mesa service area will eliminate existing high area substation load, provide for optimum area substation load, and eliminate the ultimate area forecasted 65 MW capacity deficiency. Projected electrical load growth and the desire to prevent extended outages and disruption of services to new and existing customers in the area, as well as maintain reliable service to SDG&E customers, were the prime driving factors in determining the need to construct a new substation in the area.

A further benefit of developing a new substation is that it will ensure reliability of service to customers. SDG&E designs and develops distribution substations to ensure reliability of service. SDG&E considers additional substation transformer capacity when: the loss of a single transformer may cause an interruption to major commercial/industrial load that cannot be restored through use of 12kV circuit ties to other substations. The planning and design of the Mira Sorrento Substation meets this requirement as it will provide needed capacity and additional 12kV distribution circuit ties with the substations currently serving the area.

The No Project Alternative would not meet any of the Proposed Project's objectives. A new substation would not be available to meet increased capacity needs in the area. The No

Project Alternative would not provide the opportunity to provide improved substation and circuit reliability with added tie capacity. In addition, without a new substation, SDG&E would not be able to reduce area substation loading to optimum operating conditions.

5.2.5 System Alternatives

Five potential system alternatives were evaluated; however, none met the Proposed Project objectives, as described further in the following subsections.

Alternatives were examined for correcting the projected system overloads and reliability deficiency in the Sorrento Mesa service area. The decision to investigate potential sites for construction of a new distribution substation in this service area was not initiated until SDG&E was certain that the potential for using and/or expanding existing facilities to meet projected distribution load growth, in lieu of substation construction, was considered.

The following systems and technologies were considered but rejected as potential alternatives to substation construction. These alternatives were rejected for technical or financial reasons; because they were impractical; or, because they did not achieve the purpose or need defined in the distribution planning area study.

- **Upgrading Existing Substations in the Planning Area.** The existing Torrey Pines, Mesa Rim, Genesee and Eastgate substations 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. North City West substation is located too far north of the planning area.
- **System Offloading.** Offloading excess electrical demand at Torrey Pines, Mesa Rim and Eastgate to a surrounding substation, such as Genesee Substation and North City West Substation, in the vicinity of service area was not possible without extensive modifications or upgrades to existing transmission and distribution systems.
- **New Transmission Lines.** The system deficiency is a distribution deficiency, and not a transmission deficiency. Increasing transmission capacity in the Mira Sorrento area, without providing new or substantially upgraded distribution substation facilities, would not reduce the potential for system overloads and insufficient distribution system margin.
- **Distributed Generation.** Installing distributed generation in the Sorrento Mesa service area is not considered a viable option given the anticipated system overloads and reliability deficiency. Distributed generation is considered viable when the magnitude of the estimated overload is small, and the capacity shortfall is expected to be of short duration; however, the problem in the Sorrento Mesa service area is multiple substation overloads,

capacity shortfalls, and substation reliability deficiency, the combination of which cannot be adequately addressed by distributed generation.

- **Demand Side Management.** Due to the anticipated magnitude of projected system overloads, insufficient system margin, and potential energy growth rate in the Sorrento Mesa area, demand side management (DSM) programs (such as commercial and residential energy efficient lighting retrofits) will not provide enough benefits to offset projected distribution capacity shortfall. Therefore, relying on DSM programs to offset estimated capacity shortfalls and increase system margins was not considered a viable project alternative. However, this will not deter SDG&E from suggesting or implementing DSM programs in the future, where feasible, as a method of implementing incremental energy demand reductions within the Sorrento Mesa service area.

