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July 27, 2012

A.12-05-020/SOCRE

**SENT VIA SEMPRA FTP**

Mr. Andrew Barnsdale  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Dear Mr. Barnsdale:

San Diego Gas & Electric Company (SDG&E) has worked diligently to respond to each of the questions you posed in your June 15 2012 Completeness Review letter. The original text for each item of the completeness review is included in bold, followed by SDG&E's response in plain text.

**Please note that attachment 3 (i.e. SDG&E Standard Fire Plan) of this data response contain information considered confidential pursuant to PUC Section 583 and General Order 66-C.** These pages were appropriately marked confidential and should be treated as such.

**Question #1: Distribution Lines**

*Section 3.4.4, Distribution Lines, of the PEA discusses alterations to distribution lines and substation equipment that would be components of the proposed project, but also indicates that, because the CPUC “does not regulate distribution infrastructure,” the potential impacts of these project components are not analyzed within the PEA document. A fuller description of these components, and an analysis of their impacts, is required to be included as part of the PEA.*

*Per the CEQA Guidelines, the preparation of an EIR is required when substantial evidence supports a fair argument that the overall project, not individual project elements, may have a significant effect (CEQA Guidelines Section 15064(f)).<sup>1</sup>*

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<sup>1</sup> Arviv Enterprises, Inc. V. South Valley Area Planning Commission (2<sup>nd</sup> Dist. 2002) 101 Cal. App. 4<sup>th</sup> 1333,1346,1347 [125 Cal. Rptr. 2d 140]

*A too-narrow definition and analysis of project components can result in piecemealing, or the “fallacy of division,” in which case the details of the project and the total impact of the project are not disclosed accurately.<sup>2</sup> Although the individual parts of a project may themselves have a minor or minimal impact on the environment, such impacts taken as a whole could result in a significant impact.<sup>3</sup> For these reasons, the current PEA is deficient, and a supplement that includes a complete analysis of the impacts of the distribution and substation components that are acknowledged to be part of the proposed project is required.*

**SDG&E Response:**

SDG&E hereby withdraws the erroneous statement on page 3-79 of the PEA that “The CPUC does not regulate distribution infrastructure”. Below is a description of the required distribution work component of the South Orange County Reliability Enhancement Project (Proposed Project). Additional information, including an analysis of potential impacts relating to the required distribution line work, will be provided in a subsequent submittal.

**DISTRIBUTION LINE PROJECT DESCRIPTION**

Certain existing distribution facilities will be displaced by the San Juan Capistrano Substation rebuild and/or construction of new 230 kilovolt (kV) transmission lines. A discussion of the preliminary preferred distribution line routes follows. The ultimate proposed distribution route is depicted graphically on the Proposed Distribution Map (Attachment 1, Sheets 1 – 5). The proposed distribution route is based on preliminary engineering and information available to date. The ultimate distribution route may deviate and will be based on completed engineering. Until engineering is completed, it cannot be known whether this route is entirely feasible or not.

**Distribution Getaways (San Juan Capistrano Substation)**

All seven distribution (12kV) circuits will leave the proposed San Juan Capistrano Substation from the 12kV switchgear in an underground position west into Camino Capistrano. Two circuits will travel north, two circuits will travel west (adjacent to proposed 138kV transmission lines) and the final three circuits will exit and travel south, and then east.

**Distribution Facilities at the San Juan Capistrano Substation**

Seven distribution circuits (195, 196, 197, 313, 314, 315, and 799) currently connecting to the existing Capistrano Substation will be relocated to the new proposed 12kV facility, located on the lower (or western) portion of the substation property (refer to South Orange County Reliability Enhancement Project [Proposed Project] Proponent’s Environmental Assessment [PEA] Figure 3-4, Existing Capistrano Substation Overview and Figure 3-6, Ultimate San Juan Capistrano Substation Layout). The existing AT&T telecommunication line will be re-routed with the distribution circuits as required. The substation will be designed for an ultimate 120 megavolt amperes (MVA), consisting of four transformer banks and ultimately 16 distribution

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<sup>2</sup> Burbank-Glendale-Pasadena Airport Authority v. Hensler (1991) 233 Cal. App. 3d 77, 592 [284 Cal. Rptr. 498]

<sup>3</sup> Bozung v. Local Agency Formation Commission (1975) 13 Cal. App. 3d 263,283-284 [118 Cal Rptr. 249,529 P.2d 1017]. Per this decision, “environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences.”

circuits. Initially, three transformer banks will be installed. Grading and site preparation are required for new 12kV substation facilities construction as described in PEA Section 3.5.3, Substation Site Development. A few temporary poles and underground duct may be installed in the existing substation property and along Calle Bonita to allow for temporary re-routing of two 12kV circuits (314 and 799) during grading and construction of the lower yard.

**Distribution Facilities from the San Juan Capistrano Substation to Rancho San Juan**

Circuits 196, 197, and 315 will be relocated outside the San Juan Capistrano Substation to accommodate the new 230kV line connection (refer to Proposed Distribution Map, Sheet 1). The existing distribution getaway from the substation to Junipero Serra Park, east across Calle Santa Rosalia, has Circuits 196 and 197 attached to an existing overhead distribution-only pole line on the south side of Junipero Serra Park. Circuit 315 from the substation east is under-built on existing 138kV transmission poles in Junipero Serra Park and crosses the Interstate 5 (I-5) freeway. A section of Circuit 315 will be removed to accommodate the new 230kV transmission lines.

Following construction of the Proposed Project, three circuits (196, 197, and 315) would leave the western side of the proposed San Juan Capistrano Substation in an underground position for approximately 1,000 feet, traveling from Camino Capistrano south to Calle Bonita, and then traveling east to Calle Santa Rosalia at Junipero Serra Park. The three distribution lines would then travel north within Calle Santa Rosalia for approximately 400 feet, and then east through the northern edge of Junipero Serra Park for approximately 600 feet. New 1000 circular mills (kcmil) underground cable would be installed for all of the new underground distribution lines including a conduit in the trench package for AT&T telecommunications. Two new approximately 80-foot tall steel cable poles would be installed at the northeast corner of Junipero Serra Park to carry the three circuits across I-5 (refer to Proposed Distribution Map, Sheet 1).

On the east side of I-5, two new approximately 80-foot steel cable poles would be required to replace an existing cable pole for Circuits 196 and 197 along Rancho Viejo Road, to support the three circuits. Approximately 250 feet of new trench and conduit between the new cable poles and existing underground infrastructure would be required. Circuits 196 and 197 would connect to existing underground conductor near the new cable pole locations. Circuit 315 would then be installed (new cable) underground in an existing conduit within Rancho Viejo Road and would connect with an existing four-way switch at the intersection of Rancho Viejo Road and State Route (SR) 74 (also referred to as Ortega Highway) approximately 3,500 feet southeast. This will require no trenching and road disturbance will be limited to the vault locations (connection points).

Circuit 315 will then utilize existing cable located within an existing conduit package located within SR 74, between the intersection with Rancho Viejo Road east to the intersection of SR 74 and La Pata Avenue, and then south within La Pata Avenue for a total of approximately 2.3 miles or 12,150 feet.

Approximately 300 feet of new cable would then be installed in an existing conduit located within La Pata Avenue. Two new approximately 60-foot steel cable poles will replace an

existing approximately 50 foot cable pole that currently supports distribution Circuit 1242<sup>4</sup>. The new cable poles will support both Circuits 315 and 1242. Following the installation of the new cable poles, approximately 20 existing single circuit wood distribution structures (approximately 50 feet tall) will be replaced (one for one) with new weathering steel double circuit distribution poles. The new steel poles will support both Circuit 315 and 1242 in an overhead position for approximately 1.15 miles or 6,000 feet. The new distribution poles will be approximately 55 feet in height and will be located in the immediate vicinity of the existing wood poles (refer to Proposed Distribution Map, Sheets 2-3). Approximately 1,000 feet north of the intersection of La Pata Avenue and Vista Montana, Circuits 315 and 1242 will transition back to an underground position via two new 60-foot steel cable poles that will replace an existing approximately 50-foot cable pole that currently supports Circuit 1242. Between the new cable pole and the existing distribution terminus at the San Juan Hills High School (Vista Montana), new cable will be installed underground within existing conduit (refer to Proposed Distribution Map, Sheets 3 and 4).

### **Distribution Facilities from Rancho San Juan to Talega Substation**

#### Rancho San Juan to the Prima Deshecha Landfill

South of the intersection of La Pata Road and Vista Montana, the existing Circuit 315 will be removed (approximately 3 wood poles). The existing Circuit 1242 line (located immediately adjacent to La Pata Avenue) would be replaced (using 636 aluminum conductor, steel reinforced [ACSR] overhead wire and installation of new weathered steel poles) and will become Circuit 315. The replacement of existing Circuit 1242 with the new Circuit 315 will begin with the replacement of an existing approximately 45-foot cable pole with a new approximately 60-foot steel cable pole (refer to Proposed Distribution Map, Sheet 4). Moving south along the existing Circuit 1242 route, approximately seven existing wood distribution structures (approximately 45 feet tall) will be replaced with seven new steel distribution poles over an approximately 1,400 foot span. The new poles will be located in the immediate vicinity of the existing poles.

#### Talega Hub to the Talega Substation

Circuit 204 is currently underbuilt on TL695 transmission structures. Circuit 204 will be re-located along with TL695 between transmission Pole Nos. 1b through 7b (refer to PEA Figure 3-7, Proposed Transmission Line Route). At Pole No. 7b, Circuit 204 will transition to an underground position and connect to existing conduit approximately 250 feet to the north. This section of new underground distribution line will require new trenching and conduit to be installed (refer to Proposed Distribution Map, Sheet 5). Next, new cable will be installed within an approximately 250-foot stretch of existing conduit located within the paved access road to the Talega Substation. Following the existing conduit, new trenching and conduit will be installed north for approximately 200 feet until reaching existing 69kV structure Z223778 (TL695). This structure will be replaced with a new steel pole (69kV steel pole with distribution cable-riser attachment). The new underground distribution line between Pole No. 7b and existing Pole Z223778 will require approximately 450 feet of new trench and conduit, and approximately 700 feet of new conductor cable.

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<sup>4</sup> Circuit 1242 resides in a north-south alignment along La Pata Avenue and terminates on the southern end at the prima Deshecha Landfill, adjacent to the southern terminus of Circuit 315.

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**Question #2: Telecommunications Components**

*Throughout Section 3.0 of the PEA, several references are made regarding the installation of telecommunications (fiber optic) cable, but a full discussion of the existing telecommunications system along the project route, or whether additional fiber optic routes would be required by the project, is not included. In order to accurately assess the full project footprint, this information, including a description of any additional telecommunications route components that would be required for the project, is required in order to complete the applicant's PEA.*

**SDG&E Response:**

As mentioned in the PEA (page 3-20), the existing SDG&E and ATT telecommunication lines will be relocated and installed in the rebuilt San Juan Capistrano Substation 138/12kV yard and the new San Juan Capistrano Substation 230kV yard.

At Capistrano Substation, the two existing SDG&E communication fiber lines are currently attached to the adjacent transmission structures that contain Tie Line 13834 from SDG&E's existing Trabuco to Capistrano substations and on TL13835 which currently bypasses Capistrano Substation. These existing communication fiber lines will remain and will be moved to the new underground 138kV duct package being installed for TL13834 and TL13835 to exit the new 138kV San Juan Capistrano substation facility. They will transition from underground to overhead on the same cable poles that TL13834 and TL13835 make this transition. This construction is described on pages 3-74 and 3-86.

At Talega substation, the existing SDG&E communication fibers are attached to TL695 and TL13835 overhead structures from Talega Substation to a two pole wood structure (location 38) south of SDG&E's Pico Substation. At location 38, the communication cables transition to an underground position and terminate in Pico Substation. These existing fiber lines will be replaced by new fiber installed on the new 230kV TL structures (from Talega to Capistrano substation) via a single optical ground wire (OPGW) and via underground fiber cables. This construction is described on pages 3-74, 3-75, and 3-86.

The existing AT&T communication cable is currently located underground into the Capistrano substation. This communication cable will be re-routed as required with the new distribution duct packages being installed along Camino Capistrano and Calle Bonita as described on page 3-80.

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### **Question # 3: Helicopter Use**

*The PEA includes conflicting and incomplete information regarding the use of helicopters during the construction of the proposed project. On page 4.14-28. The PEA indicates that “helicopters may be used as a construction tool during the stringing of overhead conductor cable and other transmission line construction activities associated with the Proposed Project for proposed Pole Nos. 11 through 14.” On page 3-83, the PEA indicates that “helicopters may be used during the erection of Poles Nos. 10-14.” In addition, page 3-84 of the PEA indicates that “Helicopter activities will be staged out of existing airports where possible,” but does not indicate which existing airports would be used for helicopter staging.*

*Further information regarding helicopter operations is necessary to complete the applicant’s PEA, and the following supplemental information is required:*

- 1. Confirmation of which poles (poles 10-14 or 11-14) would be installed as part of the project;*
- 2. Which of the existing poles would be removed using helicopters;*
- 3. If different types of helicopters are to be used, describe each type (e.g., light, heavy, or sky crane) and what activities they will be used for ; and*
- 4. Which existing airports would be used for staging of helicopters used during project construction.*

### **SDG&E Response:**

1. Helicopters may be used during the erection of poles 11-14, not 10-14 as indicated in section 3-83
2. Helicopters may be used to remove existing poles in proximity to the new pole locations of 7, 11 - 15, 20 – 42, 1b, 6a, 14a, and 20a.
3. The following types of helicopters could be used during construction of the Proposed Project:
  - Type 1- Used for heavy lift operations (tower structures, monopoles, construction equipment, wire spools), weights in excess of 11,000 lbs. Erickson Aircrane, Boeing CH-47.
  - Type 2- Used for medium lift operations (drilling equipment, water buffalos, fire buckets, wire stringing equipment), weights in the range of 6,000 – 11,000 lbs. Sikorsky S-61, Bell 205/212.
  - Type 3- Used for light lifts (work baskets, drilling equipment, water buffalos, wire stringing equipment, fire buckets), wire stringing and personnel transport. AS350, MD500, KMAX

4. Potential airports used for staging of the helicopter as well as landing zones for material pickup during the project may include:

Airports

- Oceanside Airport – approx. 26 miles
- Palomar Airport – approx. 32 miles
- Gillespie Field – approx. 55 miles

Landing Zones

- Prima Desecha landfill area (see figure 3-7, sheet 6 in section 3.4.3)
- South of Margarita Substation (see attachment)
- West of Rancho Mission Viejo Substation
- North of Talega Substation at end of Pico Rd and Cristianitos Rd

Since SDG&E filed the PEA, additional potential landing zones have been identified as potential landing zones for material pick up. Final locations will be determined once construction begins and the helicopter pilot identifies the safest location for construction purposes.

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**Question # 4: Access Roads**

*In order to accurately describe and assess the entire proposed project footprint and area of disturbance, a description of the access roads that would be modified or constructed is required to complete the applicant’s PEA. The PEA includes general discussion indicating that access roads would be used, modified, and created during construction to the proposed project, and Figure 3-7 shows existing access roads in the project area, but the PEA does not clearly identify areas where existing roads would be improved or where new access roads would be required. In order to correct this deficiency, supplemental information identifying the location of any road widening and other improvements, as well as new access/spur roads that would be required for the project, is required. This information should be submitted either as an addition to Figure 3-7 (additional map layer), or as a new PEA figure, as well as in the form of GIS data. A textual description of these components is also required.*

**SDG&E Response:**

The existing access road network will be utilized to construct and maintain the Proposed Project, as stated in the PEA (Section 3.5.1.1). Because the Proposed Project has been located within an existing SDG&E transmission corridor, an extensive network of access roads already exists and in most cases existing access and spur roads can provide adequate access to new pole sites. A limited number of short new spur roads will be required. Some temporary and permanent improvement of existing access roads would be required at approximately 15 locations (i.e. road widening) in order to accommodate equipment delivery and construction vehicles. Table 1, Summary of Required Access and Spur Road Work, outlines all of the required road work for the Proposed Project along with references to Attachment 2, Revised Figure 3-7, which adds callouts for areas requiring access road or spur road work to Figure 3-7 from the PEA.

**Table 1: Summary of Required Access and Spur Road Work**

Work Required to Access and Spur Roads and Purpose	Location Relative to the Proposed Project	Location on Figure 3-7
<b>IMPROVEMENTS TO EXISTING ROADS</b>		
Temporary and permanent road improve/widening. Widen road up to approximately 4 feet during construction. Improvements required to allow for vehicle access.	Access to Pole No. 4	Sheet 1
Improve existing access to pole site as part of construction of new pole and construction/maintenance pads.	Access to Pole No. 5	Sheet 1

Work Required to Access and Spur Roads and Purpose	Location Relative to the Proposed Project	Location on Figure 3-7
Temporarily widen corner of existing access road to allow for construction vehicle access. Improve (re-grade, widen approximately 1-2 feet) existing access road to provide access for construction equipment.	Access to Pole No. 7	Sheet 2
Widen existing access road (approximately 1-5 feet) adjacent to pole site as part of construction of new pole and construction/maintenance pads.	Access to Pole No. 13	Sheet 4
Temporarily widen turn in existing access road to allow for construction equipment access to the pole site.	Access to Pole No. 21	Sheet 6
Temporary road widening (approximately 5-10 feet) for construction equipment access.	Access to Pole No. 33	Sheet 14
Temporary road widening (approximately 5 feet increased width) for potential stringing site.	South of Pole No. 34	Sheet 15
Temporary road widening (approximately 5 feet increased width) for potential stringing site.	Northwest of Pole No. 35	Sheet 15
Temporary road widening/ improvement for potential stringing site (area where 3 existing roads converge would temporary be cleared for positioning of stringing equipment).	Southeast of Pole No. 36	Sheet 16
Road improvement/widening (approximately 5-10 feet) for access to pole site (construction/maintenance pad).	Access to Pole No. 38	Sheet 16
Temporary road widening (approximately 5 feet increased width) for potential stringing site.	West of Pole No. 40	Sheet 17
Temporary road widening (approximately 5 feet increased width) for potential stringing site.	East of Pole No. 40	Sheet 17
Road improvement/widening (approximately 5 feet) for access to pole site.	Access to Pole No. 4b	Sheet 17
Temporarily widen road (approximately 25 feet increased width) for installation of new underground conduit.	Access road between Pole Nos. 9a and 11a	Sheet 17

Work Required to Access and Spur Roads and Purpose	Location Relative to the Proposed Project	Location on Figure 3-7
Road widening/improvement (approximately 5 feet) for access to pole sites.	Access to Pole Nos. 9b and 47	Sheet 18
<b>NEW SPUR<sup>1</sup> AND ACCESS ROADS</b>		
New approximately 450-foot long, 14-foot wide temporary access road to potential stringing site.	North of Pole Nos. 18 and 19	Sheet 5
New/improved approximately 250-foot long spur road to pole site. This new spur road would encompass an approximately 100-foot portion of existing road infrastructure.	Access to Pole No. 20	Sheet 5
New approximately 75-foot spur road to pole site.	Access to Pole No. 25	Sheet 8
New approximately 75-foot spur road to pole site.	Access to Pole No. 27	Sheet 10
New spur road and improvements (approximately 300 feet long) to existing access road. This new spur road would encompass portions of existing road infrastructure.	Access to Pole No. 28	Sheet 11
New spur road pad (approximately 75 feet long) to pole site.	Access to Pole No. 29	Sheet 11
New spur road/maintenance pad (approximately 75 feet long) to pole site.	Access to Pole No. 30	Sheet 12
New spur road/maintenance pad (approximately 75 feet long) to pole site.	Access to Pole No. 43	Sheet 17
New approximately 50-foot spur road to pole site.	Access to Pole No. 45	Sheet 18
New spur road/maintenance pads (approximately 75 feet long) to pole sites.	Access to Pole Nos. 14a and 20a	Sheet 18
New approximately 75-foot spur road to pole site.	Access to Pole No. 47	Sheet 18
<sup>1</sup> As stated in PEA Section 3.5.1.1, access and spur roads are approximately 14 feet wide, and can be up to approximately 20 feet wide around sharp turns.		

**Question # 5: Summary of Proposed Project Disturbance Areas**

*Table 3-12 in Section 3 quantifies and summarizes the temporary and permanent disturbance represented by the project; however, the information in this table is incomplete, and may conflict with other information presented in the PEA. The table indicates that the total area of temporary construction disturbance for the transmission lines project component would be 9.66 acres. However, the PEA indicates on page 3-100, in Section 3.5.4.3, Pole Sites, that the installation of the new 230-kV steel poles would require a disturbance area of approximately 150 feet by 150 feet (or 22,500 square feet) for each pole site. The PEA indicates that 25 new 230-kV poles would be required as part of the project. Using the estimate of approximately 22,500 square feet of disturbance that would be required for the installation of each of these poles, the approximate total disturbance represented just by these 25 poles would be approximately 12.9 acres, an area greater than the 9.66 acres shown in the table for the disturbance related to installation of all of the project poles. This indicates that either the estimates of project disturbance shown in Table 3-12 are inaccurate and/or other errors exist in the PEA regarding the estimates of disturbed area that would result from the project. Accurate information regarding the total area of project disturbance as well as the disturbance represented by each project component is required for an accurate analysis of the impacts to the proposed project to biological and other resources.*

*The following supplemental information is required to complete the applicant's PEA:*

- 1. Review and correction, as necessary, of the estimates of project disturbance shown in Table 3-12;*
- 2. Include an estimate/breakdown of disturbance related to trenching and other disturbance (as opposed to construction staging or other activities that would not require excavation);*
- 3. Include an estimate/breakdown of disturbance related to installation of poles, and pole removal, as two distinct categories; and*
- 4. Included an estimate/breakdown of temporary and permanent disturbance that would be associated with new access/spur roads that would be required for the project.*

**SDG&E Response:**

To clarify, the PEA on page 3-100 indicates the following:

Installation of the new 230kV steel poles throughout the Proposed Project as described in Section 3.4.3 above will require approximately 150 foot by 150 foot areas of disturbance (this area may be smaller or larger at various locations). All new 138kV and 69kV steel poles typically require an approximately 150 foot diameter work space (75 feet from the pole in each direction). However, because most of the new poles will be located in the immediate vicinity of existing poles, the existing work areas will be utilized (and in some

cases expanded) for the construction and maintenance of the new poles. Figure 3-7 depicts the anticipated work areas for transmission line construction.