5.2.6 Substation Site Alternatives

A total of seven substation sites were initially considered for construction of the Mira Sorrento Substation. These potential substation sites are depicted in Figure 5-1, *Alternative Substation Sites*. None were eliminated during the preliminary screening effort, and as such, all seven sites were evaluated based on the following differentiating criteria:

- Engineering Factors
  - Parcel size (minimum 2-3 acres) and shape
  - Proximity to existing transmission lines
  - Use of existing ROW
  - Access to the site
- Ability to meet the Proposed Project Objectives
- Land Rights
  - Ability to secure the parcel in accordance with schedule constraints
  - Cost
- Environmental Constraints
  - Recorded occurrences of sensitive species on site
  - Potential visibility from residences and recreational areas, based on proximity
  - Hydrological features on site
  - Potential for land use conflicts from these seven alternatives, a preferred substation location was determined based on these criteria.
  - Community acceptance and support

5.2.6.1 Project Site – Preferred Site

The project site is 3.7 acres in size and is located near the intersection of Mira Mesa Boulevard and Vista Sorrento Pkwy, adjacent to an existing SDG&E transmission corridor. The site has direct access off of Mira Sorrento Place which runs adjacent to the property. Physical constraints on the property include an irregular shape, slopes of approximately 25 percent, and sensitive wetland areas. The property is zoned for residential uses but is surrounded by other commercial and industrial property. SDG&E is working with City staff to have the Zoning Ordinance revised to reflect the IL-2-1 (Light Industrial) zone originally intended for the property. The proposed substation is considered compatible from a land use perspective; however, as a result of previous planning efforts, SDG&E has obtained the support of the Mira Mesa Community Planning Group. SDG&E currently owns the majority of the property. The project site would allow SDG&E to meet all of the project objectives. A detailed analysis of this site is provided in Chapter 4.0 – *Environmental Impact Assessment*.

5.2.6.2 Wateridge Vista

A site located off of Wateridge Vista Drive is a 7.61-acre site adjacent to the existing transmission corridor, above Directors Place. The Wateridge Vista site currently provides overflow parking for an office building on an adjacent lot. Site topography would allow a developable area of three acres, which would accommodate a standard configuration low profile 120 MVA substation. This site is flat which would minimize the need for retaining walls. This property is located at a higher elevation at the top of a slope. As such, this location is more visible from offsite locations. From this location, the substation would be located above the Wateridge Condos located to the northeast. This location would not meet the criteria for reduced visibility from residences; however, the site has limited distribution connection options due to the lack of existing underground or overhead electric distribution facilities to tie into along the adjacent transmission corridor, which is the only readily accessible area adjacent to the site. This would limit distribution system connection routing to extensive underground runs through area streets and well-established landscaping on a tall and steep 2:1 slope. This site is less suitable for substation distribution than the Proposed Project. Also, in meetings with the local community economic development group, this site was considered a prime site for high-tech industrial uses consistent with the economic goals of the area, therefore, whether this site could meet the criteria of community acceptance was questionable after consultation. As prime industrial land, land cost through purchase or, if necessary, condemnation, may make meeting the project objective of utilizing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation unlikely. For these reasons, the site is not considered environmentally superior to the Project site. In addition, this alternative would fail to meet basic project objectives, including the utilization of previously acquired by SDG&E and identified by community stakeholders as appropriate for construction of a substation.

5.2.6.3 Directors Place A

This site is 6.96 acres, located along the north-central portion of Directors Place, approximately 860 feet from an existing SDG&E transmission line. A substation would be compatible with the site and surrounding area from a land use perspective and the graded pad on the parcel offers adequate area for a 120 MVA substation with landscaping. Distribution getaways could be provided down to Directors Place or down the existing transmission corridor access road; however, this site would require the underground extension of a looped transmission line from the existing transmission corridor requiring trenching down a tall and steep landscaped slope as well as within Directors Place. Such underground construction would result in additional temporary construction impacts including air quality emissions from equipment and soil movement, increased potential for soil erosion and subsequent water quality issues, additional equipment noise and traffic congestion from temporary road closures and detours, as compared to the Proposed Project site. Also, in meetings with the local community economic development group, this site, like Wateridge Vista, was considered a prime site for high-tech industrial uses consistent with the economic goals of the area, therefore, whether this site could meet the criteria of community acceptance was questionable after consultation. As prime industrial land, land cost through purchase or, if necessary, condemnation, may make meeting the project objective utilizing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation unlikely. For these reasons, this site is not considered environmentally superior to the project site. In addition, this alternative would fail to meet basic Project objectives, including the utilization of previously acquired by SDG&E and identified by community stakeholders as appropriate for construction of a substation.