Figure 3-7 depicts project work areas based on preliminary design and is a more specific depiction of the general description of 150 feet by 150 feet. Therefore, the approximately 9.66 acres identified in the PEA is an accurate estimate of work area based on design concepts completed for the PEA. Work areas are also further defined per the previous response and the updated Figure 3-7, Attachment 2.

**Question # 6: Volumes of Excavation and Fill**

*The PEA includes discussions of exaction and fill activities that would take place during project construction, but does not include estimates of the total volume (cubic yards) of excavation and fill that would be associated with each project component. In order to fully assess the impacts of the project on biological and other resources, this information is required to complete the applicant's PEA.*

**SDG&E Response:**

Excavation and fill estimates for the San Juan Capistrano Substation are provided in PEA Section 3.5.3.1. Very preliminary excavation and fill information is available for the transmission line construction and that information was included in the PEA. Appendix 3-D, Detailed Construction Schedule and Vehicle Use Tables were utilized in the Air Quality and Traffic analysis to estimate truck trips relating to import/export of fill and construction debris.

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**Question # 7: Applicant Proposed Measures**

*Table 3-18 lists the Applicant Proposed Measures that would be implemented for the project. Some of the APMs are not specific enough to draw conclusions about their ability to provide adequate mitigation for potential impacts. Phrases used such as “make an effort,” “to the extent feasible,” and “will be returned to an approximate pre-construction state” leave in question what is being proposed, and how to measure the effectiveness of the action. These statements are required to be clarified or corrected in order to complete the applicant’s PEA. Some examples are the following:*

**APM AES-1:** Clean Construction Work Areas. SDG&E will make an effort to keep construction activities as clean and inconspicuous as practical.

**APM NOISE-1:** Any endeavors during the construction phase wherein nighttime and weekend activities are necessary (such as due to Caltrans transportation constraints for oversized/overweight loads), will be limited to the extent feasible so that noise will not exceed the pertinent maximum noise level limits or the hourly L50 limits when measured at the nearest residential property. For example, to minimize potential noise disturbances during nighttime deliveries of transformers, the Applicant will make every reasonable effort to minimize the duration of trucking activities at the project site. This will entail pulling the delivery vehicle onto the project site, parking it overnight, and unloading the item(s) during normal, daytime construction hours. If nighttime or weekend activities cannot be conducted to meet the city’s noise standards, SDG&E will communicate the exception to the City of San Juan Capistrano in advance of conducting the work that may exceed the threshold(s). This APM is consistent with the conditions deemed acceptable by the CPUC for the similar situation at the Silvergate Transmission Substation Project.

**APM PS-2:** All recreational facilities that are physically impacted during construction activities will be returned to an approximate pre-construction state, allowing for SDG&E operation and maintenance activities, following the completion of the Proposed Project. SDG&E will make replacements of any public damaged or removed equipment, facilities, and infrastructures, in a timely manner.

**SDG&E Response:**

SDG&E has reviewed the APMs included within the PEA and proposes the following modifications:

**AES-1** SDG&E will keep construction activities as clean and inconspicuous as practical.

**PS-2** All recreational facilities that are physically impacted during construction activities will be returned to an approximate pre-construction state, allowing for SDG&E operation and maintenance activities, following the completion of the Proposed Project. An approximate pre-construction state would allow for the replacement of like facilities (i.e. replacement of recreational facilities with recreational facilities) but would not necessarily require the exact one-for-one

replacement of existing facilities. For example, replacement vegetation could be different from existing vegetation where existing vegetation (i.e. tall growing trees) is not the most compatible with the Proposed Project facilities (shorter growing trees would require less maintenance to achieve required clearances and maintenance access). SDG&E will make repairs or replacements of any public damaged or removed equipment (if there is an appropriate and available long-term location), facilities, and infrastructure, in a timely manner.

SDG&E has found that the phrase “to the extent feasible” and other similar phrases are utilized within PEA documents and CPUC-prepared CEQA documents. For example, similar phrases such as “where practicable”, “where feasible”, “when feasible”, and “wherever possible” were noted. The recent Mira Sorrento Draft MND (June 2012) used the phrase “to the extent feasible” in one of the mitigation measures and the East County Substation Final EIR/EIS also used similar language such as “when feasible” and “where practical” within mitigation measures. Therefore, SDG&E does not believe this type of qualifying text is required to be replaced within the APMs submitted with the PEA.

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**Question # 8: Fire Plan**

*In the discussion under Section 4.7.4.9 (Question 7.h), the PEA states the a, “As part of the proposed project and consistent with ESP 113.1, SDG&E would implement a project-specific fire plan to assist in safe practices to prevent fires [in] the Prosed Project area.” The PEA further indicates that the project-specific fire plan is incorporated into the proposed project. The fire plan, or complete details of the contents of the fire plan, are required to be included in the PEA in order to accurately assess the applicant’s proposal to address fire risks and hazards in the project area, and the complete the applicant’s PEA.*

**SDG&E Response:**

The SDG&E Fire Plan Standard is provided as Attachment 3 and is considered as incorporated into the project. Any additional specific requirements will be added once a more detailed construction schedule is available.

**Question # 9: Additional Item - San Juan Capistrano Substation Wall Design Charrette**  
*Page 1-11 of the PEA refers to a design Charrette held April 18, 2012 to identify an architectural design theme for the San Juan Capistrano Substation wall. Per the PEA, “Input received during the design Charrette is being incorporated into the architectural style for the substation wall.” Please submit any designs, plans, elevations, and/or simulated views of the San Juan Capistrano Substation wall that were revised as a result of this Charrette, as well as any textual materials from the Charrette indicating community values and goals related to the appearance of the San Juan Capistrano Substation wall.*

**SDG&E Response:**

The San Juan Capistrano Substation Wall Design Charrette was held on April 18, 2012. Five design simulations (from three design concepts) were viewed and discussed by those in attendance. General consensus favored a ‘mission’ or ‘Spanish’ style design. The favored concepts will be used when SDG&E participates with the City of San Juan Capistrano’s ad hoc committee to further refine the design. Materials used for the charrette are provided in Attachment 4.

Distribution impact analysis will require additional time to complete. SDG&E will provide this information to you in the next few weeks.

We appreciate the CPUC's efforts to review SDG&E's PEA and ensure its completeness. Should you have any questions, please do not hesitate to contact me at (858) 654-1749 or Chris Terzich at (858) 637-3713.

Sincerely,

Mary Turley  
Project Manager

Cc: Allen Trial – SDG&E  
Rebecca Giles – SDG&E  
Central Files – SDG&E  
Christy Herron – ED Consultant  
Ke Hao Ouyang - DRA

**ATTACHMENT 1  
PROPOSED DISTRIBUTION MAP  
SHEETS 1 THROUGH 5**



Path: \\NTAP\B\ENV\Environmental\Cultural\Natural Resources\GIS\SDG&E\SDG&E\Project Description\2012\Distribution\Mapbook\06192012.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

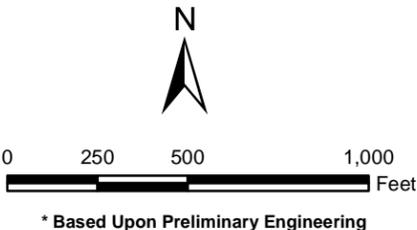


- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed

**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
 Rev. 1

Sheet 1 of 5





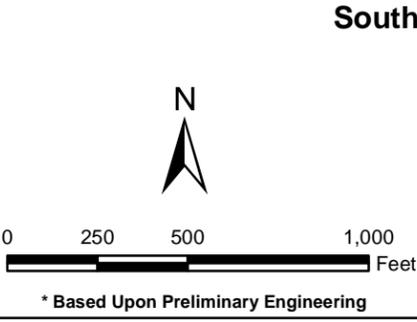
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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed

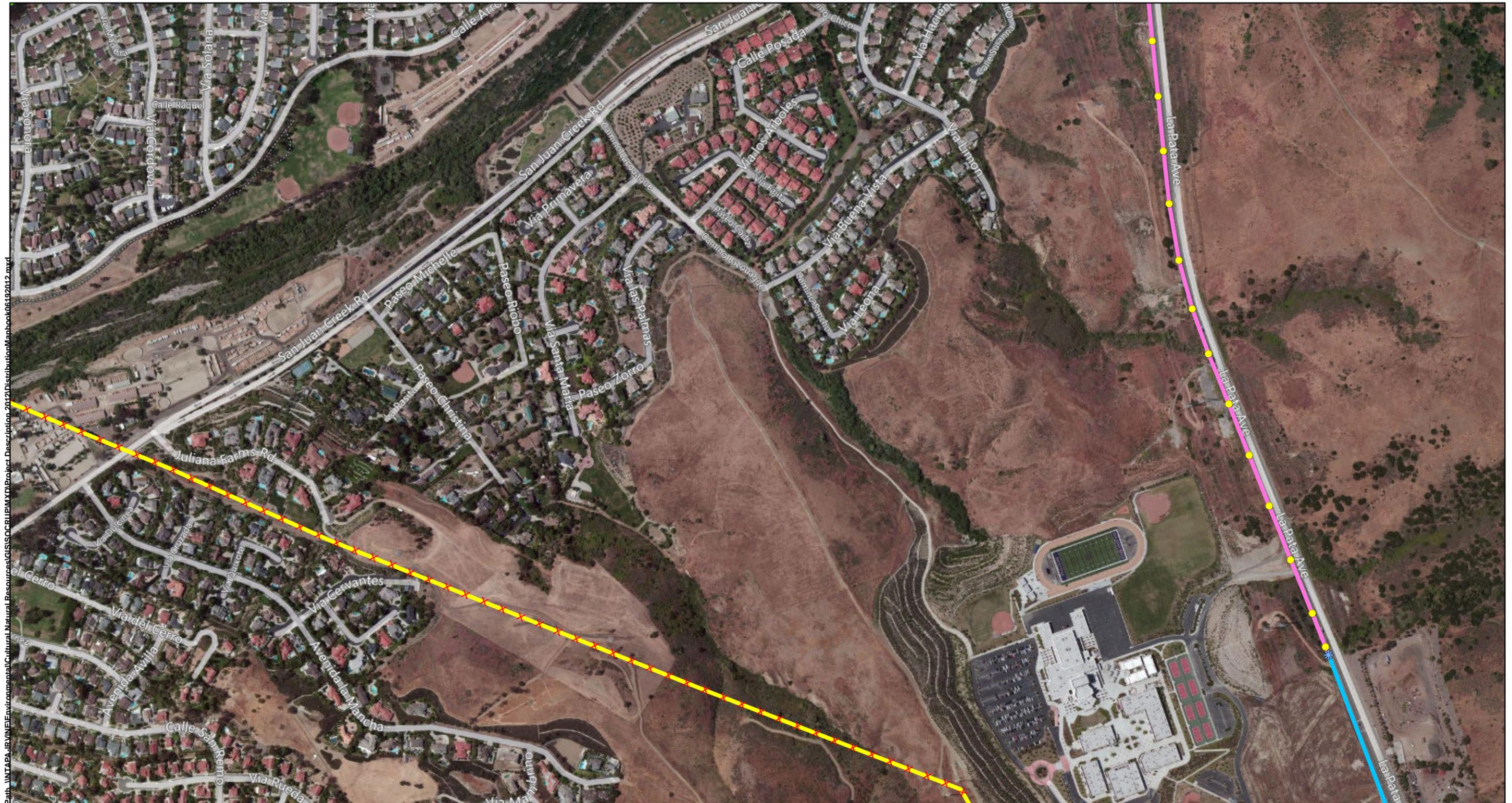


**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
 Rev. 1

Sheet 2 of 5





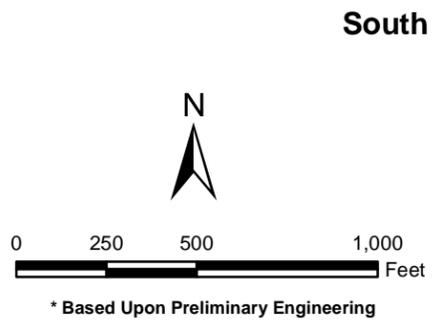
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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
 Rev. 1

Sheet 3 of 5

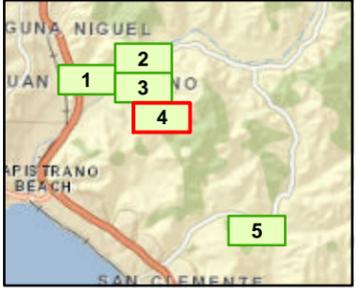




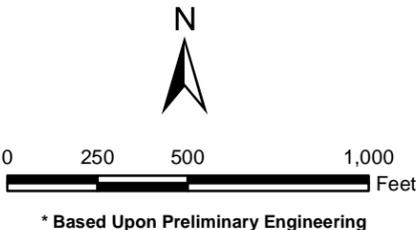
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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

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- Legend**
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  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
 Rev. 1

Sheet 4 of 5





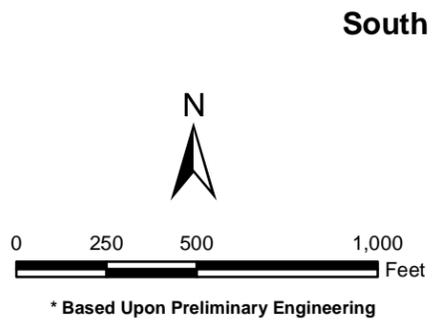
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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

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- Legend**
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  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
 Rev. 1



Sheet 5 of 5



**ATTACHMENT 2  
REVISED FIGURE 3-7**



Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\SOCRUP\MXD\Project Description 2012\Fig 3-7 AccessRoadRevision06222012.mxd

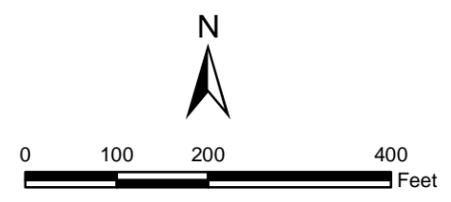
Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Project Segment Boundary
  - Proposed Transmission Lines**
  - 230kV Transmission Line - Overhead
  - 138kV Transmission Line - Overhead
  - 69kV Transmission Line - Overhead
  - 230kV Transmission Line - Underground
  - 138kV Transmission Line - Underground
  - 69kV Transmsion Line - Underground
  - New Poles**
  - 230kV Standard Pole
  - ✱ 230kV Cable Pole
  - 138kV Standard Pole
  - ✱ 138kV Cable Pole
  - 69kV Standard Pole
  - ✱ 69kV Cable Pole
  - Temporary Impact Area
  - Permanent Impact Area
  - ▨ Stringing Sites
  - ▨ Lay Down Areas
  - ▨ Existing Access Road
  - Existing 138kV Transmission Line
  - Existing 230kV Transmission Line
  - Existing 69kV Transmission Line

Text Location and Description of Access Road Work

**Legend**



**South Orange County Reliability Enhancement Project**  
**Proposed Transmission Line Route**

**Figure 3-7**  
 Sheet 1 of 20  
 Updated: 7/6/2012



Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\SOCRUP\MXD\Project\_Description\_2012\Fig\_3-7\_AccessRoadRevision06222012.mxd



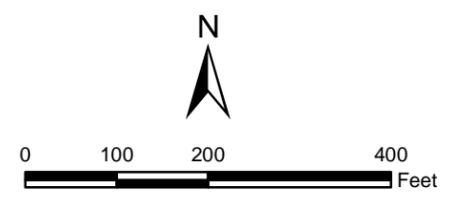
Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Project Segment Boundary
  - Proposed Transmission Lines**
    - 230kV Transmission Line - Overhead
    - 138kV Transmission Line - Overhead
    - 69kV Transmission Line - Overhead
    - 230kV Transmission Line - Underground
    - 138kV Transmission Line - Underground
    - 69kV Transmission Line - Underground
  - New Poles**
    - 230kV Standard Pole
    - 230kV Cable Pole
    - 138kV Standard Pole
    - 138kV Cable Pole
    - 69kV Standard Pole
    - 69kV Cable Pole
  - Temporary Impact Area
  - Permanent Impact Area
  - ▨ Stringing Sites
  - ▨ Lay Down Areas
  - Existing Access Road
  - Existing 138kV Transmission Line
  - Existing 230kV Transmission Line
  - Existing 69kV Transmission Line

Text Location and Description of Access Road Work

Legend



**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route

**Figure 3-7**  
 Sheet 2 of 20  
 Updated: 7/6/2012





Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\OCRUP\MXD\Project Description 2012\Fig 3-7 Access Road Revision 06/22/2012.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

--- Project Segment Boundary

**Proposed Transmission Lines**

- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmsion Line - Underground

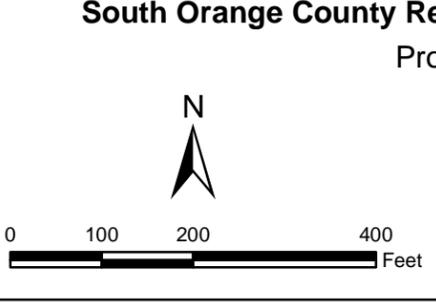
**New Poles**

- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

**Legend**



Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\OCUR\PMXD\Project Description 2012\Fig 3-7 AccessRoadRevision06222012.mxd



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 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Project Segment Boundary
- Proposed Transmission Lines**
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmsion Line - Underground

**New Poles**

- 230kV Standard Pole
- ✱ 230kV Cable Pole
- 138kV Standard Pole
- ✱ 138kV Cable Pole
- 69kV Standard Pole
- ✱ 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▧ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

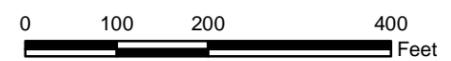
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**South Orange County Reliability Enhancement Project**

**Proposed Transmission Line Route**

**Figure 3-7**

Sheet 4 of 20  
 Updated: 7/6/2012





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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Project Segment Boundary
- Proposed Transmission Lines**
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmsion Line - Underground

**New Poles**

- 230kV Standard Pole
- ✱ 230kV Cable Pole
- 138kV Standard Pole
- ✱ 138kV Cable Pole
- 69kV Standard Pole
- ✱ 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

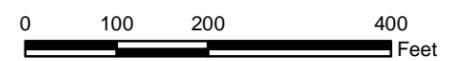
Text Location and Description of Access Road Work

**Legend**

**South Orange County Reliability Enhancement Project**  
**Proposed Transmission Line Route**

**Figure 3-7**

Sheet 5 of 20  
 Updated: 7/6/2012



Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\SOCRUP\MXD\Project Description 2012\Fig 3-7 Access Road Revision 06/22/2012.mxd



Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Project Segment Boundary
- Proposed Transmission Lines**
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmission Line - Underground

**New Poles**

- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

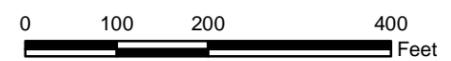
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**South Orange County Reliability Enhancement Project**

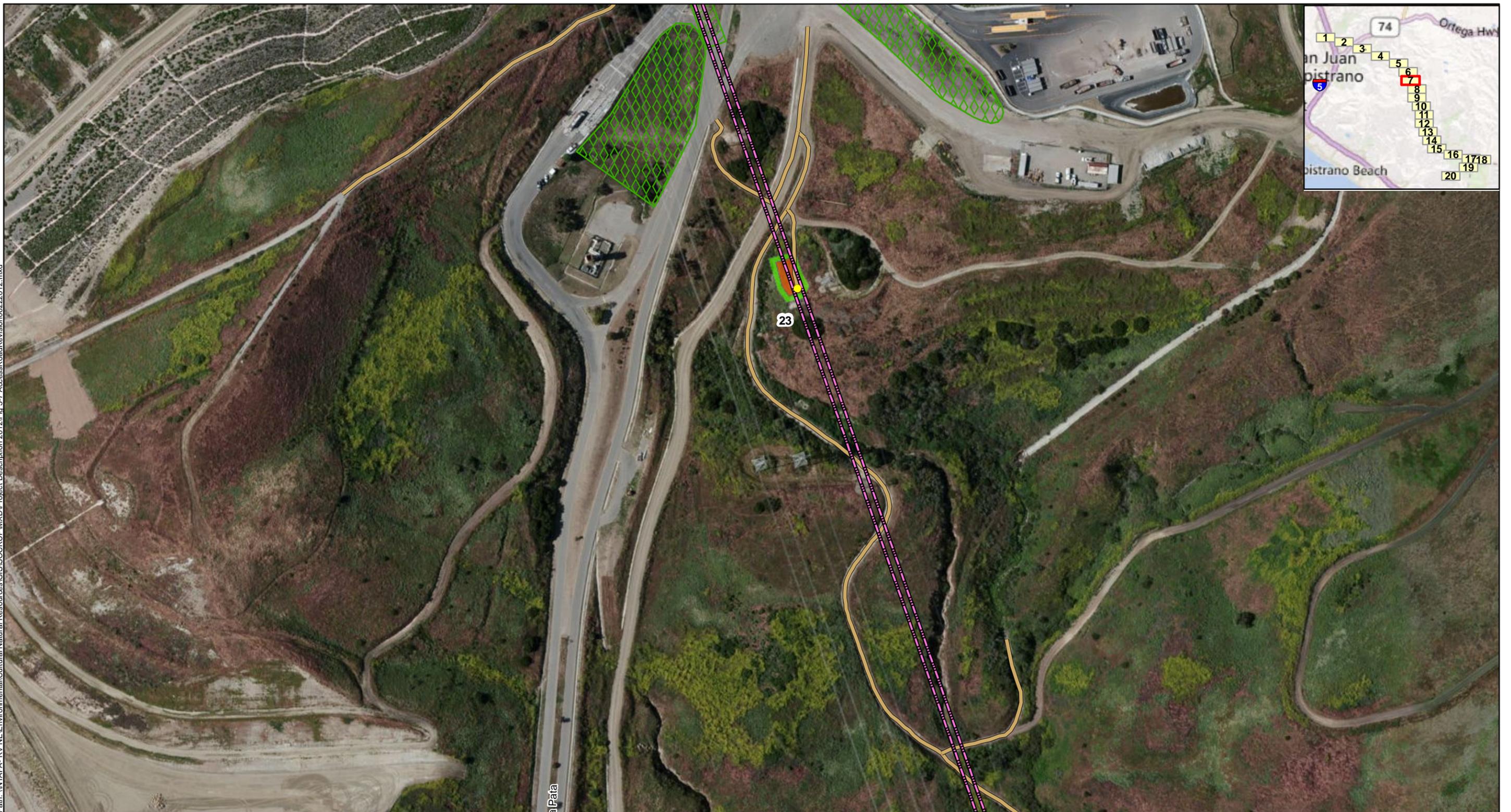
**Proposed Transmission Line Route**

**Figure 3-7**

Sheet 6 of 20  
 Updated: 7/6/2012



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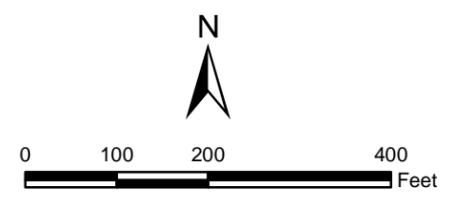
Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Project Segment Boundary
  - Proposed Transmission Lines**
    - 230kV Transmission Line - Overhead
    - 138kV Transmission Line - Overhead
    - 69kV Transmission Line - Overhead
    - 230kV Transmission Line - Underground
    - 138kV Transmission Line - Underground
    - 69kV Transmission Line - Underground
  - New Poles**
    - 230kV Standard Pole
    - ✱ 230kV Cable Pole
    - 138kV Standard Pole
    - ✱ 138kV Cable Pole
    - 69kV Standard Pole
    - ✱ 69kV Cable Pole
  - Temporary Impact Area
  - Permanent Impact Area
  - Stringing Sites
  - Lay Down Areas
  - Existing Access Road
  - Existing 138kV Transmission Line
  - Existing 230kV Transmission Line
  - Existing 69kV Transmission Line

Text Location and Description of Access Road Work

Legend



**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route

**Figure 3-7**  
 Sheet 7 of 20  
 Updated: 7/6/2012



Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\OCRUP\MXD\Project\_Description\_2012\Fig\_3-7\_AccessRoadRevision06222012.mxd



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 Created By: TRC  
 Date: 7/6/2012

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**Legend**

- - - Project Segment Boundary
- Proposed Transmission Lines**
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- - - 230kV Transmission Line - Underground
- - - 138kV Transmission Line - Underground
- - - 69kV Transmsion Line - Underground

**New Poles**

- 230kV Standard Pole
- ✱ 230kV Cable Pole
- 138kV Standard Pole
- ✱ 138kV Cable Pole
- 69kV Standard Pole
- ✱ 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

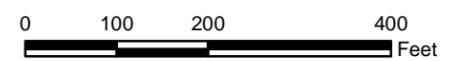
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**South Orange County Reliability Enhancement Project**

**Proposed Transmission Line Route**

**Figure 3-7**

Sheet 8 of 20  
 Updated: 7/6/2012



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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Project Segment Boundary
- Proposed Transmission Lines**
- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmssion Line - Underground

**New Poles**

- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

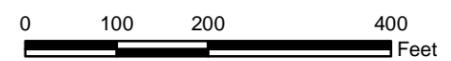
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**South Orange County Reliability Enhancement Project**

**Proposed Transmission Line Route**

**Figure 3-7**

Sheet 9 of 20  
 Updated: 7/6/2012



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Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

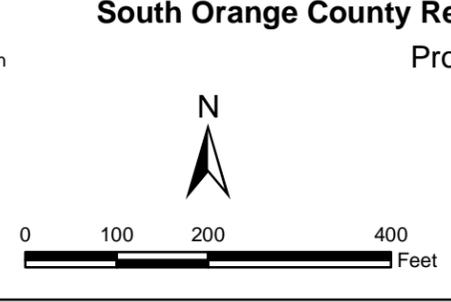
SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Project Segment Boundary
  - Proposed Transmission Lines**
  - 230kV Transmission Line - Overhead
  - 138kV Transmission Line - Overhead
  - 69kV Transmission Line - Overhead
  - 230kV Transmission Line - Underground
  - 138kV Transmission Line - Underground
  - 69kV Transmission Line - Underground

- New Poles**
- 230kV Standard Pole
  - 230kV Cable Pole
  - 138kV Standard Pole
  - 138kV Cable Pole
  - 69kV Standard Pole
  - 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- Stringing Sites
- Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

- Text Location and Description of Access Road Work
- Legend**



**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route

**Figure 3-7**  
 Sheet 10 of 20  
 Updated: 7/6/2012

Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\OCRUP\MXD\Project\_Description\_2012\Fig\_3-7\_AccessRoadRevision06222012.mxd



Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Project Segment Boundary
- Proposed Transmission Lines
  - 230kV Transmission Line - Overhead
  - 138kV Transmission Line - Overhead
  - 69kV Transmission Line - Overhead
  - 230kV Transmission Line - Underground
  - 138kV Transmission Line - Underground
  - 69kV Transmssion Line - Underground

**New Poles**

- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- ▨ Stringing Sites
- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

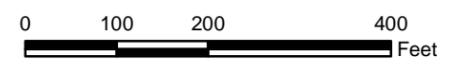
Text Location and Description of Access Road Work

**Legend**

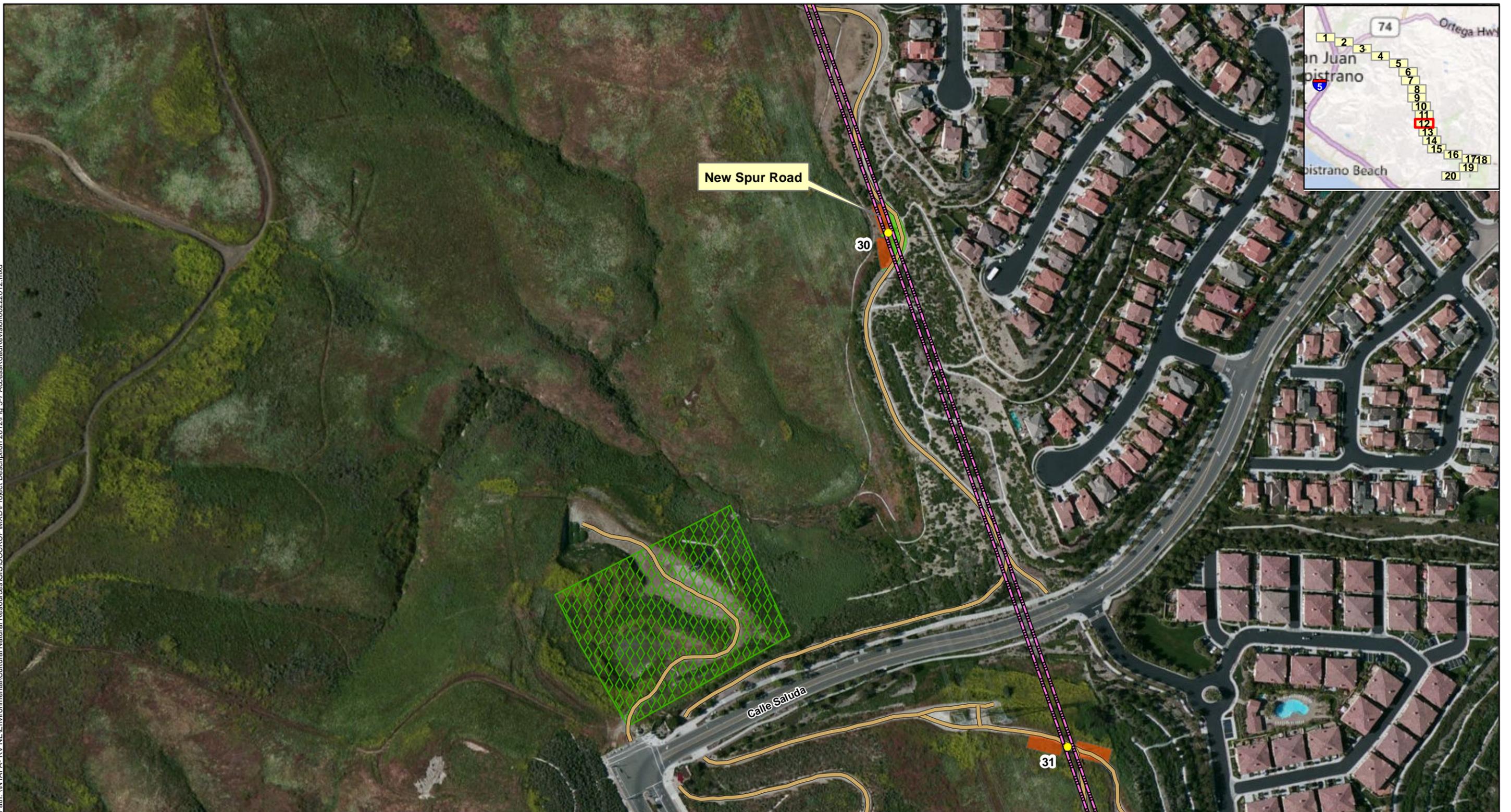
**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route

**Figure 3-7**

Sheet 11 of 20  
 Updated: 7/6/2012



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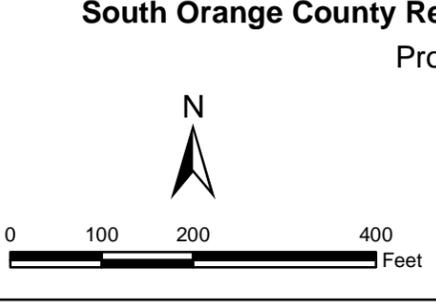
Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012  
 SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Project Segment Boundary
  - Proposed Transmission Lines**
    - 230kV Transmission Line - Overhead
    - 138kV Transmission Line - Overhead
    - 69kV Transmission Line - Overhead
    - 230kV Transmission Line - Underground
    - 138kV Transmission Line - Underground
    - 69kV Transmission Line - Underground

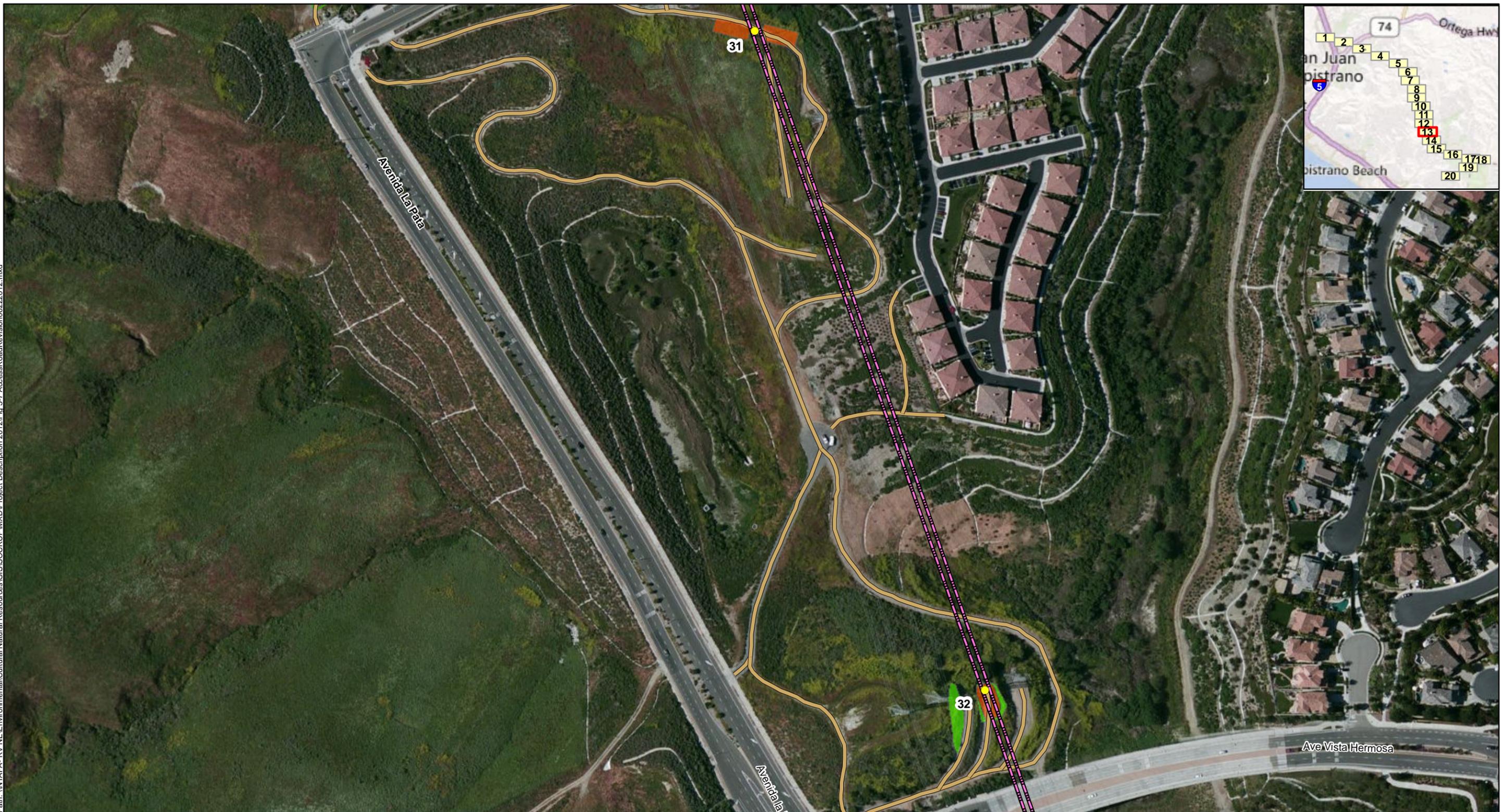
- New Poles**
- 230kV Standard Pole
  - 230kV Cable Pole
  - 138kV Standard Pole
  - 138kV Cable Pole
  - 69kV Standard Pole
  - 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
- Stringing Sites
- Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

- Text Location and Description of Access Road Work
- Legend**



Path: \\NTAPA-RV\NE\Environmental\Cultural Natural Resources\GIS\SOCRUP\MXD\Project\_Description\_2012\Fig\_3-7\_AccessRoadRevision06222012.mxd



Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Project Segment Boundary
- Proposed Transmission Lines
  - 230kV Transmission Line - Overhead
  - 138kV Transmission Line - Overhead
  - 69kV Transmission Line - Overhead
  - 230kV Transmission Line - Underground
  - 138kV Transmission Line - Underground
  - 69kV Transmsion Line - Underground

**New Poles**

- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

- Temporary Impact Area
- Permanent Impact Area
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- ▨ Lay Down Areas
- Existing Access Road
- Existing 138kV Transmission Line
- Existing 230kV Transmission Line
- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

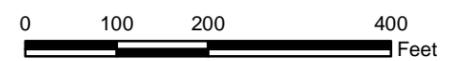
**Legend**

**South Orange County Reliability Enhancement Project**

**Proposed Transmission Line Route**

**Figure 3-7**

Sheet 13 of 20  
 Updated: 7/6/2012



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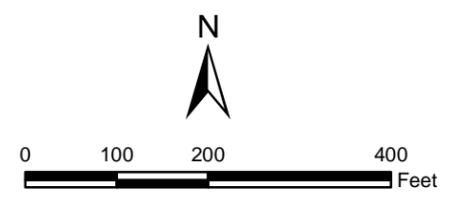


Created For: Mary Turley  
 Created By: TRC  
 Date: 7/6/2012  
 SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Project Segment Boundary
  - Proposed Transmission Lines**
    - 230kV Transmission Line - Overhead
    - 138kV Transmission Line - Overhead
    - 69kV Transmission Line - Overhead
    - 230kV Transmission Line - Underground
    - 138kV Transmission Line - Underground
    - 69kV Transmission Line - Underground
  - New Poles**
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    - ★ 230kV Cable Pole
    - 138kV Standard Pole
    - ★ 138kV Cable Pole
    - 69kV Standard Pole
    - ★ 69kV Cable Pole
  - Temporary Impact Area
  - Permanent Impact Area
  - ▨ Stringing Sites
  - ▨ Lay Down Areas
  - Existing Access Road
  - Existing 138kV Transmission Line
  - Existing 230kV Transmission Line
  - Existing 69kV Transmission Line

Text Location and Description of Access Road Work

Legend



**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route

**Figure 3-7**  
 Sheet 14 of 20  
 Updated: 7/6/2012



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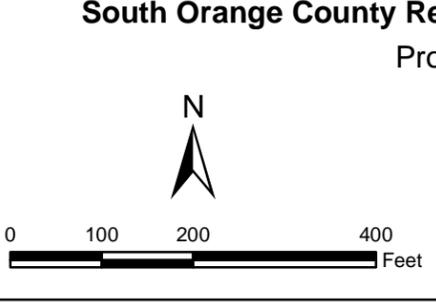
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- - - Project Segment Boundary
  - Proposed Transmission Lines**
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- Text** — Location and Description of Access Road Work
- Legend**





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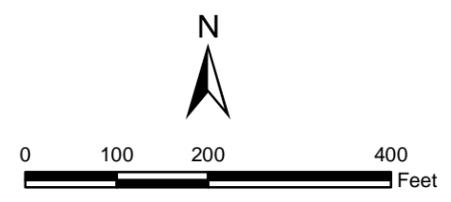
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  - ▨ Lay Down Areas
  - Existing Access Road
  - Existing 138kV Transmission Line
  - Existing 230kV Transmission Line
  - Existing 69kV Transmission Line

Text Location and Description of Access Road Work

Legend



**South Orange County Reliability Enhancement Project**  
**Proposed Transmission Line Route**

**Figure 3-7**  
 Sheet 16 of 20  
 Updated: 7/6/2012





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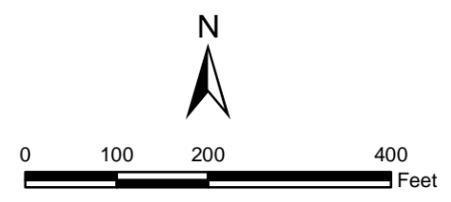
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- Existing 69kV Transmission Line

Text Location and Description of Access Road Work

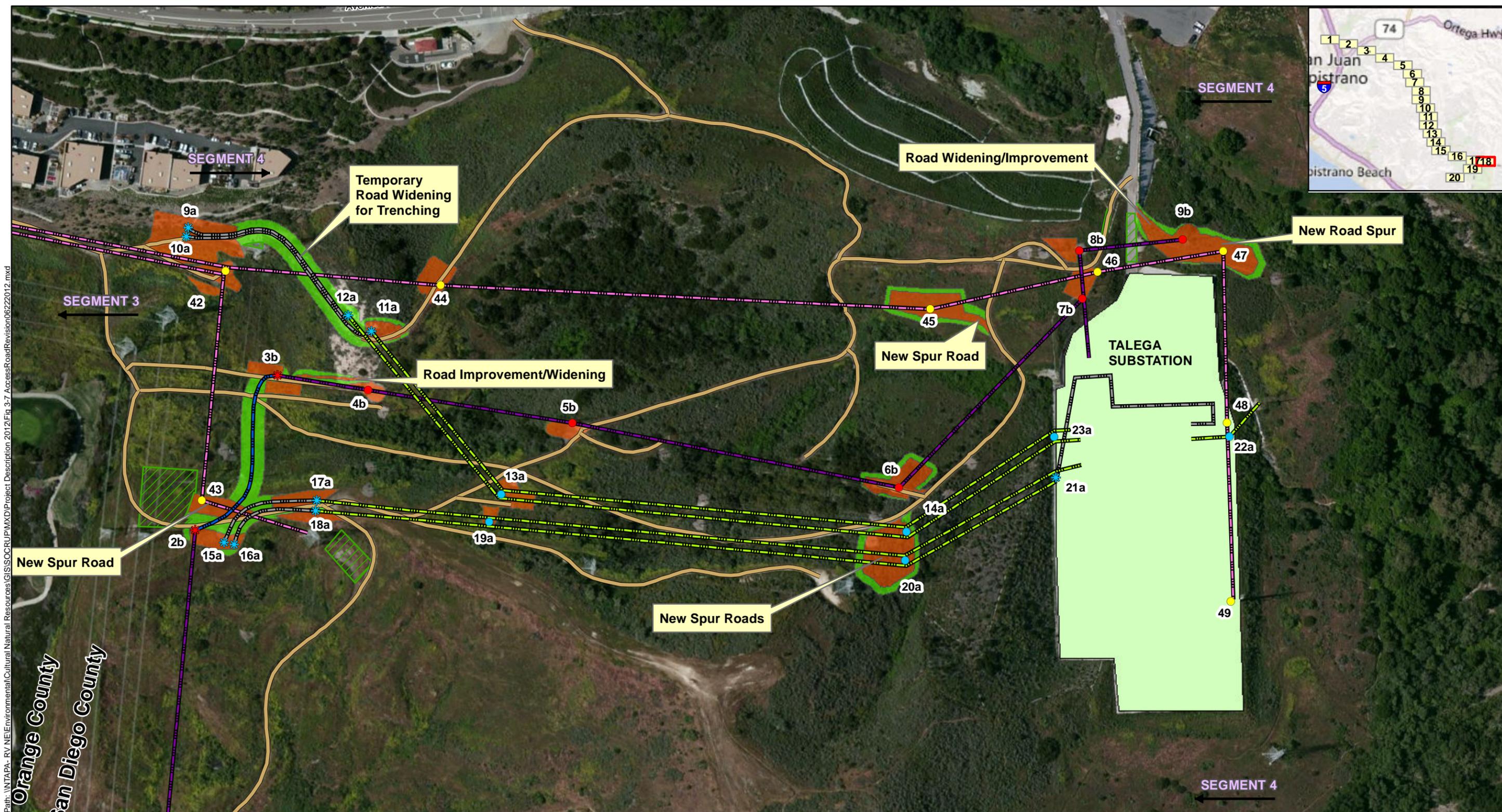
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**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route