5.2.6.4 Mira Sorrento Place

This site is located just north of the preferred project site on the north side of Mira Sorrento Place. This property is approximately 5.6 acres in size, rectangular shaped, and is undeveloped. The existing SDG&E transmission easement traverses the western portion of the property. Distribution getaways could be provided down Mira Sorrento Place or down the existing transmission corridor access road. The property is owned by a private entity. Access to the site could be provided from Mira Sorrento Place. The site could support a graded pad for a 120 MVA. This site has some physical constraints because of slope and habitat issues. The property slopes down into an existing drainage channel that may support wetland habitats. An existing drainage structure is located under Mira Sorrento Place that would likely have to be extended under the pad for the proposed substation; however, the site is located away from major public vantage points such as Interstate 805 or Mira Mesa Boulevard. The site is adjacent to the Wateridge Condominiums located just north of the site and adjacent to the condominium tennis courts and common area. This property is also located adjacent to a Marriott hotel and a Qualcomm office building. Because of the site's proximity to the residential uses, it is questionable whether this site could meet the criteria of

community acceptance. The location of the natural drainage channel and the required improvements necessary to maintain adequate surface water flow through the site, make it unlikely that this site could meet the criteria for environmental constraints. For these reasons, this site is not considered environmentally superior to the project site. In addition, this alternative would fail to meet basic project objectives, including the utilization of previously acquired by SDG&E and identified by community stakeholders as appropriate for construction of a substation.

5.2.6.5 Wateridge Circle

This site is located just west of Wateridge Circle and south of Lusk Boulevard. The site is approximately 10.3 acres and is owned by the City of San Diego. The property has an irregular shape consisting of two ridgelines each of which could likely support a graded pad for a 120 MVA substation. Access to the site would be from Wateridge Circle. The project site is approximately 1,000 feet from the existing 138kV transmission corridor. The 69kV loop-in could be accommodated through existing SDG&E easements that extend from the property to the 138kV transmission corridor. The property has some physical constraints from slopes and the large drainage that runs through the center of the property. Graded pads could be graded at the upper portions of the site, but would likely result in manufactured fill slopes that would adversely impact the drainage or the need for retaining walls. The property supports non-native grassland and coastal sage scrub habitat as well as potential wetland area within the central drainage. This property is located near top of a hill and would be would be within a prominent view from Interstate 805.

The property is encumbered with an open space easement that would need to be vacated by the City prior to any development on the site. Any area removed from open space would need to be replaced in-kind in open space in another location. The property's topographical and environmental constraints, it would be unlikely that it would meet the criteria for minimizing environmental impacts and reducing visibility because the hillside location would make the manufactured slopes and retaining walls visible from multiple directions. Additionally, the City of San Diego would require a vacation of an existing biological open space easement established for the preservation of sensitive habitats which would require the purchase off in-kind habitat in another location. For these reasons, this site is not considered environmentally superior to the Project site. In addition, this alternative would fail to meet basic project objectives, including the utilization of previously acquired by SDG&E and identified by community stakeholders as appropriate for construction of a substation.

5.2.6.6 Lusk Boulevard

This site is located north of Lusk Boulevard and just west of the western terminus of Wateridge Circle. The property is approximately 4.1 acres and is privately owned. The existing transmission corridor traverses the eastern edge of the site. The 69kV loop-in could be accommodated through existing SDG&E easements onsite and underground trenching

would be minimized. The property has an irregular shape and supports a combination of disturbed, non-native and native habitats including coastal sage scrub habitat. The site has a small graded pad area adjacent to an existing parking lot. Physical features on the site include a small knoll on the western portion of the site and a steep drainage that falls to the north off the property. There are existing SDG&E easements roads on the property to service distribution lines that traverse the central portion of the property. The pad area is elevated higher than Lusk Boulevard and separated from the street by a row of ornamental trees. The substation would be mostly screened from view for drivers on Lusk Boulevard, and visible from the adjacent office building. Given the Project's distance from the Interstate 805 freeway and other high volume transportation corridors, a substation in this location would be visible from fewer public vantage points than the other locations considered.