**Figure 3-7**  
 Sheet 17 of 20  
 Updated: 7/6/2012





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Orange County  
San Diego County

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**Legend**

--- Project Segment Boundary

**Proposed Transmission Lines**

- 230kV Transmission Line - Overhead
- 138kV Transmission Line - Overhead
- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmission Line - Underground

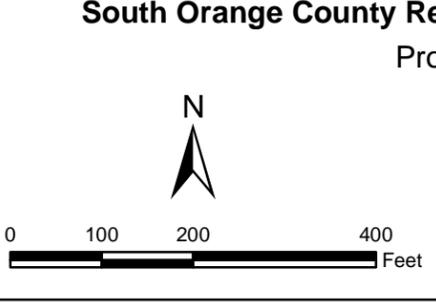
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- ▨ Existing Access Road
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- ▨ Existing 230kV Transmission Line
- ▨ Existing 69kV Transmission Line

Text Location and Description of Access Road Work

**Legend**



**South Orange County Reliability Enhancement Project**  
**Proposed Transmission Line Route**



**Figure 3-7**  
 Sheet 18 of 20  
 Updated: 7/6/2012

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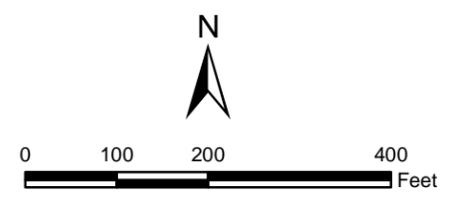
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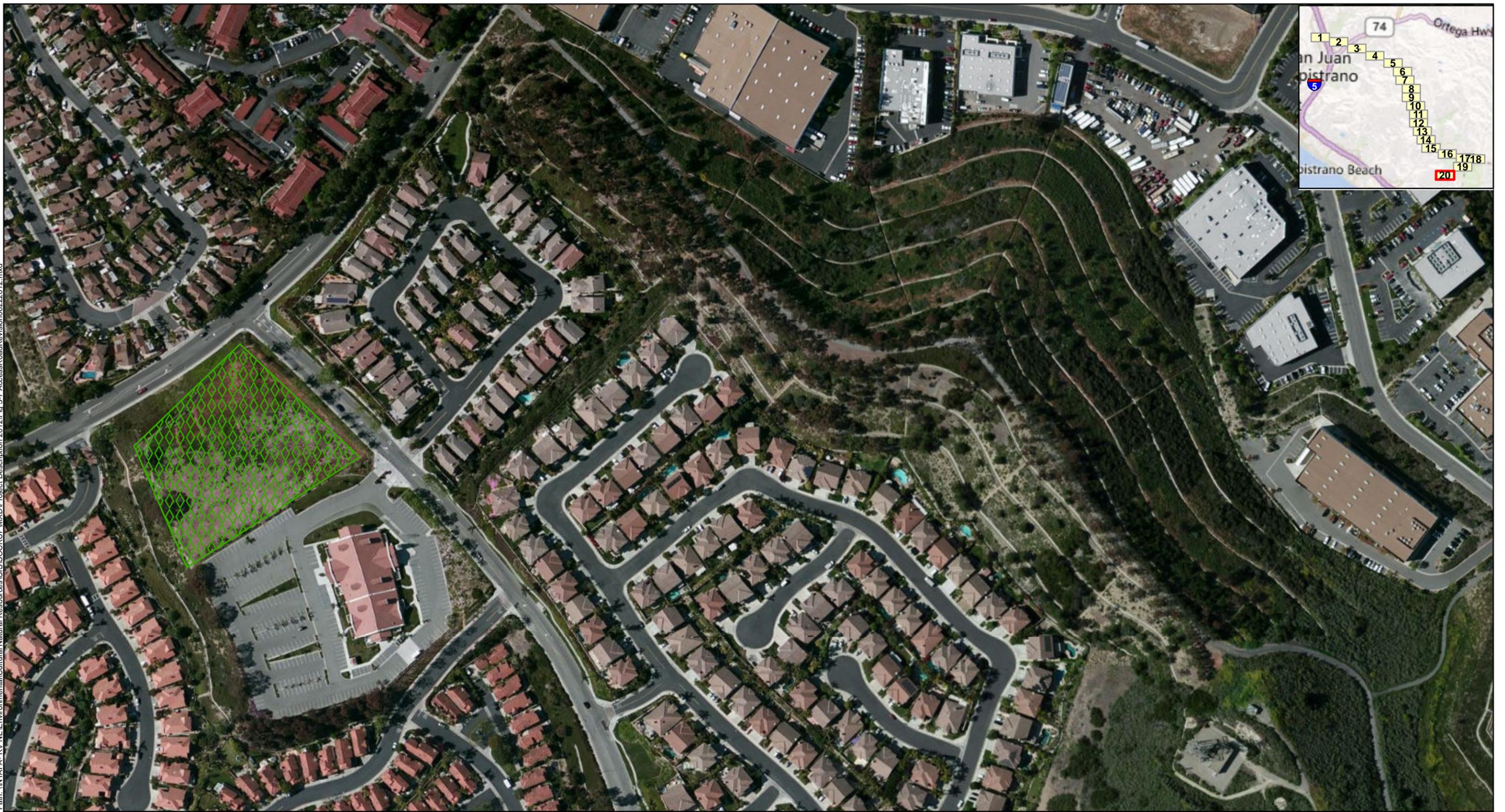
Text Location and Description of Access Road Work

**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route



**Figure 3-7**  
 Sheet 19 of 20  
 Updated: 7/6/2012

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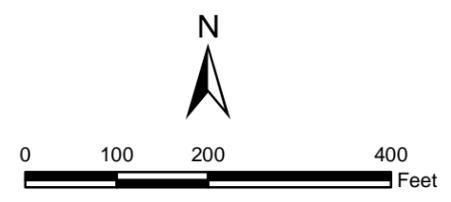
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Text Location and Description of Access Road Work

Legend

**South Orange County Reliability Enhancement Project**  
 Proposed Transmission Line Route



**Figure 3-7**  
 Sheet 20 of 20  
 Updated: 7/6/2012

## ATTACHMENT 4



# NeoClassic v2



# Modern Mission



# California Mission v1



# California Mission v2



# NeoClassic V1



Rebecca Giles  
Case Manager  
San Diego Gas and Electric Company  
8330 Century Park Court  
San Diego, CA 92123-1530

August 14, 2012

Reg.12-10/A.12-05-020  
SOCRE CPCN

**SENT VIA THE SEMPRA FTP**

Mr. Andrew Barnsdale  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

**RE: SDG&E's Supplemental Response to Completeness Review Letter**

Dear Mr. Barnsdale:

Attached please find San Diego Gas & Electric Company's (SDG&E) supplemental response to the questions posed in your June 15 2012 Completeness Review letter. This submittal supplements the response to Q1 previously provided on July 27, 2012 and also completes the utility's response to this letter.

**Attachment F contains a cultural resources inventory report which is considered confidential in its entirety under the provisions of PUC Section 583 and General Order 66-C as well as under the North American Electric Reliability Corporation's Rules of Procedure, Section 1500 et seq. and other applicable Federal and State Laws and Regulations.** These pages were appropriately marked confidential and should be treated as such.

If you have any questions or require additional information, please feel free to contact me by phone at (858) 636-6876 or e-mail: [RGiles@semprautilities.com](mailto:RGiles@semprautilities.com).

Sincerely,

**Signed**

Rebecca Giles  
Case Manager

Enclosures

cc: Christy Herron – ED Consultant  
Ke Hao Ouyang - DRA  
Allen Trial – SDG&E  
Central Files - SDG&E

# **DISTRIBUTION LINE IMPACT ANALYSIS**

FOR THE

## **SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT PROJECT**



**AUGUST 2012**

***Prepared For:***

San Diego Gas & Electric Company  
8315 Century Park Court  
San Diego, CA 92123

***Prepared By:***



123 Technology Drive West  
Irvine, CA 92618

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<b>Appendix B</b>	<b>Detailed Equipment Use Table</b>
<b>Appendix C</b>	<b>Air Quality Emissions Calculations</b>
<b>Appendix D</b>	<b>Biological Resources Assessment Addendum</b>
<b>Appendix E</b>	<b>Cultural Resources Assessment Addendum</b>
<b>Appendix F</b>	<b>Records Search Results (Confidential – submitted under separate cover)</b>

## List of Acronyms

Acronym	Definition
AB	Assembly Bill
ACSR	aluminum conductor, steel reinforced
ADT	average daily traffic
Analysis	Distribution Line Impact Analysis for the South Orange County Reliability Enhancement Project
APMs	Applicant Proposed Measures
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BMPs	best management practices
BMP Manual	Water Quality Construction Best Management Practice Manual
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CMP	Congestion Management Plan
CO <sub>2</sub>	carbon dioxide
Construction General Permit	General Permit for Discharges of Stormwater Runoff Associated with Construction Activity
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utilities Commission
CSS	coastal sage scrub
dB	decibels
dBA	A-weighted sound level
ESP	Electric Standard Practice
FAA	Federal Aviation Administration
FTZ	Fire Threat Zone
FTA	Federal Transit Administration
GHG	greenhouse gas
HCP	Habitat Conservation Plan
I-5	Interstate-5
kcml	thousand circular mils
kV	kilovolts
L <sub>50</sub>	noise standard for a cumulative period of more than thirty minutes in any hour
L <sub>eq</sub>	equivalent sound level
LOS	level of service
LST	Localized Significance Threshold

<b>Acronym</b>	<b>Definition</b>
LUP	Linear Underground/Overhead Project
MVA	megavolt amperes
NAGPRA	Native American Graves Protection and Repatriation Act
NCCP	Natural Community Conservation Plan
No.	number
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
PEA	Proponent's Environmental Assessment
PM <sub>2.5</sub>	fine particulate matter (less than 2.5 microns in diameter)
PM <sub>10</sub>	coarse suspended particulate matter (less than 10 microns)
PPV	peak particle velocity
Proposed Project	South Orange County Reliability Enhancement Project
PVC	polyvinyl chloride
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCIC	South Coast Information Center
SDG&E	San Diego Gas & Electric
SEMS	California Standardized Emergency Management System
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWS	southern willow scrub
TL	Transmission Line
USFWS	United States Fish and Wildlife Service
Williamson Act	California Land Conservation Act of 1965

## **1.0 INTRODUCTION**

Pursuant to the Deficiency/Data Request letter from the California Public Utilities Commission (CPUC) dated June 15, 2012, this Distribution Line Impact Analysis (Analysis) has been prepared to describe the scope of required distribution line work that is required as part of San Diego Gas & Electric Company's (SDG&E's) South Orange County Reliability Enhancement Project (Proposed Project) as well as to identify any impacts the distribution line work may have, either individually or when viewed in conjunction with the transmission line and substation components of the Proposed Project. A Proponent's Environmental Assessment (PEA), was previously submitted as Volume II of II of the Proposed Project's application for a Certificate of Public Convenience and Necessity (CPCN) – application Number (No.) 12-05-020.

This Analysis confirms that the distribution line component will not result in any significant unavoidable impacts. This Analysis also confirms that, even with the addition of the incremental impacts associated with the distribution line component, the significance conclusions of the PEA remain unchanged.

## **2.0 PROJECT DESCRIPTION**

The following subsections describe the distribution line components of the Proposed Project (including purpose, location, proposed facilities, and estimated construction effort) that were not previously included in the PEA. It is important to note that construction and maintenance work associated with the distribution portion of the new San Juan Capistrano Substation was included within the PEA, and that this report addresses components of the proposed distribution work that were not covered within the PEA, including removal and installation of distribution lines outside of the San Juan Capistrano and Talega substations. Much of the required distribution line removal was included within the PEA as many existing distribution lines are under-built on 138 kilovolt (kV) transmission structures that will be removed as part of the transmission line component of the Proposed Project.

This Analysis comprises reasonable assumptions and conclusions based upon the engineering and information that is available at this time. The project description and conclusions included in this Analysis are subject to change based upon final engineering and information that may not be known or foreseeable at this time.

### **2.1 PURPOSE**

Existing distribution facilities would need to be relocated or replaced in order to provide room for the new 230kV transmission lines included as part of the Proposed Project (refer to PEA Section 3.4.3, Transmission Lines).

### **2.2 PROJECT LOCATION**

Distribution line work will be required between the San Juan Capistrano Substation and the Prima Deshecha Landfill, as well as adjacent to the Talega Substation (see Figure 1, Distribution Overview Map), all within or immediately adjacent to existing franchise or rights-of-way (ROW). Similar to the substation and transmission line components previously analyzed in the

PEA, the required distribution line work is located within the Cities of San Juan Capistrano and San Clemente as well as within unincorporated Orange County. The distribution line work will be conducted within the immediate vicinity of the proposed transmission and substation components of the Proposed Project (refer to Figure 1).

### **2.3 PROPOSED FACILITIES**

The preliminary preferred distribution line routes are discussed, as applicable, in the following subsections. The proposed distribution route is depicted graphically on Figure 2, Proposed Distribution Map (Sheets 1 – 5). The proposed new distribution line facilities are located entirely within existing franchise and include the following components:

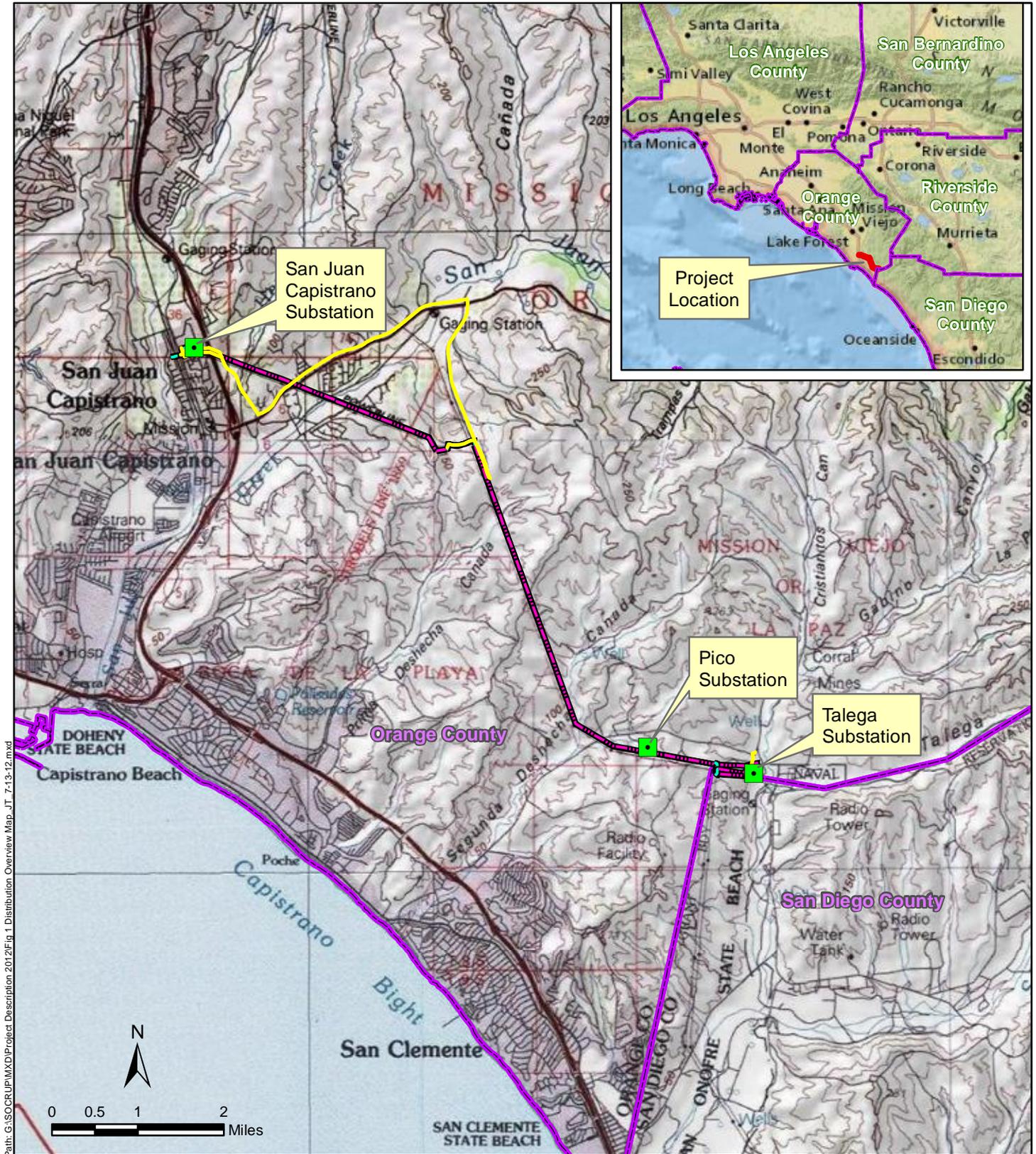
- Approximately 2,700 feet of new underground distribution line (requiring new trenching, conduit and cable);
- Approximately 6,000 feet (1.1 miles) of new cable in existing underground conduit;
- Approximately 530 feet of new overhead distribution line;
- Utilization of approximately 13,500 feet (2.6 miles) of existing underground cable; and
- Approximately 7,500 feet (1.4 miles) of new overhead distribution line that is replacing existing line within the same approximate alignment.

In connection with the proposed new distribution line facilities, the following facilities will be removed:

- Approximately 600 feet of existing underground cable;
- Approximately 18,100 feet (3.4 miles) of existing overhead distribution lines; and
- Approximately 40 distribution poles.

Until engineering is completed, it is unknown at this time if this route is entirely feasible or not.

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### South Orange County Reliability Enhancement Project

#### Legend

- Proposed Distribution Lines
- Substations
- Proposed Overhead Transmission Lines
- Proposed Underground Transmission Lines
- County Boundary

Distribution Overview Map

Figure 1



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BACK OF FIGURE 1

### 2.3.1 Distribution Facilities at the Proposed San Juan Capistrano Substation

The seven distribution (12kV) circuits (195, 196, 197, 313, 314, 315, and 799) currently connecting to the existing Capistrano Substation will be relocated to the new proposed 12kV facility, located on the lower (or western) portion of the substation property (refer to PEA Figure 3-4, Existing Capistrano Substation Overview and PEA Figure 3-6, Ultimate San Juan Capistrano Substation Layout). The existing AT&T telecommunication line will be re-routed with the distribution circuits, as required. The substation will be designed for an ultimate 120 megavolt amperes (MVA), consisting of four transformer banks and ultimately 16 distribution circuits. Initially, three transformer banks will be installed. Grading and site preparation are required for the new 12kV substation facilities construction, as described in PEA Section 3.5.3, Substation Site Development. A few temporary poles and underground duct may be installed in the existing substation property and along Calle Bonita and Camino Capistrano to allow for temporary re-routing of two 12kV circuits (314 and 799) during grading and construction of the lower yard.

### 2.3.2 Substation Getaways (Proposed San Juan Capistrano Substation)

All seven distribution (12kV) circuits will leave the proposed San Juan Capistrano Substation from the 12kV switchgear in an underground position west into Camino Capistrano. Two circuits will travel north, two circuits will travel west (adjacent to proposed 138kV transmission lines) and the final three circuits will exit and travel south, and then east.

### 2.3.3 Distribution Lines to be Installed and Removed

The following subsections describe the proposed distribution line work, including areas of new distribution line installation (overhead and underground), areas requiring removal of existing distribution facilities, and areas where existing distribution facilities will be utilized to complete the required distribution line relocation. A summary of the distribution poles is provided in Table 1, Summary of New Distribution Poles.

**Table 1: Summary of New Distribution Poles**

Pole No. <sup>1</sup>	Pole Height (Feet)	Pole Type	Installation
D1, D6, D7, D29, D30, D31	60	Weathered Steel Cable Pole	Direct Bury
D2-D5	80	Weathered Steel Cable Pole	Foundation
D8-D28	55	Weathered Steel Standard Pole	Direct Bury
D32-38	55	Weathered Steel Standard Pole	Direct Bury
D39	80	Weathered Steel Distribution/ Transmission Pole	Direct Bury
*Based upon preliminary engineering. <sup>1</sup> Pole locations are depicted on Figure 2.			