Because of the physical constraints of the property the small graded pad is unlikely to have enough area to accommodate the proposed substation layout. The elongated shape of the property and topographical constraints make it unlikely that the existing pad area could be expanded to meet the dimensions of the proposed substation layout. As with other commercial/industrial zones, this site was considered a prime site for high-tech industrial uses consistent with the economic goals of the area, therefore, whether this site could meet the criteria of community acceptance was questionable after consultation. As prime industrial land, land cost through purchase or, if necessary, condemnation, may make meeting the project objective of utilizing SDG&E-owned land previously identified by community stakeholders and condemned for the purpose of constructing a substation unlikely. In addition, this alternative would fail to meet basic project objectives, including the utilization of previously acquired by SDG&E and identified by community stakeholders as appropriate for construction of a substation.

5.2.6.7 Wateridge North

This site located north of Lusk Boulevard and east of Telesis Court is 8.1 acres in size and is located on Lusk Blvd, approximately 570 feet from the existing transmission corridor. The site is encumbered with a biological open space easement that would need to be vacated by the City and is located across the street from the Wateridge residential community. A large area of disturbance would be required for substation construction, including cut and fill slopes and road grading for substation access. The nearby residential area also makes this site less consistent in terms of land use. In addition, existing onsite slopes would cause difficulty with building placement and equipment access and would require construction of extensive retaining walls for the necessary access road and sub-drainage systems. Further, this site would require the underground extension of a looped transmission line from the existing transmission corridor requiring the trenching of Lusk Boulevard. Such underground construction would result in additional temporary construction impacts including air quality, noise and traffic congestion, as compared to the Proposed Project site. For these reasons, the site is not considered environmentally superior to the Project site. In addition, this alternative

would fail to meet basic project objectives, including the utilization of previously acquired by SDG&E and identified by community stakeholders as appropriate for construction of a substation.

5.2.7 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 the Sorrento Valley area. The No Project Alternative, Transmission System Load Management Alternative, and Energy Conservation 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 transmission 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 Project schedule or for a nominal amount close to the no cost of the use of existing SDG&E-owned property. Many of the sites would also have environmental and land use conflicts that exceed that of the Proposed Project. Each of the alternatives failed to meet basic project objectives. Thus, the Project Site was selected as the preferred substation site. Through this evaluation process, the Proposed Project Site was identified as the most feasible alternative that: (a) best meets all of the Proposed Project objectives, (b) is consistent with engineering design requirements, and (c) minimizes environmental impacts.

Construction of the proposed substation at the intersection of Mira Sorrento Place and Vista Sorrento Parkway best meets project needs and produces the least amount of impact to the environment and the public. Furthermore, since the Project site is immediately adjacent to the existing transmission corridor, minimal extension of transmission lines through area streets is required. The substation screen walls and proposed landscaping would substantially minimize the visual impact of the substation site by blending the facility with the existing development in the area. Finally, the Project site has support from the Mira Mesa Community Planning Group and San Diego Economic Development Corporation. The Proposed Project will not result in any significant environmental impacts and none of the alternative sites would substantially lessen the environmental impacts associated with the proposed project. After analysis of the resources that would be impacted by the various alternatives, the Proposed Project, was selected as the environmentally preferred alternative. All potential impacts have been avoided or minimized using existing standards, programs and permits for the Proposed Project.

5.3 Growth-Inducing Impacts

5.3.1 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) considers 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.