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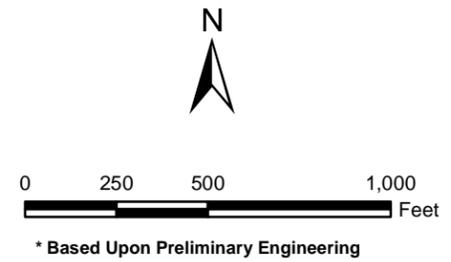
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- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**

Sheet 1 of 5



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BACK OF FIGURE 2 (SHEET 1)



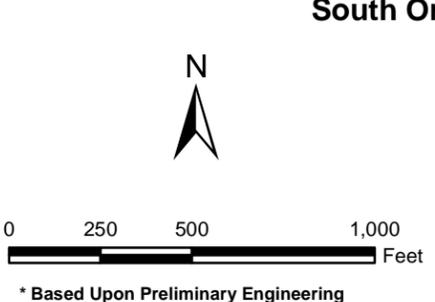
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**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**



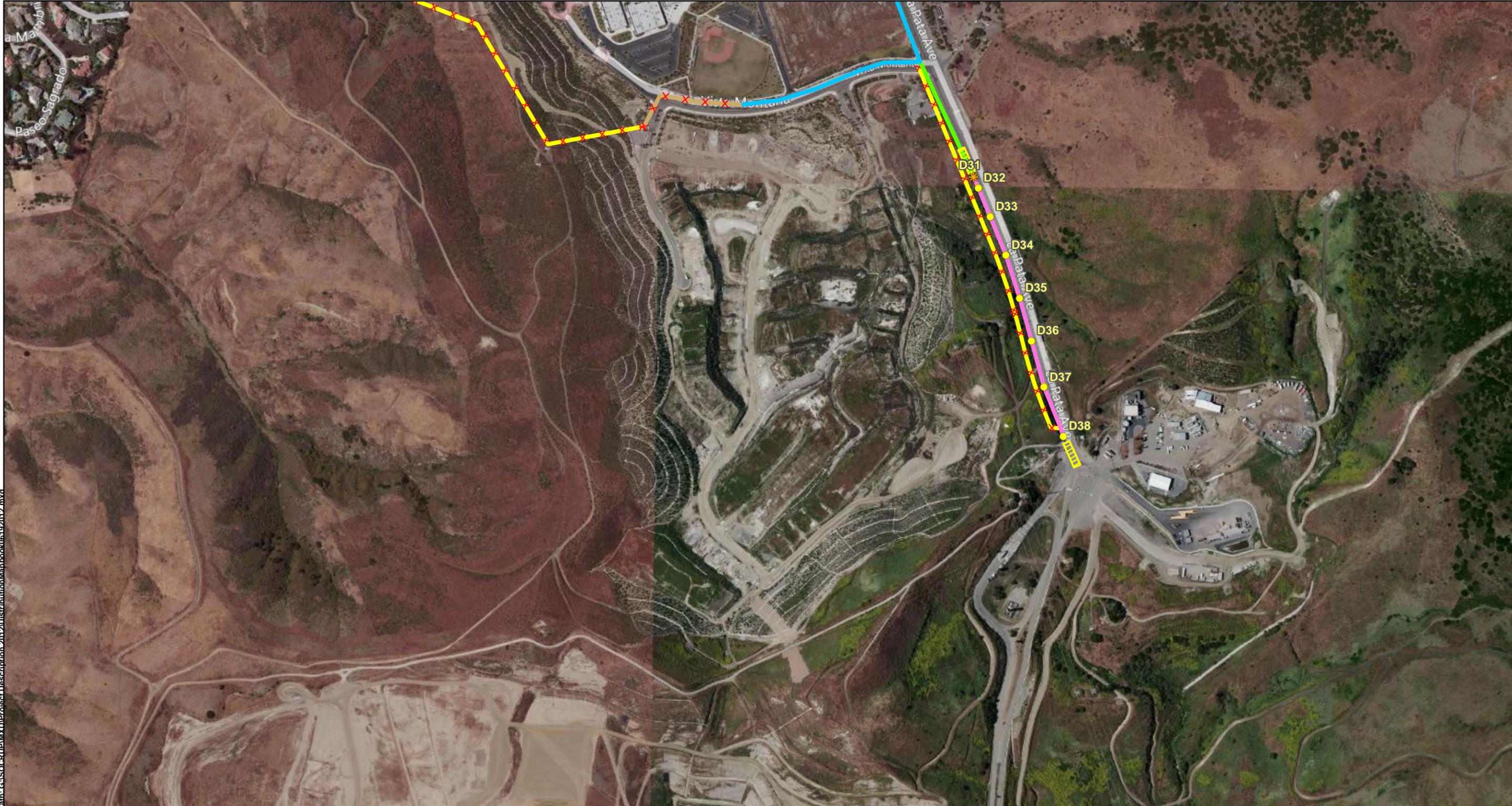
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BACK OF FIGURE 2 (SHEET 3)



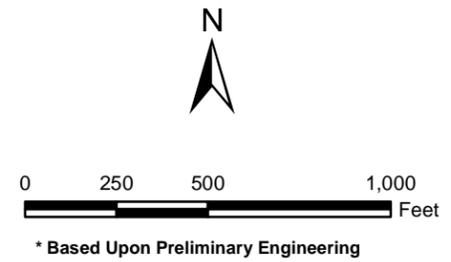
Path: G:\SOCR\B\W\X\N\Project\_Description\_2012\DistributionMapbook06192012.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation



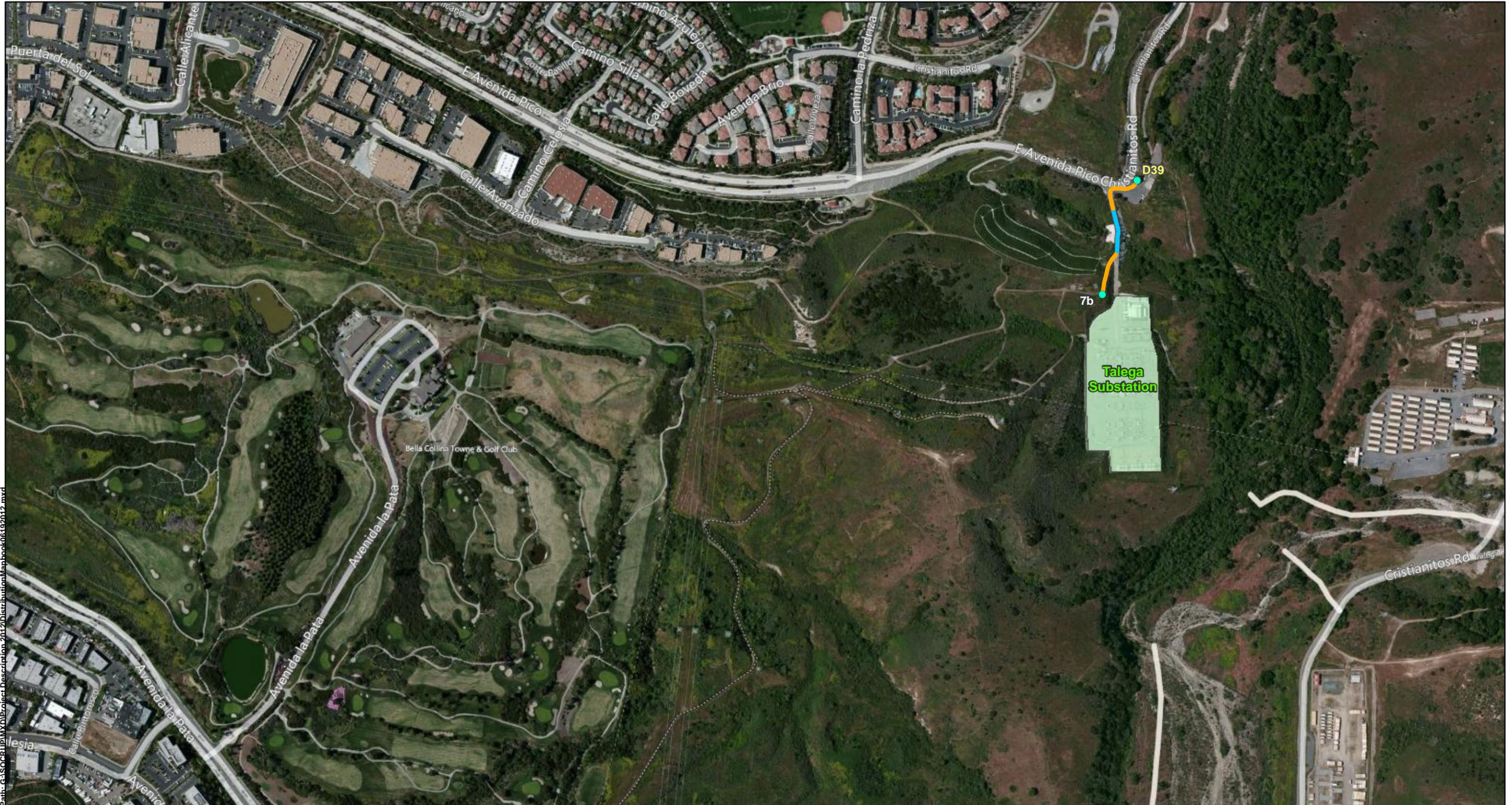
**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**



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BACK OF FIGURE 2 (SHEET 4)



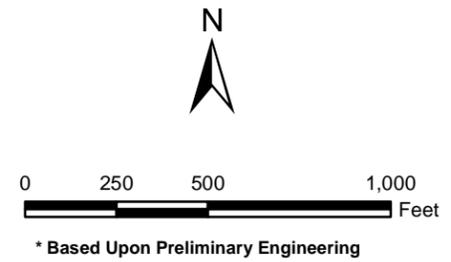
Path: G:\SOCRI\IP\WX\Project Description 2012\Distribution\Mapbook\06192012.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

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- New Distribution Only Cable Pole
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  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**



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BACK OF FIGURE 2 (SHEET 5)

### **2.3.3.1 Distribution Facilities from the Proposed San Juan Capistrano Substation to Rancho San Juan**

Circuits 196, 197, and 315 will be relocated outside the proposed San Juan Capistrano Substation to accommodate the new 230kV line connection (refer to Figure 2, Sheet 1). The existing distribution getaway from the substation to Junipero Serra Park, east across Calle Santa Rosalia, has Circuits 196 and 197 attached to an existing overhead distribution-only pole line on the south side of Junipero Serra Park. Circuit 315 from the substation east is under-built on existing 138kV transmission poles in Junipero Serra Park and crosses the Interstate 5 (I-5) freeway. A section of Circuit 315 will be removed to accommodate the new 230kV transmission lines.

Following construction of the Proposed Project, three circuits (196, 197, and 315) would leave the western side of the proposed San Juan Capistrano Substation in an underground position for approximately 1,000 feet, traveling from Camino Capistrano south to Calle Bonita, and then traveling east to Calle Santa Rosalia at Junipero Serra Park. The three distribution lines would then travel north within Calle Santa Rosalia for approximately 400 feet, and then east through the northern edge of Junipero Serra Park for approximately 600 feet. New 1000 circular mills (kcmil) underground cable would be installed for all of the new underground distribution lines including a conduit in the trench package for AT&T telecommunications. Two new approximately 80-foot tall steel cable poles (Pole Nos. D2 and D3) would be installed at the northeast corner of Junipero Serra Park to carry the three circuits across I-5 (refer to Figure 2, Sheet 1).

On the east side of I-5, two new approximately 80-foot steel cable poles (Pole Nos. D4 and D5) would be required to replace an existing cable pole for Circuits 196 and 197 along Rancho Viejo Road, to support the three circuits. Approximately 250 feet of new trench and conduit between the new cable poles and existing underground infrastructure would be required. Circuits 196 and 197 would connect to existing underground conductor near the new cable pole locations. Circuit 315 would then be installed (new cable) underground in an existing conduit within Rancho Viejo Road and would connect with an existing four-way switch at the intersection of Rancho Viejo Road and State Route (SR) 74 (also referred to as Ortega Highway) approximately 3,500 feet southeast. This will require no trenching and road disturbance will be limited to the vault locations (connection points).

Circuit 315 will then utilize existing cable located within an existing conduit package located within SR-74, between the intersection with Rancho Viejo Road east to the intersection of SR-74 and La Pata Avenue, and then south within La Pata Avenue for a total of approximately 2.3 miles or 12,150 feet (refer to Figure 2, Sheets 1 and 2).

Approximately 300 feet of new cable would then be installed in an existing conduit located within La Pata Avenue. Two new approximately 60-foot steel cable poles (Pole Nos. D6 and D7) will replace an existing approximately 50-foot cable pole that currently supports distribution Circuit 1242<sup>1</sup>. The new cable poles will support both Circuits 315 and 1242. Following the installation of the new cable poles, approximately 20 existing single circuit wood distribution structures (approximately 50 feet tall) will be replaced (one for one) with new weathered steel

<sup>1</sup> Circuit 1242 resides in a north-south alignment along La Pata Avenue and terminates on the southern end at the Prima Deshecha Landfill, adjacent to the southern terminus of Circuit 315.

double circuit distribution poles (Pole Nos. D8 through D28). The new steel poles will support both Circuit 315 and 1242 in an overhead position for approximately 1.15 miles or 6,000 feet. The new distribution poles will be approximately 55 feet in height and will be located in the immediate vicinity of the existing wood poles (refer to Figure 2, Sheets 2 and 3). Approximately 1,000 feet north of the intersection of La Pata Avenue and Vista Montana, Circuits 315 and 1242 will transition back to an underground position via two new 60-foot steel cable poles that will replace an existing approximately 50-foot cable pole that currently supports Circuit 1242. Between the new cable pole and the existing distribution terminus at the San Juan Hills High School (Vista Montana), new cable will be installed underground within existing conduit (refer to Figure 2, Sheets 3 and 4).

### **2.3.3.2 Distribution Facilities from Rancho San Juan to Talega Substation**

#### **Rancho San Juan to the Prima Deshecha Landfill**

South of the intersection of La Pata Road and Vista Montana, the existing Circuit 315 will be removed (approximately three wood poles). The existing Circuit 1242 line (located immediately adjacent to La Pata Avenue and utilizing No. 2 aluminum conductor, steel reinforced [ACSR] overhead wire) will be replaced with 636 ACSR overhead wire and installation of new weathered steel poles and would become Circuit 315. The replacement of existing Circuit 1242 with the new Circuit 315 will begin with the replacement of an existing approximately 45-foot cable pole with a new approximately 60-foot steel cable pole (refer to Figure 2, Sheet 4). Moving south along the existing Circuit 1242 route, approximately seven existing wood distribution structures (approximately 45 feet tall) will be replaced with seven new steel distribution poles over an approximately 1,400 foot span. The new poles will be located in the immediate vicinity of the existing poles.

#### **Talega Hub to the Talega Substation**

Circuit 204 is currently under-built on transmission line (TL) 695 transmission structures. Circuit 204 will be relocated along with TL695 between transmission Pole Nos. 1b through 7b (refer to PEA Figure 3-7, Proposed Transmission Line Route). At Pole No. 7b, Circuit 204 will transition to an underground position and connect to existing conduit approximately 250 feet to the north. This section of new underground distribution line will require new trenching and conduit to be installed (refer to Figure 2, Sheet 5). Next, new cable will be installed within an approximately 250-foot stretch of existing conduit located within the paved access road to the Talega Substation. Following the existing conduit, new trenching and conduit will be installed north for approximately 200 feet until reaching existing 69kV structure Z223778 (TL695). This structure would either be replaced with a new steel pole (Pole No. D39 - 69kV steel pole with distribution cable-riser attachment), or a distribution cable-riser attachment would be added to the existing pole. The new underground distribution line between Pole No. 7b and existing Pole Z223778 will require approximately 450 feet of new trench and conduit, and approximately 700 feet of new conductor cable.

## 2.4 DISTRIBUTION LINE CONSTRUCTION

Specific construction methods, equipment, work force, and work area requirements for the distribution line component of the Proposed Project are outlined within the following subsections.

### 2.4.1 Construction Methods

#### 2.4.1.1 Installation of New Steel Poles

Installation of direct-bury steel poles will begin with the excavation of holes approximately 20 to 48 inches in diameter and approximately 7 to 12 feet deep, depending on the height of the pole. Pole holes will be excavated using a small truck-mounted or track-mounted drill rig if the site is land-accessible. Rock splitting/blasting may be required if crews encounter rock while digging. Pole hole drilling will excavate between approximately 0.7 to 2.2 cubic yards of soil per pole. New poles will be delivered to the site by a flatbed truck and placed in holes using a machine digger. All distribution pole holes will be backfilled and compacted with the previously excavated soil. Any remaining excavated material will be placed around the holes or spread onto access roads and adjacent areas. The permanent footprint for each direct-bury steel pole will range from approximately 1 foot to 2.8 feet.

Installation of new steel foundation cable poles (Pole Nos. D2 – D5 [refer to Figure 2, Sheet 1]) will be installed in a similar fashion to the steel foundation poles included within the transmission component of the Proposed Project (refer to PEA Section 3.5.1, Overhead Transmission Lines).

#### 2.4.1.2 Existing Pole Removal

Once the replacement poles have been constructed, new conductor has been strung, and any third-party lines have been relocated to the replacement poles, SDG&E will remove the existing wood poles. Wood pole removals will typically require an approximately 20-foot diameter area around the pole. Pole-removal activities will utilize bucket trucks to remove cross arms and the conductor. Poles will be completely removed where possible. The holes will be backfilled with native soil or materials similar to the surrounding area and the site will be restored. If complete removal is not practical (e.g., if the pole cannot be pulled from the ground), it will be sectioned and cut at the base or 6 to 12 inches below the surface and covered with native material. If necessary to avoid impacts to sensitive resources or private property, poles may be cut off above ground level. All anchors and stub poles will also be removed where possible. Old poles, associated hardware, and any other debris generated will be removed from the site and placed on flatbed trucks for recycling or disposal at an approved facility.

#### 2.4.1.3 Conductor Installation

Bucket trucks would be used as guard structures. As an alternative to using bucket trucks as guard structures, SDG&E may use flaggers to halt traffic for brief periods while overhead conductors are installed at road crossings.

Conductor stringing will begin with the installation of insulators and stringing sheaves during steel pole installation. Sheaves are rollers that temporarily attach to the lower end of the

insulators to allow the conductor to be pulled along the line. A rope will then be pulled through the rollers from structure to structure. The rope would be pulled through the rollers using a bucket truck or aerial man-lift. Once the rope is in place, it will be attached to a steel cable and pulled back through the sheaves, and into place using conventional tractor-trailer pulling equipment located within one of the designated stringing sites. The conductor will be pulled through each structure under a controlled tension to keep the conductor elevated and away from obstacles; thereby, minimizing third-party damage to the line and protecting the public.

In some cases, sleeves or splices may be installed on the power lines. This might occur when stringing operations slightly damage the conductor or if the conductor is not long enough and must be joined to another segment. If the conductor is damaged, a section of the conductor may be replaced or a repair sleeve may be wrapped around the outside of the conductor and pressed into place to protect the conductor. SDG&E will utilize full-tension splices, or compression splices, when the conductor is damaged too severely for a repair sleeve, when the conductor is not long enough to span between structures, or if stringing sites are spread too far apart. During full-tension splices, the two ends of the conductor are connected with the use of heavy-duty vices.

After the conductor is pulled into place, the sag between the structures will be adjusted to a pre-calculated level. The conductor will then be attached to the end of each insulator, the sheaves will be removed, and the vibration dampers and other hardware accessories will be installed. The distribution conductor will be installed with a minimum ground clearance of 25 feet (17 feet where there is pedestrian access only). SDG&E will accomplish the removal of existing conductors in a method similar to the reverse of the conductor installation process. The old conductors will be wound onto wooden spools, placed on flatbed trucks, and recycled at an approved facility.

#### **2.4.1.4 Underground Duct Package and Cable Installation**

Prior to trenching for underground distribution lines, SDG&E will notify other utility companies (via Underground Service Alert) to locate and mark existing underground utilities along the proposed underground alignments. Exploratory excavations (potholing) will also be conducted to verify the locations of existing facilities in the field, if necessary. Where trenching will occur within public roadways, traffic control will be implemented pursuant to local agency guidelines as outlined within individual encroachment permits issued for the required work.

Trenches will be excavated using a backhoe, saw cutter, and other trenching equipment as warranted by site conditions. The depth of the trench will be determined by localized topography and potential conflicts, but is anticipated to be approximately 5 to 6 feet deep, with a width of approximately 2.5 feet. Dewatering of the trenches is not anticipated, but may be required based on weather conditions during construction. If trench water is encountered, trenches will be dewatered using a portable pump and disposed of in accordance with applicable regulations and permits. Once installed, the depth from grade to the top of the concrete duct package will be approximately 2.5 feet, and the depth from grade to the top of the conduit in the duct package will be approximately 3 feet. The trench alignment will proceed to/from cable poles or splice vaults.

The underground distribution lines will be installed in a duct bank composed of two to eight 5-inch-diameter polyvinyl chloride (PVC) conduits encased in concrete or placed in sand or native fill. A typical drawing of the proposed duct bank has been included in Appendix A of this Analysis (Typical Structure Diagrams). In order to facilitate the pulling and splicing of the cables, underground concrete splice vaults measuring approximately 8 feet long, 5.5 feet wide, and 7 feet deep will be installed in line with the underground duct banks every approximately 500 to 800 feet. These vaults will also provide access to the underground cables for maintenance, inspection, and repair during operation.

The trench, during trenching activities, will be widened at the underground vault locations to allow for approximately 2 feet of additional clearance. The pre-formed, steel-reinforced precast concrete splice vaults will be delivered to the associated work areas on flatbed trucks and lowered into place using small, truck-mounted cranes. The splice vaults will then be connected to the underground duct banks before being covered with at least 3 feet of compacted fill. The trench alignment will proceed to the riser pole and support the transition between the underground and the overhead conductors. The previously excavated native material will be used to backfill the trench after installation of the concrete duct banks. SDG&E does not anticipate that engineered backfill will be required. The remainder of the excavated material will be spread across the right-of-way (ROW) or access roads, if possible, or disposed of at an approved facility. SDG&E does not anticipate encountering contaminated soils (refer to Section 6.8 of this Analysis [Hazards and Hazardous Materials]).

The PVC cable conduits will be installed (separated by spacers), and concrete will be poured around the conduits to form the duct banks after trenching activities for the underground duct banks have been completed. The trenches will be backfilled with these materials and the cables will be installed in the duct banks upon completion of the duct bank installation. Each cable segment will be pulled into the duct bank and terminated at the cable pole where the line converts to an overhead configuration. A cable reel will be placed at one end of the section and a pulling rig at the other end to pull the cable through the ducts. A larger rope will then be pulled into the duct using a fish line and attached to the cable puller, which pulls the cable through the duct. Lubricant will be applied to the cable as it enters the duct to decrease friction during pulling. The ground surface will be restored to near pre-construction conditions and repaved or reseeded as appropriate following installation of the conductor.

## **2.4.2 Construction Equipment**

Table 2, Construction Equipment, outlines the anticipated construction equipment and includes a brief description of what each piece of equipment would be utilized for. Appendix B of this Analysis (Detailed Equipment Use Table) contains a detailed breakdown of construction equipment requirements for each portion (i.e., trenching, pole removal, stringing, etc.) of distribution line construction.

**Table 2: Construction Equipment**

<b>Equipment</b>	<b>Use</b>
Air compressor	Operate hand tools and other small machinery
Arrow board	Traffic control
Backhoe	Excavate material
Bitumen (emulsion) sprayer	Final street repair following trenching
Bobcat	Moving dirt and steel plates
Boom truck	Pull cable, set pole sections, set steel plates
Bucket Truck	Install conductor, act as guard structure, set pole sections
Concrete Truck	Slurry/concrete hauling
Crew truck	Transport construction personnel
Drilling rig	Drill holes for pole installation
Dump truck	Remove waste from construction sites
Flatbed truck	Deliver materials to construction site or laydown yard
Foreman truck	Transport construction personnel
Fork lift	Transport materials within ROW or at laydown yards
Grinder (4-inch)	Final street repair following trenching
Loader	Load spoils and wastes
Pavement roller	Asphalt construction (road repair)
Pickup truck (1-ton)	Transport construction personnel and small equipment
Puller and tensioner	Pull new conductor into place and secure at correct tension, remove/pull existing cable from structures
Reel trailer	Feeding underground cable, feed existing cable onto reel for removal
Saw cut	Cut concrete during trenching
Spreader box	Final street repair following trenching
Vibrating plate	Asphalt construction (road repair)
Water Truck	Dust control and fire protection
*Based upon preliminary engineering. Source: SDG&E	

### 2.4.3 Construction Work Force

Construction of the distribution component of the Proposed Project is anticipated to require up to approximately 15 workers to construct during trenching activities within public roadways.

Typical construction activities required to complete the distribution component of the Proposed Project would require between 8 and 10 workers to construct.

#### 2.4.4 Construction Work Areas

Construction of the distribution component of the Proposed Project will require temporary workspace including pole construction work areas, pole removal workspace, stringing sites, space for trenching, and new access roads. Construction of the distribution lines will utilize the staging and laydown areas identified within the PEA (refer to PEA Section 3.5.4.1 and PEA Figure 3-7 [Sheets 1-20]). Descriptions for construction workspace are provided below. A summary of construction work areas is provided in Table 3, Temporary Construction Work Areas.

**Table 3: Temporary Construction Work Areas**

Construction Activity	Work Area Required (acres)
Remove existing structures (approximately 40 poles)	0.29
Install new direct bury poles (approximately 35)	0.25
Install new foundation poles (approximately 4)	0.81
New underground trench and conduit (approximately 2,700 feet)	0.74
One New Spur Road (approximately 130 feet) <sup>2</sup>	0.041
Stringing Sites (approximately 6)	0.24
Construction staging and laydown	As outlined in the PEA
<b>Total<sup>1</sup></b>	<b>2.38</b>
*Based upon preliminary engineering.	
<sup>1</sup> Total area is considered to be conservative as work areas for pole installation and removal will most likely overlap once construction has been completed.	
<sup>2</sup> Located within Junipero Serra Park (refer to Figure 2, Sheet 1)	

##### 2.4.4.1 Pole Work Areas

In order to accommodate construction equipment and activities during pole replacement (pole installation and removal) along existing distribution lines, additional temporary construction areas may be cleared and graded at each pole location. Existing poles typically have a 10-foot radius (20-foot diameter) workspace for operation and maintenance activities; therefore, pole removals may be able to be completed from this existing workspace. However, some vegetation clearance or minor grading may still be required, and such work would be conducted with small graders or small front-end loaders to provide a safe operating environment. It is not anticipated that any trees will need to be removed; however, some trees may be trimmed and some existing vegetation may be cleared. Each of the approximately 35 new steel direct bury poles would require approximately less than 0.1-acre work area, measuring approximately 20 feet in diameter. Due to the fact that most of the new poles will be placed in the immediate vicinity of existing poles, the total potential combined workspace would include some level of overlap. However, due to the preliminary nature of engineering, it is assumed that the full workspace would be required for pole removal and pole installation (work areas would not overlap).

A total of approximately 0.25 acre of temporary disturbance will be required to facilitate pole installation and an additional 0.25 acre would be required for pole removal. The actual amount

of workspace need would most likely be less than this amount as some of the pole installation and removal work would be conducted utilizing overlapping work areas. This would be true for Pole Nos. D6 through D38 (new overhead distribution line along La Pata Avenue – refer to Figure 2, Sheets 2 through 4). SDG&E will access pole work areas by motor vehicle. After construction has been completed, pole work areas will be returned to a natural state consistent with the surrounding area to the extent feasible.

Installation of Pole Nos. D2 through D5 would require additional workspace as these poles will be transmission-rated concrete foundation poles. Typically, larger, transmission-rated steel cable poles of this size require approximately 150-foot diameter workspace. However, since Pole Nos. D2-D5 are essentially two groupings of two poles (Pole Nos. D2/D3 and D4/D5 would be immediately adjacent to each other), only two work areas would be required. Therefore, installation of these four steel foundation cable poles will require a temporary construction footprint of approximately 0.81 acre.

**2.4.4.2 Trench Work Areas**

Temporary workspaces centered on the duct bank alignments will be established to accommodate the installation of the underground duct banks and vaults. These areas will be cleared and graded as needed to provide a safe working space for the operation of construction equipment. The duct banks will require an approximately 10- to 12-foot-wide workspace. A total of approximately 2,700 linear feet of new trench will require approximately 0.75 acre of workspace, mostly within existing paved roadways. Some vegetation clearing may be conducted with gas-powered weed abatement tools, sickles, rakes, or other hand tools along the trench alignment. No tree removal is anticipated; however, some trees may be trimmed and some existing vegetation may be cleared. The majority of the new required trenches will be located within existing public and private paved roadways, and will therefore not result in any impacts to existing vegetation or habitat. Trench work areas will be accessed using public roadways and existing access roads. Following construction, trench work areas will be returned to a natural state consistent with the surrounding area to the extent feasible.

**2.5 CONSTRUCTION SCHEDULE**

Construction of the distribution line component of the Proposed Project will occur within the overall construction sequence for the Proposed Project as outline in Table 4, Proposed Construction Schedule (Table 4 was included within the PEA as Table 3-15). The distribution line construction elements are highlighted in Table 4 by bold text.

**Table 4: Proposed Construction Schedule**

<b>Proposed Project Segment/Task</b>	<b>Approximate Duration (Months)*</b>	<b>Anticipated Start Date**</b>
Construct 138 and 69kV from Talega Hub to Talega Substation (Segment 4)	8	November 2013
Below grade 138kV addition in Talega Substation	3	November 2013

**Table 4 (cont.): Proposed Construction Schedule**

<b>Proposed Project Segment/Task</b>	<b>Approximate Duration (Months)*</b>	<b>Anticipated Start Date**</b>
Construct 138kV addition in Talega Substation	6	February 2014
Energize 138kV addition in Talega Substation	1	July 2014
Obtain San Juan Capistrano City grading permits	4	September 2013
138kV Capistrano Substation getaways (Segment 1)	5	November 2013
Remediate & Demo existing buildings in lower yard	2	October 2013
<b>Reroute 2-12kV circuits to temporary position</b>	<b>1</b>	<b>November 2013</b>
Lower yard site grading (Phase 1)	6	December 2013
Lower yard site development (walls, drainage, etc)	3	March 2014
Lower yard (138/12kV) below grade construction	8	June 2014
Lower yard 138/12kV substation construction	13	January 2015
<b>Construct 12kV distribution circuits</b>	<b>10</b>	<b>December 2014</b>
Lower yard 138/12kV testing and energizing	6	August 2015
Construct 138kV cable poles and cable into gas insulated substation	5	September 2015
Cutover existing 138/12kV substation to new 138/12kV substation	1	February 2016
Construction pad and access road grading for 230kV structure sites between San Juan Capistrano and Talega substations (Segments 1 – 4)	8	September 2015
Construct structure foundations for new 230kV poles (Segments 1 – 4)	7	October 2015
De-energize TL13835 & construct underground 230kV ducts along Vista Montana (Segment 2). Re-energize TL13835	4	March 2016
Construct new 230kV overhead transmission lines (set poles and pull conductor – Segments 1 – 4)	4	March 2016

**Table 4 (cont.): Proposed Construction Schedule**

<b>Proposed Project Segment/Task</b>	<b>Approximate Duration (Months)*</b>	<b>Anticipated Start Date**</b>
Construct temporary TL13835 at San Juan Capistrano Substation	1	March 2016
Remove equipment and foundations in upper yard	2	March 2016
Remediate and grade upper yard (Phase 2)	3	May 2016
Upper yard (230kV) substation below grade construction	6	August 2016
Upper yard (230kV ) substation construction	10	December 2016
De-energize TL138xx & 13816 and construct underground 230kV ducts along Vista Montana (Segment 2). Re-energize TL138xx and 13816	7	December 2016
230kV testing and energizing at San Juan Capistrano Substation	5	June 2017
De-energize temporary TL13835 & install Bank 60's 138kV line position	1	November 2017
Proposed Project In Service Date		November 2017
Site and ROW Restoration	4	March 2018
<p>*Based upon preliminary engineering. Actual construction activities would not necessarily continue throughout the listed construction duration. Construction duration represents the amount of time between the start and completion of construction activities for each segment/task.</p> <p>**Dates are dependent on when all permits are obtained.</p> <p>Source: SDG&amp;E</p>		

## 2.6 OPERATION AND MAINTENANCE

Once construction of the distribution line work is complete, operation and maintenance will continue as occurs today under current, baseline conditions. There will be no substantial difference between operation and maintenance procedures and activities for the distribution lines following completion of the Proposed Project than currently exists today. Existing resources (work crews and vehicles) will be utilized to complete operation and maintenance on the distribution component of the Proposed Project.

Typical operation and maintenance procedures applicable to distribution infrastructure (existing and proposed) are discussed in PEA Section, Operation and Maintenance [Existing and Proposed]. Typical operation and maintenance procedures applicable to distribution

infrastructure include, but are not limited to, vegetation management, routine inspections, routine repairs, and ROW and access road maintenance.

Approximately 315 square feet of space (20-foot radius) will be maintained around each new distribution pole and the four new foundation poles will also have an approximately 30-foot by 70-foot maintenance pad (similar to transmission poles) for each grouping of two poles (D2/D3 and D4/D5). In addition, one new permanent approximately 130-foot, 14-foot wide spur road will be maintained for access to Pole Nos. D2 and D3. Therefore, the permanent operation and maintenance workspace would be approximately 0.4 acres.

### **3.0 SCOPE OF ANALYSIS**

This report analyzes the potential impacts of distribution-related work that was not addressed within the impact analysis contained within the PEA. The PEA previously analyzed impacts associated with the San Juan Capistrano and Talega Substations, including the distribution portion of the San Juan Capistrano Substation. The PEA also addressed impacts for all of the distribution line removal work associated with distribution underbuild. This analysis considers the impacts of the following distribution line activities:

- Installation of approximately 2,700 feet of new underground distribution line (new trench, conduit, and cable);
- Installation of approximately 6,000 feet (1.1 miles) of new cable within existing conduit packages;
- Utilization of approximately 13,500 feet (2.6 miles) of existing underground distribution line;
- Installation of approximately 39 new or replacement distribution poles;
- Removal of approximately 40 existing distribution poles; and
- Operation of the new distribution facilities.

As discussed below, the potential environmental impacts of these activities, as designed, are less than significant.

### **4.0 METHODOLOGY**

The methodologies utilized during the preparation of the PEA have been utilized during the preparation of this Analysis, where applicable and where sufficient design exists to employ such methods. Data and descriptions of the work utilized in the analysis are included within Section 2.0 of this Analysis.

### **5.0 SETTING**

The required distribution line work will occur within the immediate vicinity of the transmission and substation work described within the PEA (refer to Section 2.2 of this Analysis [Project Location] and Figures 1 and 2. Therefore, the general environmental setting described within the PEA is applicable for the distribution line work analyzed herein. Where additional descriptions of the existing environment are applicable to a particular resource area, the additional

information is provided in the corresponding resource impact analysis section (Sections 6.1 through 6.16).

The majority of new construction required for the distribution component of the Proposed Project is concentrated around La Pata Avenue, between SR-74 and the Prima Deshecha Landfill due to the high utilization of existing distribution conduit and cable (refer to Figure 2). This area is located on the border of the City of San Juan Capistrano and unincorporated Orange County. This area is largely undeveloped, with existing land uses including a high school (San Juan Hills High School), the Prima Deshecha Landfill, and the planned Rancho San Juan housing development (currently under construction). The remainder of the proposed distribution route is surrounded by existing residential and commercial development. The entirety of the proposed distribution line route is located where similar electrical distribution facilities are currently located. In fact, approximately half of the proposed distribution line(s) will utilize existing conduit and cable and will, therefore, not require any new construction.

## **6.0 POTENTIAL IMPACTS**

The potential impacts for the required distribution line re-routing are analyzed for the following resource areas:

- Aesthetics,
- Agriculture and Forestry,
- Air Quality and Greenhouse Gases,
- 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,
- Recreation,
- Transportation and Traffic, and
- Utilities and Service Systems.

### **6.1 SIGNIFICANCE CRITERIA**

For each of these resource areas, potential impacts are discussed in relation to impacts for substation and transmission line project components outlined within the PEA. References to discussion, data, tables, and figures contained within the PEA are included, where appropriate.

Consistent with the analysis contained within the PEA for substation and transmission line work, significance criteria were taken from Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*.

**6.2 AESTHETICS**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**6.2.1 Question 2a – Would the project have a substantial adverse effect on a scenic vista?**

**Construction and Operation & Maintenance - No Impact**

Approximately 22,200 feet (4.2 miles) of the proposed distribution lines (including the utilization of existing underground lines) will be located underground. The remaining distribution lines will be located within or immediately adjacent to existing franchise and ROW, along existing streets, and through one park (Junipero Serra Park). 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. As such, there are no recognized scenic vistas within the Proposed Project viewshed. Therefore, the distribution line component (and the Proposed Project) would not have a substantial adverse effect on a scenic vista.

The discussion under Question 2c provides a detailed evaluation that indicates that the proposed distribution lines would represent a minor improvement in some views of open hillsides and ridgelines that are currently experienced by the public.

**6.2.2 Question 2b – Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

**Construction and Operation & Maintenance – No Impact**

There are no designated State Scenic Highways within the Proposed Project viewshed; therefore, the Proposed Project (including the distribution line component) would not substantially damage scenic resources within a State Scenic Highway.

The Proposed Project crosses SR-74, an eligible State Scenic Highway and an Orange County and City of San Juan Capistrano scenic roadway. There are limited views of the Proposed Project from this roadway at this time (refer to PEA Figure 4.1-3h [Photograph 16]). The proposed distribution line component would remove distribution structures from this corridor,

and would, therefore, represent a minor improvement in views from this county and city scenic roadway.

### **6.2.3 Question 2c – Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

#### **Construction – Less than Significant Impact**

Construction-related visual impacts associated with the Proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings. Construction-related visual impacts would result from the presence of equipment, materials, and work crews along the Proposed Project alignment. Although these effects are relatively short-term, they would be most noticeable to residents who live in close proximity and motorists traveling along adjacent roadways. Construction activity may also be noticeable from nearby parks and open space areas. While construction of the distribution line component is expected to take place over an approximately 11 month period (spread out over a 1.5 year period), construction at specific locations along the route would take considerably less time (sometimes as little as 1 to 2 weeks). Construction activities would be noticeable to local residents, motorists, and recreational users to varying degrees. These temporary construction-related visual impacts would be less than significant for the distribution line component, and less than significant with implementation of Applicant Proposed Measures (APMs) AES-1 and AES-2 (refer to PEA Section 4.1, Aesthetics) for the Proposed Project. Implementation of these APMs would ensure that this impact remains less than significant by minimizing local residents' and motorists' views of construction work areas and laydown areas.

#### **Operations and Maintenance – Less than Significant Impact**

The distribution line component involves undergrounding and relocating distribution lines in an area where numerous electric transmission, distribution, and substation facilities are seen within the public viewshed. PEA Figures 4.1-3a through 4.1-3r (Photographs of the Project and Vicinity) present a set of 36 photographs that show representative visual conditions and existing public views within the Proposed Project area including views of existing distribution facilities. Photograph locations are shown on PEA Figures 4.1-2a and 4.1-2b (Photograph Viewpoint Locations). For the purposes of this discussion, the distribution component is addressed in two portions: 1) from Capistrano Substation to Forster Ridge, and 2) Talega Substation. A map of the distribution line route is depicted on Figures 1 and 2.

##### *Capistrano Substation to Forster Ridge*

Existing distribution facilities in the vicinity of the existing Capistrano Substation include those located within and connecting to the substation. Photograph No. 3 (refer to PEA Figure 4.1-3b), from Camino Capistrano looking toward the substation, shows several poles and overhead conductors in the area. Photograph Nos. 5 and 6 (refer to PEA Figure 4.1-3c) represent views toward the substation from the south which show wood poles and overhead conductors of distribution lines, along with lattice towers and substation equipment, visible against the sky and a backdrop of distant hillsides. These photographs show that utility structures including portions of the substation are typical features in the adjacent neighborhood. The existing distribution

lines run from the Capistrano Substation east across Junipero Serra Park, then cross I-5 along with overhead transmission line conductors (refer to Photograph No. 10 on PEA Figure 4.1-3e).

In the area around the proposed San Juan Capistrano Substation, the proposed distribution lines will be undergrounded. Distribution lines extending east from the substation through Junipero Serra Park will also be removed and relocated underground. Distribution lines crossing I-5 will be rebuilt with new cable poles to the west in Serra Park and to the east along Rancho Viejo Road.

After crossing I-5 and Rancho Viejo Road, the existing distribution facilities, including wood poles and overhead conductors, run southeast paralleling the Proposed Project transmission lines. Photograph No. 11 (refer to PEA Figure 4.1-3f), from Rancho Viejo Road shows transmission towers and conductors appearing above street trees. Distribution lines can also be seen crossing over the road with wood poles mostly screened by trees. An existing distribution line appears alongside transmission lines through San Juan Capistrano residential neighborhoods; however, because of their smaller scale, distribution poles appear as secondary elements in the utility corridor (refer to Photograph Nos. 20 and 21 on PEA Figures 4.1-3j and 4.1-3k). The distribution lines continue to San Juan Hills High School where they are undergrounded. Existing distribution lines then continue south along La Pata Avenue, terminating near the Prima Deshecha Landfill. Photograph No. 23 (refer to PEA Figure 4.1-3l) from La Pata Avenue east of San Juan Hills High School shows multiple overhead utility lines including distribution lines running along the road. Transmission and other utility lines are established features along this four-lane arterial.

As part of the Proposed Project, the existing distribution line facilities from I-5 to San Juan Hills High School (including poles and overhead conductors) that are located within the Proposed Project transmission line corridor (mainly under-built on transmission structures) will be removed. The new distribution lines will be relocated underground along Rancho Viejo Road, SR-74, and La Pata Avenue. Beginning approximately 600 feet from the intersection of SR-74 and La Pata Avenue, the Proposed Project will rebuild approximately 1.15 miles of existing above-ground distribution line along La Pata Avenue. Wood poles will be replaced with slightly taller, weathered steel poles. Approximately 1,000 feet north of the La Pata Avenue-Vista Montana intersection, at a high school access road, the line will return underground and existing distribution lines south of the high school will be removed. Approximately 700 feet south of Vista Montana, the line will continue above ground, replacing existing wood poles with steel poles. The route will terminate near the Prima Deshecha Landfill.

### *Talega Substation*

Photograph No. 35 (refer to PEA Figure 4.1-3r), taken from Christianos Road in the Talega residential neighborhood shows transmission and other utility structures on the hillside beyond the residences. The Talega Substation appears against a landscape backdrop at the left edge of this view. In the view from this neighborhood, distribution lines appear subordinate to the transmission structures (mainly under-built on transmission poles). Photograph No. 36 (refer to PEA Figure 4.1-3r) is a view of the open hilly landscape and Talega Substation as seen from the undeveloped area near the Prima Deshecha Trail south of Talega. Poles of power lines leading into the substation are visible on the right side of the photograph.

Around Talega Substation, the distribution line component of the Proposed Project involves locating new underground distribution lines. Additionally, two existing wood poles will be replaced with steel poles (Pole 7b as described within the PEA and one additional pole at the terminus of Avenida Pico – refer to Figure 2, Sheet 5).

#### *Overall Change to the Existing Visual Setting*

The distribution line component will remove visible distribution structures including poles and overhead lines along approximately 2.4 miles of the Proposed Project route. New cable poles will be installed to transition the lines from above-ground to underground position in limited locations, such as in Junipero Serra Park at the edge of I-5, along Rancho Viejo Road (refer to Photograph No. 11 on PEA Figure 4.1-3f), and on La Pata Avenue (Photograph No. 23, PEA Figure 4.1-3l). These poles will be somewhat larger than existing distribution poles. However, given the presence of larger scale transmission structures in these areas, the visual effect will be minor and not particularly noticeable. Additionally, mature trees in Junipero Serra Park and along Rancho Viejo Road will substantially screen these poles.