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 Sorrento Valley, Mira Mesa, Carmel Valley, 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 would 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 would not stimulate population growth or result in a new concentration of residents, businesses, or industries.

5.3.2 Growth Caused by Direct and Indirect Employment

The construction and operation of the Proposed Project itself would not affect employment patterns in the area. SDG&E would employ approximately 15 to 35 workers during the different phases of construction throughout the 24-month-long construction period. The majority of construction workers is anticipated to come from San Diego County and would not require lodging. Contractors from outside of San Diego County may be mobilized to the job site for all or part of the construction phase of the Proposed Project and may stay at existing local hotels. An abundance of hotels and other lodging facilities are within close proximity to the Proposed Project area and can be utilized by the out-of-town personnel.

Operation and maintenance of the Proposed Project would be performed by current SDG&E employees and would, therefore, not create new jobs. Because the Proposed Project would not result in an increase in employment during the operation and maintenance phase, the Proposed Project would not increase the demand for new housing.

5.3.3 Growth Related to the Provision of Additional Electric Power

5.3.3.1 Regional Background

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. The SANDAG serves as the forum for regional decision-making. The 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 the SANDAG as the regional planning board, pursuant to a voter-approved proposition. The cities and county provide the SANDAG with information about their general plans, local growth patterns, and land use regulations. In return, the SANDAG generates regional management plans and population forecasts. As members of the SANDAG, the cities and county review and approve all plans and forecasts prepared by the SANDAG. The cities and county use the 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.

The SANDAG Regional Comprehensive Plan (RCP), last approved in 2004, was prepared to provide policy guidance on accommodating the growth projected by the 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 the 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 customers 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. The 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 local land use jurisdictions plus updated information for all model inputs. Like the 2030 RGF, the 2050 RGF predicts that local population will grow at a steady rate to

over 4 million residents per year between 2010 and 2050. In addition, San Diego County employment and income will grow steadily throughout the next 40 years and beyond.

The 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 the 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.

5.3.3.2 Proposed Project and Growth

The objectives of the Proposed Project are to:

- meet the area electric capacity needs;
- provide improved substation and circuit reliability with added tie capacity; and,
- reduce area substation loading to optimum operating conditions.

The Proposed Project would help to serve the load in the Sorrento Valley area and would increase flexibility and reliability to the distribution system by constructing the Mira Sorrento Substation. Furthermore, the Proposed Project would not create a new service or electrical supply that would indirectly allow for an increase in population or housing as a result, as it would not extend infrastructure into previously un-served areas.

The Proposed Project would accommodate existing and planned power demands in SDG&E's service territory, as well as those based on state-adopted 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 would not induce population growth in the area.

5.4 References

Bing Maps, Internet Mapping Program, used August 2010

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http://www.fws.gov/wetlands/Data/Mapper.html. used August 2010.

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Not to Scale
Source: Google Earth 2010

SD Mac: 25103691EIRLetterPortrait.indd

Mira Sorrento Substation
Proponent's Environmental Assessment

ALTERNATIVE SUBSTATION SITES

Figure 5-1

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CHAPTER 6: OTHER PROCESS-RELATED DATA NEEDS

In accordance with the requirements of CPUC General Order 131-D, a list that includes all parcels within 300 feet of any Project component of the Mira Sorrento Substation Project (including associated transmission facilities) was prepared and is provided under separate cover. The list includes the Assessor's Parcel Number, owner mailing address, and the physical address of each property within the 300-foot radius. The list is intended to allow for future public noticing of all those identified with regard to the proposed Mira Sorrento Substation Project.

No other process-related data needs were identified for this PEA. All information contained within the previous chapters of this document is considered adequate in determining the potential environmental effects of the Proposed Project and identifying the means by which to properly reduce any such potential effects to a level that is less than significant through implementation of SDG&E APMs and Relevant Environmental Standards. No significant and non-mitigable impacts would result with Project implementation, and all potential impacts identified for the Proposed Project would be reduced to less than significant.

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