As part of the Proposed Project, overhead distribution lines will be replaced along portions of La Pata Avenue. Wood poles will be replaced with slightly taller, weathered steel poles. Given the presence of multiple transmission and other utility structures along this roadway corridor, the changes made by the replacement line will not be particularly noticeable and will not affect the existing landscape character in this area.

In a few locations, the distribution line project will introduce new or replacement distribution structures into areas where utility structures, including larger transmission structures, are established features. Overall, however, the distribution component involves a substantial decrease in the number of visible structures in residential areas of San Juan Capistrano. In these areas, it will result in an improvement in the visual character of the landscape setting. As a result, impacts would be less than significant.

#### **6.2.4 Question 2d – New Light or Glare**

##### **Construction – Less than Significant Impact**

Construction will occur during daytime hours (no nighttime work is currently anticipated for the distribution line component). However, even if limited construction activities were to occur at night, it would be for a relatively brief period of time (2 to 4 hours) and would not require a substantial source of light. Therefore, this impact would be less than significant.

##### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Neither the existing nor proposed distribution line facilities include any permanent lighting. Therefore, there are no impacts.

### 6.3 AGRICULTURE AND FORESTRY RESOURCES

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Conflict with existing zoning for agricultural use, or a California Land Conservation Act of 1965 (Williamson Act) contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 6.3.1 Question 3a - Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Resources Agency, to non-agricultural use?

##### Construction – No Impact

There is no designated Prime Farmland, Unique Farmland, or Farmland of Statewide importance located within the impact area of construction activities. There is designated farmland located adjacent to the distribution line route, near the intersection of SR-74 and La Pata Avenue. However, it is not anticipated that this area would be directly impacted by construction activities. Where construction is required, currently there are not any agricultural land uses. All new distribution structures will be located in the immediate vicinity of existing distribution structures. Therefore, no impacts to farmland, designated or otherwise, would occur during construction of the distribution line work.

##### Operations and Maintenance – No Impact

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance of the Proposed Project because operation and maintenance of the Proposed Project would occur in the same or essentially the same locations as they occur

today under baseline, existing conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

### **6.3.2 Question 3b - Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

#### **Construction – No Impact**

A small portion of the Prima Deshecha Landfill is zoned as General Agriculture by the County of Orange. This area is not currently utilized for agriculture, and the land surrounding the existing utility ROW in this area is controlled by the landfill, so future agricultural utilization of this land is unlikely—especially during the relatively short time during which construction for the distribution line would occur. The area surrounding Pole Nos. D21 through D38 (which is zoned for General Agriculture by the County of Orange) is not currently viable for agricultural use because it is in use as part of an active landfill or open space between the San Juan Hills High School and La Pata Avenue. The landfill is not expected to close until well after the Proposed Project is complete and the area between La Pata Avenue and the high school is not well situated for agricultural use. Additionally, the required distribution line construction will be confined to areas within or immediately adjacent to current ROW, or within areas not affected by California Land Conservation Act of 1965 (Williamson Act) contracts such as streets and public parks. Therefore, there would be no conflicts with agricultural zoning or Williamson Act contracts, and no impact would occur.

#### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance of the proposed distribution lines because operation and maintenance would occur in the same or essentially the same locations as they occur today under baseline, existing conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

### **6.3.3 Question 3c - Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

#### **Construction– No Impact**

The distribution line route impact areas are not zoned as forest land or timberland, and there are no forests or timber harvest areas in the vicinity of the distribution line route. Therefore, no impact on forest land or timberland would occur.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting

from operation and maintenance because operation and maintenance would occur in the same or essentially the same locations as they occur today under baseline, existing conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### **6.3.4 Question 3d - Result in the loss of forest land or conversion of forest land to non-forest use?**

##### **Construction– No Impact**

There are no forests or similar areas in the vicinity of the distribution line route and, therefore, no conversion of forest land to other uses would occur as a result of the construction of proposed facilities and improvements under the distribution line work. Therefore, no impact on existing forest land or timberland would occur.

##### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance would occur in the same or essentially the same locations as they occur today under baseline, existing conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### **6.3.5 Question 3e - Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

##### **Construction – No Impact**

There is currently no utilized farmland within the distribution line impact area. Also, there are no forest lands or similar areas on or near the distribution line physical footprint. Therefore, the proposed distribution work would not result in other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. There would be no impacts in this regard.

##### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance would occur in the same or essentially the same locations as they occur today under baseline, existing conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

## 6.4 AIR QUALITY AND GREENHOUSE GASES

Would the Project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f.	Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 6.4.1 Question 4a - Conflict with or obstruct implementation of the applicable air quality plan?

#### Construction – Less than Significant Impact

The distribution line component is located within the South Coast Air Quality Management District's (SCAQMD's) jurisdiction. The most recent air quality management plan adopted by the SCAQMD for the South Coast Air Basin (Basin) is the 2007 Air Quality Management Plan (AQMP). The distribution line construction would comply with applicable federal, state, and local laws.

The control strategies proposed in the 2007 AQMP focus on emissions of fine particulate matter less than 2.5 microns (PM<sub>2.5</sub>) and ozone precursors, and identify precursor emissions as the key source of PM<sub>2.5</sub> in the atmosphere, as opposed to directly emitted PM<sub>2.5</sub>. The distribution line component would not conflict with or obstruct implementation of the 2007 AQMP, as it will be in compliance with applicable rules and regulations adopted by the SCAQMD for the purpose of attaining and maintaining the air quality standards. The 2007 AQMP anticipates construction activities in its emissions budget and assumes that projects would comply with requirements for construction equipment and control of fugitive dust emissions, thereby, reducing emissions of

PM<sub>2.5</sub> and ozone precursors to the extent feasible. Through its compliance with applicable rules and regulations, the distribution line construction would not conflict with or obstruct implementation of the 2007 AQMP, and impacts will be less than significant.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts relating to compliance with the 2007 AQMP from operation and maintenance of the distribution line component because operation and maintenance would occur in the same or essentially the same locations, and would utilize the same type of equipment as current operation and maintenance activities that occur today under existing, baseline conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### **6.4.2 Question 4b - Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

##### **Construction – Significant Short Term Impact**

Certain distribution facilities that are affected by the San Juan Capistrano Substation rebuild or construction of new 230kV transmission lines will be relocated. A description of the required distribution line work is provided in Section 2.0 of this Analysis.

The proposed construction schedule is presented in Section 2.5 of this Analysis (Construction Schedule). The distribution line construction is anticipated to start in November 2013 and be completed by September 2015.

Construction emissions would be generated from heavy construction equipment, vehicles, and fugitive dust. Emissions were estimated based on the construction schedule and equipment requirements for the Proposed Project provided by SDG&E. Emissions were calculated with the same methodologies discussed in Section 4.3 of the PEA (Air Quality and Greenhouse Gases). Emissions were calculated assuming fugitive dust and equipment best management practices (BMPs) would be employed to reduce emissions to the extent possible as discussed in Section 4.3 of the PEA.

Table 5, Estimated Construction Emissions for Distribution Line Construction, presents a summary of the daily construction emissions for each phase of the distribution line construction, with comparisons to the applicable SCAQMD significance thresholds. Emission calculations are provided in Appendix C of this Analysis (Air Quality Emissions Calculations).

**Table 5: Estimated Construction Emissions for Distribution Line Construction**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<i>Total Construction Emissions, lbs/day</i>						
<b>PART 1: Reroute 2-12kV Circuits to Temporary Position - 2013</b>						
<b>Undergrounding 1 – Construction of 800’ of Underground Line</b>						
Heavy Construction Equipment	9.61	32.08	73.03	0.10	3.64	3.24
Worker Vehicles	0.48	9.46	0.87	0.01	0.26	0.11
Construction Truck Trips	0.30	1.17	7.31	0.01	0.45	0.29
<b>TOTAL</b>	<b>10.38</b>	<b>42.70</b>	<b>81.21</b>	<b>0.12</b>	<b>4.35</b>	<b>3.64</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	9.61	32.08	73.03	0.10	3.64	3.24
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Conductor Pulling – UG1</b>						
Heavy Construction Equipment	2.28	7.26	22.05	0.03	0.72	0.64
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.06
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>2.55</b>	<b>12.37</b>	<b>22.67</b>	<b>0.04</b>	<b>0.89</b>	<b>0.72</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	2.28	7.26	22.05	0.03	0.72	0.64
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Cable Pole Foundation</b>						
Heavy Construction Equipment	2.12	8.26	15.52	0.02	0.68	0.61
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.09
Construction Truck Trips	0.06	0.23	1.46	0.00	0.09	0.06

**Table 5 (cont): Estimated Construction Emissions for Distribution Line Construction**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>TOTAL</b>	<b>2.56</b>	<b>16.06</b>	<b>17.68</b>	<b>0.04</b>	<b>0.98</b>	<b>0.75</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	2.12	8.26	15.52	0.02	0.68	0.61
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>PART 2: Construct 12 kV Distribution Circuits – 2014/2015</b>						
<b>Construct Cable Pole Foundations (I-5)</b>						
Heavy Construction Equipment	2.48	10.22	19.55	0.03	0.80	0.71
Worker Vehicles	0.38	0.01	0.10	0.05	0.21	0.09
Construction Truck Trips	0.06	0.23	1.46	0.00	0.09	0.06
<b>TOTAL</b>	<b>2.92</b>	<b>10.47</b>	<b>21.12</b>	<b>0.08</b>	<b>1.10</b>	<b>0.86</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	2.48	10.22	19.55	0.03	0.80	0.71
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Set Cable Poles (I-5)</b>						
Heavy Construction Equipment	1.06	3.01	8.84	0.01	0.29	0.26
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.09
Construction Truck Trips	0.06	0.23	1.46	0.00	0.09	0.06
<b>TOTAL</b>	<b>1.50</b>	<b>10.81</b>	<b>11.00</b>	<b>0.03</b>	<b>0.59</b>	<b>0.41</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.06	3.01	8.84	0.01	0.29	0.26
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

**Table 5 (cont): Estimated Construction Emissions for Distribution Line Construction**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Stringing Conductor (I-5)</b>						
Heavy Construction Equipment	1.58	5.23	13.75	0.03	0.46	0.41
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.09
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>1.98</b>	<b>12.87</b>	<b>14.61</b>	<b>0.04</b>	<b>0.70</b>	<b>0.51</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.58	5.23	13.75	0.03	0.46	0.41
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Undergrounding 2 – Trenching from Capistrano to Rancho Viejo Road</b>						
Heavy Construction Equipment	6.09	23.37	44.22	0.06	2.51	2.23
Worker Vehicles	0.48	9.46	0.87	0.01	0.26	0.11
Construction Truck Trips	0.30	1.17	7.31	0.01	0.45	0.29
<b>TOTAL</b>	<b>6.87</b>	<b>33.99</b>	<b>52.39</b>	<b>0.09</b>	<b>3.21</b>	<b>2.63</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	6.09	23.37	44.22	0.06	2.51	2.23
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Conductor Pulling – Undergrounding 2</b>						
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.56	5.49	14.44	0.03	0.48	0.42
Localized Significance Threshold	N/A	1,343	334	N/A	11	8

**Table 5 (cont): Estimated Construction Emissions for Distribution Line Construction**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Conductor Pulling – Rancho Viejo Road</b>						
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.56	5.49	14.44	0.03	0.48	0.42
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Conductor Pulling – La Pata Avenue</b>						
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.56	5.49	14.44	0.03	0.48	0.42
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Construct New Poles – La Pata Avenue</b>						
Heavy Construction Equipment	2.18	8.60	17.30	0.03	0.67	0.60
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.06	0.23	1.46	0.00	0.09	0.06
<b>TOTAL</b>	<b>2.49</b>	<b>13.88</b>	<b>19.23</b>	<b>0.04</b>	<b>0.90</b>	<b>0.70</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

**Table 5 (cont): Estimated Construction Emissions for Distribution Line Construction**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Total On-site Emissions</b>	2.18	8.60	17.30	0.03	0.67	0.60
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Stringing (Overhead) – La Pata Avenue</b>						
Heavy Construction Equipment	1.90	6.32	17.39	0.03	0.57	0.51
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.07
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>2.30</b>	<b>13.96</b>	<b>18.25</b>	<b>0.04</b>	<b>0.81</b>	<b>0.60</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.90	6.32	17.39	0.03	0.57	0.51
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Conductor Pulling – La Pata Avenue and Vista Montana</b>						
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.56	5.49	14.44	0.03	0.48	0.42
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Remove Poles and Conductor – La Pata Avenue</b>						
Heavy Construction Equipment	3.21	9.82	27.96	0.05	0.93	0.83
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>3.48</b>	<b>14.93</b>	<b>28.59</b>	<b>0.06</b>	<b>1.10</b>	<b>0.89</b>
Significance Thresholds	75	550	100	150	150	55

**Table 5 (cont): Estimated Construction Emissions for Distribution Line Construction**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	3.21	9.82	27.96	0.05	0.93	0.83
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Undergrounding 3 – North of Talega Substation</b>						
Heavy Construction Equipment	6.09	23.37	44.22	0.06	2.51	2.23
Worker Vehicles	0.48	9.46	0.87	0.01	0.26	0.09
Construction Truck Trips	0.30	1.17	7.31	0.01	0.45	0.29
<b>TOTAL</b>	<b>6.87</b>	<b>33.99</b>	<b>52.39</b>	<b>0.09</b>	<b>3.21</b>	<b>2.60</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	6.09	23.37	44.22	0.06	2.51	2.23
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Conductor Pulling – North of Talega Substation</b>						
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05
Construction Truck Trips	0.01	0.07	0.16	0.00	0.03	0.02
<b>TOTAL</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Total On-site Emissions</b>	1.56	5.49	14.44	0.03	0.48	0.42
Localized Significance Threshold	N/A	1,343	334	N/A	11	8
<i>Above Localized Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

\*Based upon preliminary engineering.

As shown in Table 5, emissions for individual distribution line construction phases will be below both the SCAQMD's regional significance thresholds and the localized significance thresholds (LSTs) for all pollutants for each phase of construction. These emissions will result in a less than significant impact on air quality during construction.

It was assumed that for the purpose of estimating total cumulative emissions associated with construction of the distribution lines, the maximum daily emissions associated with construction of the distribution facilities and the simultaneous construction of the substation and transmission line components of the Proposed Project would occur in a single day. The construction schedule was reviewed to identify the month during which maximum emission would occur, for both the 2013 and 2014/2015 distribution line construction periods. Table 6, Estimated Maximum Construction Emissions, presents the maximum daily emissions associated with construction of the distribution facilities in 2013 (Rerouting of the 2-12 kV circuits to temporary position – new underground trench and conduit) and 2014/2015 (Construction of 12kV distribution circuits – new underground trench and conduit) with simultaneous maximum construction emissions for the substation and transmission components of the Proposed Project also under construction at the same time. The LSTs are not applicable because construction would not occur on one site during the maximum simultaneous construction scenario, but would occur at different locations.

**Table 6: Estimated Maximum Daily Construction Emissions**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<i>Total Maximum Construction Emissions, lbs/day</i>						
<b>2013 (November)</b>						
Reroute 2-12 kV Circuits to Temporary Position (Undergrounding 1)	10.38	42.70	81.21	0.12	4.35	3.64
Construct 138 and 69kV from Talega Hub to Talega Substation (Segment 4)	36.83	154.81	311.53	0.48	103.65	38.58
Below grade 138kV addition in Talega Substation	5.05	24.39	49.54	0.08	28.90	10.31
138 kV Capistrano Substation Getaways (Segment 1)	22.58	92.16	182.08	0.29	98.31	34.07
Remediate and demolish building in lower yard	4.19	20.49	32.80	0.06	40.48	9.36
<b>TOTAL</b>	<b>79.03</b>	<b>334.55</b>	<b>657.16</b>	<b>1.03</b>	<b>275.69</b>	<b>95.96</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>
<b>2015 (September)</b>						
Construct 12kV Distribution Circuits (Undergrounding 2)	6.87	33.99	52.39	0.09	3.21	2.63
Lower Yard 138/12kV Substation Construction <sup>1</sup>	12.97	44.56	103.09	0.20	3.85	3.32
Lower Yard 138/12kV Relay Testing	0.45	4.95	2.27	0.01	0.23	0.11

**Table 6 (cont): Estimated Maximum Daily Construction Emissions**

Emission Source	Pollutant					
	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>TOTAL</b>	<b>20.29</b>	<b>83.5</b>	<b>157.75</b>	<b>0.3</b>	<b>7.29</b>	<b>6.06</b>
Significance Thresholds	75	550	100	150	150	55
<i>Above Significance Thresholds?</i>	<i>No</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>No</i>	<i>No</i>
*Based upon preliminary engineering. <sup>1</sup> Includes construction of cable poles and underground conduit into new 138kV gas insulated substation (all located within substation property boundary).						

As shown in Table 6, maximum simultaneous construction emissions, including construction of the distribution facilities, would exceed the regional significance threshold for nitrogen oxides (NO<sub>x</sub>) in both November 2013 and September 2015, and for reactive organic gases (ROG), PM<sub>2.5</sub>, and coarse suspended particulate matter less than 10 microns (PM<sub>10</sub>) in November 2013. The exceeding of thresholds would occur with or without the distribution component of the Proposed Project. All other emissions would remain below the significance thresholds.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

### **6.4.3 Question 4c - 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)?**

#### **Construction – Significant Short Term Impact**

As discussed under Question 4b and shown previously in Table 6, maximum daily construction emissions (including the simultaneous construction of distribution, substation, and transmission facilities) would exceed the regional significance thresholds for NO<sub>x</sub> during the year 2013 and for NO<sub>x</sub> and PM<sub>2.5</sub> during the year 2014. These emissions would therefore result in a cumulatively significant, but temporary, impact on the ambient air quality during construction activities.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line

component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### **6.4.4 Question 4d - Expose sensitive receptors to substantial pollutant concentrations?**

##### **Construction – Less than Significant Impact**

Given that the construction of the distribution facilities is short-term relative to the exposure periods for carcinogenic and chronic risks, and construction activities would move along the distribution lines, impacts to sensitive receptors would not result in substantial exposure to diesel particulate matter. Impacts would be less than significant.

##### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### **6.4.5 Question 4e - Create objectionable odors affecting a substantial number of people?**

##### **Construction – Less than Significant Impact**

Odor impacts are not anticipated due to the nature of the proposed activities. Typical odor nuisances include hydrogen sulfide, ammonia, chlorine, and other sulfide-related emissions. No substantial sources of these pollutants will exist during construction, including construction of the distribution lines. Construction equipment and construction operations would emit trace pollutants that could be considered to have objectionable odors, such as diesel exhaust. These odors would be temporary in nature. Odor impacts would be less than significant because of the temporary nature of construction activities.

##### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### 6.4.6 Question 4f - Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?

##### Construction – No Impact

As described previously under compliance with an applicable air quality plan (2007 AQMP), the distribution line component would comply with applicable air quality rules and regulations. Construction is temporary, and would not diminish an existing air quality rule or future compliance requirement that would result in a significant increase in air pollutants. There would be no impact.

##### Operations and Maintenance – No Impact

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions. Therefore, no impacts from the operation and maintenance of the distribution lines would occur.

#### 6.4.7 Question 4g - Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

##### Construction – Less than Significant Impact

The main source of greenhouse gas (GHG) emissions associated with the proposed distribution line component would be combustion of fossil fuels during construction, which would be temporary. GHG emissions for construction were calculated using the same approach as criteria pollutant emissions for overall construction emissions. Estimated GHG emissions are summarized in Table 7, Greenhouse Gas Construction Emissions. Emission calculations are provided in Appendix C of this Analysis.

**Table 7: Greenhouse Gas Construction Emissions**

Construction Activity	GHG Emissions (metric tons)		
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Reroute 2-12kV circuits to temporary position	282	0.03	0.15
Construct 12 kV distribution circuits	1,071	0.07	0.24
<b>TOTAL</b>	<b>1,353</b>	<b>0.10</b>	<b>0.39</b>
<b>Global Warming Potential</b>	<b>1</b>	<b>21</b>	<b>310</b>
<b>CO<sub>2</sub> Equivalent</b>	<b>1,353</b>	<b>2</b>	<b>121</b>
<b>CO<sub>2</sub> Equivalent Total</b>	<b>1,476</b>		
<b>Amortized Construction Emissions (amortized over 30 years)</b>	<b>49</b>		

The distribution line component's total annualized construction carbon dioxide (CO<sub>2</sub>) -equivalent emissions of 49 metric tons are below the SCAQMD's significance threshold of 10,000 metric

tons of CO<sub>2</sub>-equivalent annually for industrial projects. When added to the total amortized emissions for the substation and transmission line components of the Proposed Project (559 metric tons of CO<sub>2</sub>-equivalent), the total amortized emissions of GHGs would be 608 metric tons of CO<sub>2</sub>-equivalent for the entire Proposed Project. This level of GHG emissions would not result in a significant impact on global climate. The distribution line component is, therefore, consistent with the goals of Assembly Bill (AB) 32. Impacts would be less than significant.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions.

Furthermore, by virtue of its compliance with applicable rules and regulations and its similarity to existing operation and maintenance requirements, the Proposed Project is consistent with AB 32's goals. Emissions would not differ from Business as Usual levels for operations and maintenance, and no net increase of GHG emissions would result. Therefore, there would be no impacts.

### **6.4.8 Question 4h - Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

#### **Construction – Less than Significant Impact**

As discussed under Question 4g, construction of the distribution lines would be temporary. GHG emissions are below the SCAQMD's significance threshold when amortized over a 30-year period as recommended by the SCAQMD. Construction equipment and vehicles supporting the construction of the Proposed Project would comply with the requirements implemented by the California Air Resources Board to reduce GHG emissions. Therefore, construction impacts are less than significant.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the same locations, and would utilize the same type of equipment, as current operation and maintenance activities that occur today under existing, baseline conditions.

The distribution line component would not increase the usage of sulfur hexafluoride in any substation facilities. The distribution line component would therefore not change any impacts associated with the utilization of sulfur hexafluoride as discussed within Section 4.3 of the PEA.

All aspects of operation and maintenance of the distribution line component would not substantially differ from existing conditions. There would be no net impacts.

## 6.5 BIOLOGICAL RESOURCES

Would the Project:		Potentially Significant Impact	Potentially Significant Unless APMs 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 6.5.1 Question 5a - 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?

#### Construction – Less than Significant Impact

##### Overview

Impacts to sensitive species could result from disturbance to habitat utilized by special status species, including species covered under the *SDG&E Subregional Natural Communities Conservation Plan (NCCP)* (similar to the impacts discussed for the transmission and substation components of the Proposed Project [refer to PEA Section 4.4.4.2]). Potential impacts from

construction of the distribution line component would be avoided, minimized, and mitigated through implementation of measures within the *SDG&E Subregional NCCP*. A detailed description of the potential impacts and *SDG&E Subregional NCCP* Operation Protocols, Habitat Enhancement Measures and Mitigation are included within PEA Section 4.4.4.2. With the implementation of the *SDG&E Subregional NCCP* as a project feature, impacts are expected to be less than significant for the distribution line component.

*Impacts to Vegetation Communities*

The distribution line component would permanently impact approximately 0.014 acre of CSS, 0.072 acre of Disturbed CSS, 0.13 acre of Ruderal vegetation, 0.029 acre of Disturbed habitat, and 0.063 acre of Ornamental vegetation. The distribution line component would also temporarily impact approximately 0.007 acre of CSS, 0.064 acre of Disturbed CSS, 0.725 acre of Ruderal vegetation, 0.055 acre of Disturbed habitat, and 0.64 acre of Ornamental vegetation. There would be no permanent or temporary impacts to Coastal Freshwater Marsh, Southern willow scrub (SWS), Disturbed SWS, or Riparian Scrub habitat. Impacts to sensitive habitats would be limited to CSS and Disturbed CSS. These impacts are also summarized in Table 8: Vegetation Community Impacts in Acres. Table 8 also provides estimated impacts for sensitive habitats for the Proposed Project.

**Table 8: Vegetation Community Impacts in Acres**

<b>Vegetation Community</b>	<b>Permanent Impacts</b>	<b>Temporary Impacts</b>
<b>Distribution Line Impacts</b>		
Coastal Sage Scrub	0.014	0.007
Disturbed Coastal Sage Scrub	0.072	0.064
Coastal Freshwater Marsh	0.0	0.0
Southern Willow Scrub	0.0	0.0
Disturbed Southern Willow Scrub	0.0	0.0
Riparian Scrub	0.0	0.0
<i>Subtotal</i>	<i>0.086</i>	<i>0.071</i>
<b>Proposed Project Impacts Identified In PEA<sup>1</sup></b>		
Coastal Sage Scrub	0.846	0.443
Disturbed Coastal Sage Scrub	0.718	0.856
Coastal Freshwater Marsh	0.0	0.0
Southern Willow Scrub	0.0	0.0
Disturbed Southern Willow Scrub	0.0	0.0

**Table 8 (cont.): Vegetation Community Impacts in Acres**

<b>Vegetation Community</b>	<b>Permanent Impacts</b>	<b>Temporary Impacts</b>
Riparian Scrub	0.0	0.0
<b>Total</b>	<b>1.65</b>	<b>1.37</b>
Notes: *Based upon preliminary engineering. <sup>1</sup> See PEA Table 4.4-3.		

The *SDG&E Subregional NCCP* allows for impacts to habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional NCCP*. Compliance with the *SDG&E Subregional NCCP* is designed to avoid impacts whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. Consistent with the *SDG&E Subregional NCCP*, the distribution line work has been designed to avoid impacts, including using existing access roads to the greatest extent feasible and placing any new facilities, staging areas, or access roads outside drainage areas and habitats when feasible. Where avoidance of sensitive habitat areas (CSS and Disturbed CSS) is not possible or where sensitive habitat areas exist adjacent to work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* for remaining impacts to sensitive habitats would ensure that these impacts remain less than significant.

#### *Impacts to Sensitive Species*

Compliance with the *SDG&E Subregional NCCP* Sections 7.1 and 7.2 would ensure that potential impacts to sensitive species would remain less than significant, in the same manner as potential impacts to sensitive species from construction of substation and transmission line facilities (refer to PEA Section 4.4, Biological Resources). The distribution line route does not contain known or suspected presence of any sensitive species not already identified within the PEA and Biological Resources Assessment prepared for the transmission line and substation components of the Proposed Project (refer to Appendix D of this Analysis [Addendum to the Biological Resources Assessment]). Construction of the distribution lines will only result in relatively minor impacts to sensitive habitats, as stated in Table 8. The distribution line component has been (and would continue to be) designed to avoid impacts, including using existing access roads to the greatest extent feasible and placing any new facilities, staging areas, or access roads outside of drainages and sensitive habitats when feasible. This would implement the *SDG&E Subregional NCCP* and is similar to potential impacts for the transmission line and substation components of the Proposed Project.

#### *Impacts to Common Species*

The distribution line has been (and would continue to be) designed to avoid impacts, including using existing access roads to the greatest extent feasible and placing any new facilities, staging areas, or access roads outside of drainages and habitats when feasible. This would implement the *SDG&E Subregional NCCP* and is similar to the transmission line and substation components of the Proposed Project. Wildlife habitat is not expected to be adversely affected

due to the location of the proposed distribution lines (primarily existing franchise and underground conduit) and the presence of potential foraging areas near the Proposed Project area. Where avoidance of habitat areas supporting wildlife is not possible, or where sensitive habitat areas may exist adjacent to work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* would ensure that these impacts remain less than significant.

*SDG&E Subregional NCCP Operation Protocols, Habitat Enhancement Measures and Mitigation (Incorporated Into Proposed Project Design)*

- Vehicles would be kept on access roads and limited to 15 miles per hour (Section 7.1.1, 1.).
- No plants would be collected (Section 7.1.1, 2.).
- Measures to prevent or minimize wild fires would be implemented, including exercising care when driving and not parking vehicles where catalytic converters can ignite dry vegetation (Section 7.1.1, 9.).
- Field crews would refer all environmental issues, including questions regarding environmental impacts, to the Environmental Surveyor (Section 7.1.1, 10.).
- All SDG&E personnel would participate in an environmental training program conducted by SDG&E, with annual updates (Section 7.1.2, 11.).
- The Environmental Surveyor would conduct preactivity studies for all activities occurring in natural areas, and would complete a preactivity study form including recommendations for review by a biologist and construction monitoring, if appropriate. The form would be provided to the California Department of Fish and game (CDFG) and the United States Fish and Wildlife Service (USFWS) but does not require their approval (Section 7.1.3, 13.).
- The Environmental Surveyor would flag boundaries of habitats to be avoided and, if necessary, the construction work boundaries (Section 7.1.3, 14.).
- The Environmental Surveyor would conduct monitoring as recommended in the preactivity study form (Section 7.1.4, 35.).
- Fugitive dust would be controlled by regular watering and speed limits (Section 7.1.4, 39.).
- New access roads would be designed and constructed according to the *SDG&E Guide for Encroachment on Transmission Rights-of-Way (4/91)* (Section 7.1.6, 46.). No wildlife, including rattlesnakes, would be collected or harmed, except to protect life and limb (Section 7.1.1, 2. and 7).
- Feeding of wildlife is not allowed (Section 7.1.1, 4.).
- No pets are allowed within the ROW (Section 7.1.1, 5.).
- Littering is not allowed, and no food or waste would be left on the right-of-way or adjacent properties (Section 7.1.1, 8.).

- Field crews would refer all environmental issues, including wildlife relocation, dead or sick wildlife, or questions regarding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may be necessary to assist with wildlife relocations (Section 7.1.1, 10.).
- Supplies, equipment, or construction excavations where wildlife could hide (e.g., pipes, culverts, pole holes, trenches) would be inspected prior to moving or working on/in them (Section 7.1.4, 37. and 38.).
- During the nesting season, the presence or absence of nesting species (including raptors) shall be determined by a biologist who would recommend appropriate avoidance and minimization measures (Section 7.1.6, 50).

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates extensive existing electric transmission, distribution and substation facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities required for the distribution line component would not materially increase in frequency or intensity from current operation and maintenance activities for the existing distribution infrastructure. Therefore, there would be no impact.

### **6.5.2 Question 5b - Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?**

#### **Construction – Less than Significant Impact**

Construction activities associated with the proposed distribution line relocation work could result in impacts to sensitive natural communities. Impacts could result from blading, scraping, excavation, and erosion, along with fragmentation and human access to restricted areas. The *SDG&E Subregional NCCP* allows for impacts to habitats when incidental to otherwise lawful activities and when conducted in full compliance with the SDG&E Subregional NCCP. Compliance with the *SDG&E Subregional NCCP* is designed to avoid impacts whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. With respect to sensitive habitat impacts, implementation of the *SDG&E Subregional NCCP* would ensure that potential impacts remain less than significant.

As described in Section 6.5.1 of this Analysis and PEA Section 4.4, there would be no permanent or temporary impacts to riparian habitats including Coastal Freshwater Marsh, SWS, Disturbed SWS, or Riparian Scrub habitat. Impacts to sensitive habitats are limited to 1.65 acres of permanent impact and 1.37 acres of temporary impact to CSS and Disturbed CSS habitats. These impacts are also summarized above in Table 8.

Consistent with the *SDG&E Subregional NCCP*, the distribution line component has been designed to avoid impacts, including using existing access roads to the greatest extent feasible, and placing any new facilities, staging areas, or access roads outside drainages and habitats when feasible. Where avoidance of sensitive habitat areas (CSS and Disturbed CSS) is not possible, or

where sensitive habitat areas exist adjacent to work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* would ensure that these impacts remain less than significant.

*SDG&E Subregional NCCP* Operation Protocols, Habitat Enhancement Measures and Mitigation

- Impacts to CSS and Disturbed CSS habitat for new facilities would be mitigated for permanent impacts at a 2:1 ratio in preserve areas and at a 1:1 ratio outside preserve areas (*SDG&E Subregional NCCP* Section 7.2).
- Impacts to CSS and Disturbed CSS habitat for new facilities would be mitigated for temporary impacts through basic site remediation, including hydroseeding for erosion control, if necessary. For areas greater than 500 square feet, any acreage not meeting *SDG&E Subregional NCCP* criteria would be deducted from SDG&E Mitigation Credits at a 1:1 ratio. For areas of less than 500 square feet, success criteria would not be required to be met (Sections 7.2 and 7.4).

As a result of implementation of the above measures, potential impacts to sensitive habitats would be less than significant.

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities required for the distribution line component would not materially increase in frequency or intensity from current operation and maintenance activities for the existing distribution infrastructure. Therefore, there would be no impact.

**6.5.3 Question 5c - 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, etc.) through direct removal, filling, hydrological interruption, or other means?**

**Construction – Less than Significant Impact**

Construction of the distribution line component would result in no permanent or temporary impacts to waters under the jurisdiction of the United States Army Corps of Engineers, Regional Water Quality Control Board (RWQCB), or CDFG. Indirect impacts to jurisdictional drainages (such as increased sedimentation or introduction of pollutants) would be avoided through the use of technical design and construction techniques to minimize and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of BMPs, as outlined with the *SDG&E Subregional NCCP* (Section 7.1.4, 20), *SDG&E Water Quality Construction Best Management Practices Manual* (BMP Manual), and adherence to the Storm Water Pollution Prevention Plan (SWPPP) that would be prepared as part of the Proposed Project's compliance with National Pollutant Discharge Elimination System (NPDES) regulations. Therefore, impacts to jurisdictional waters would be less than significant.

## **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Placement of new poles or structures for the relocated overhead distribution lines would occur in the immediate vicinity of existing structures within the ROW, and no disturbance to jurisdictional waters would be required in order to operate and maintain the distribution lines, or the remainder of the Proposed Project. Therefore, there would be no impact.

### **6.5.4 Question 5d - 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?**

#### **Construction – Less than Significant Impact**

It is not anticipated that the distribution line component would have a significant adverse effect on wildlife movement (similar to the impacts associated with the transmission line component of the Proposed Project). The required distribution line work would be located almost entirely within an existing ROW where transmission and distribution lines are currently present. Placement of pole structures for the new overhead distribution line would occur in the immediate vicinity of existing structures within the ROW, and due to their small footprint would maintain wide natural areas to allow the continued movement of wildlife species. The required distribution line work would also avoid or span existing drainages that often serve as wildlife movement corridors. Similar to construction of the transmission line component of the Proposed Project, distribution line construction could temporarily disrupt wildlife movement, at least during daylight hours. It is expected that regional wildlife movement would not be significantly impacted by the Proposed Project due to minimal loss of protective cover (vegetation), roosts, forage habitat, or movement corridors. Furthermore, the measures outlined in PEA Sections 4.4.4.2 and 4.4.4.3 would avoid or minimize impacts associated with construction. Therefore, the potential impacts to wildlife movement are anticipated to be less than significant.

## **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Placement of new poles or structures for the relocated overhead distribution lines would occur in the immediate vicinity of existing structures within the ROW. Due to the overall decrease in number of structures and the associated small footprint of these structures, wide natural areas would be maintained to allow the continued movement of wildlife species. Once construction is completed, no effects are expected that would preclude wildlife from returning. Therefore, there would be no impact.

**6.5.5 Question 5e - Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**Construction – No Impact**

Local governments are precluded from regulating public utilities through their zoning laws, land use laws, ordinances and other police powers by the exclusive jurisdiction of the CPUC. To the extent issuance of a tree removal permit or other approval by a local jurisdiction is a discretionary action; CPUC approval of the CPCN would preempt local authority. Because these local policies or ordinances do not apply, there would be no impact.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric transmission, distribution and substation facilities throughout the proposed distribution alignment line area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities would not materially increase in frequency or intensity. Standard operational and maintenance activities, such as road grading, tree trimming, structure installation, and replacement and repairs, would not conflict with any local policies or ordinances protecting biological resources. Therefore no impacts are expected as result of operation and maintenance.

**6.5.6 Question 5f - Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan?**

**Construction – No Impact**

The distribution line component traverses through areas within the *Southern Orange County Subregional NCCP*. The distribution line component would occur within the geographic boundaries of and would comply with the requirements of the *SDG&E Subregional NCCP*. The *SDG&E Subregional NCCP* contains measures to coordinate with Habitat Conservation Plan (HCP) implementing entities and to provide additional mitigation in the event of permanent impacts to HCP/NCCP preserve areas. Therefore, no conflicts are expected with the *Southern Orange County Subregional NCCP* during construction of the relocated distribution lines. The *SDG&E Subregional NCCP* is independent of other NCCP/HCPs and is not dependent upon the implementation of such plans and is not superseded by other plans. SDG&E would coordinate with the appropriate authorities during the Proposed Project approval process to ensure that the impacts, mitigation measures, and operational protocols are implemented for the Proposed Project under the *SDG&E Subregional NCCP*. With the implementation of the *SDG&E Subregional NCCP*, no impacts are expected.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Any future operations and maintenance activities will be conducted in compliance with the *SDG&E Subregional NCCP*. Standard operational and maintenance activities, such as

road grading, tree trimming, structure installation, and replacement and repairs, would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan. Therefore there is no impact as a result of operation and maintenance.

## 6.6 CULTURAL RESOURCES

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 6.6.1 Question 6a - Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

#### Construction and Operation & Maintenance – No Impact

The distribution line component would not cause a substantial adverse change in the significance of an historical resource; there are no known existing historic resources within the distribution line footprint. Therefore, the distribution line component of would not impact any historical resources.

### 6.6.2 Question 6b - Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

#### Construction – Less than Significant Impact with Incorporation of APMs.

##### *Record Search Results*

An additional records search was conducted on July 3, 2012 by Susan Underbrink, RPA, of TRC at the South Central Coastal Information Center (SCCIC) housed at California State University at Fullerton (see Appendix E of this Analysis [Addendum to the Cultural Resources Assessment for the South Orange County Reliability Enhancement Project, Orange and San Diego Counties, California date May 2012], and Appendix F of this Analysis [Records Search Results {Confidential Appendix}]). This additional record search identified two additional previously identified cultural resources within one-quarter mile of the distribution line component of the Proposed Project (refer to Table 9, Previously Recorded Cultural Resources within ¼ Mile of the Distribution Line Route). Site (30-000026) lies within the distribution line route.

**Table 9: Previously Recorded Cultural Resource within ¼ Mile of the Distribution Line Route**

Primary Number	Brief Description	Recorder and date
30-000025	Camp	1949
30-000026*	Lithic scatter with groundstone	1949; Schuster, 1977; Cooley, 1980; Wlodarski & Romani, 1985; Demcak, 2010
* Denotes a cultural resource within the Proposed Distribution Line Route		

*Archaeological Field Survey Results*

Refer to Appendix E of this Analysis for a complete description of the field survey methods for the archaeological field survey conducted for the distribution line component. The previously recorded prehistoric cultural resource (30-000026) was not relocated within the distribution line survey area during the field survey, and site (30-000363-previously described in PEA Section 4.5, Cultural Resources) was not relocated near the Talega Substation. No new cultural resources were located during the cultural resource survey.

*Potential Impacts*

Construction of the distribution line component (including potential grading/earth work, and excavation of holes for the installation of the distribution line structures) could potentially impact prehistoric archaeological sites by disturbing subsurface soils, and potentially disturbing or destroying unknown buried cultural deposits. Any possible potential impacts would remain less than significant with the implementation of the proposed APM's CUL-1 through CUL-6, as outlined within the PEA (refer to PEA Section 4.5).

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Moreover, SDG&E already has standard internal programs and practices that avoid cultural impacts and those programs and practices would not change as a result of the Proposed Project or distribution line component. There would be no operational impacts on cultural resources along the distribution line once the distribution line component is constructed. The only activities that would occur would be regular maintenance and repairs, such as structure and insulator replacements. These activities are the same as happen today under existing conditions, and would have no effect on archaeological resources. Therefore, no impacts to cultural resources are anticipated during the continuing operation and maintenance of the distribution line component.

### **6.6.3 Question 6c - Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

#### **Construction – Less than Significant Impact with Incorporation of APMs**

Based on the geologic map of Orange County and the previous records searches conducted through the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County, no previously recorded vertebrate paleontological sites are known to exist within the distribution line area. However, paleontological sites do occur in similar age rock units outside the distribution line route but within the southern Orange County/San Diego region.

Any excavations in the Capistrano Formation exposed in the elevated portions of the distribution line route area may encounter significant fossil vertebrate remains and are considered moderate to high in paleontological sensitivity. The distribution line route potentially contains rock unit types that have a high potential for paleontological resources throughout the region (Capistrano Formations). Thus, there is the potential for impacts to paleontological resources to occur when earthwork activities are performed, such as grading operations and excavation that cuts into the geological deposits (formations) within which fossils are buried, especially when the excavations go below three feet in depth. Impacts from construction of the distribution line component to unique paleontological resources are potentially high from the south side of San Juan Creek to the Talega Substation. However, potential impacts would be reduced to a less than significant level with the implementation of the proposed APMs CUL-1, CUL-8, and CUL-9, as outlined within PEA Section 4.5 (Cultural Resources).

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Moreover, SDG&E already has standard internal programs and practices that avoid cultural impacts and those programs and practices would not change as a result of the operation and maintenance of the distribution line component. Ground-disturbing activities associated with distribution line operation and maintenance would be performed at similar intensities as they are currently conducted and at the locations already disturbed for distribution line construction. Therefore, no impacts to paleontological resources are anticipated during the continuing operation and maintenance of the distribution line.

### **6.6.4 Question 6d - Disturb any human remains, including those interred outside of formal cemeteries?**

#### **Construction – Less than Significant Impact**

There are no known existing cemeteries, previously recorded Native American or other human remains within or directly adjacent to the distribution line route. Therefore, the potential for the inadvertent discovery of Native American or other human remains during subsurface construction associated with the distribution line component is considered low. If human remains are encountered during the course of construction, SDG&E would halt work in the vicinity of the find and would implement the appropriate notification processes as required by

law (California Health and Safety Code 7050.5 and Public Resources Code 5097.98-99, and the Native American Graves Protection and Repatriation Act [NAGPRA]). As a result, potential impacts would be less than significant.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E’s existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Moreover, SDG&E already has standard internal programs and practices that avoid cultural impacts and those programs and practices would not change as a result of the distribution line component. Ground-disturbing activities associated with operation and maintenance of the distribution line component would be performed at locations that have been previously disturbed for distribution line construction. Therefore, no impacts to human remains are anticipated during the continuing operation and maintenance of the distribution line component.

**6.7 GEOLOGY, SOILS, AND MINERAL RESOURCES**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii.	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii.	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv.	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Be located on expansive soil, as defined by article 1803.5 of the California Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.7.1 Question 7a(i) – Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?**

**Construction – No Impact**

There are no active faults in the vicinity of the proposed distribution line work. The closest active fault is an offshore segment of the Newport-Inglewood fault located approximately 5.9 miles to the southwest. Therefore, no impacts from fault rupture are expected.

**Operations and Maintenance – No Impact**

There are no active faults in the vicinity of the proposed distribution line work. The closest active fault is an offshore segment of the Newport-Inglewood fault located approximately 5.9 miles to the southwest. Therefore, no impacts from fault rupture are expected.

**6.7.2 Question 7a(ii) – Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?**

**Construction – Less than Significant Impact**

Various faults are capable of generating strong seismic ground shaking in the proposed distribution line work area. However, because of the short construction period and the low likelihood of a moderate to large earthquake to occur during this time, the potential for construction personnel to experience strong seismic ground shaking is low. Due to the short construction period, the risk of exposure of people or structures to strong seismic ground shaking during construction is less than significant.

**Operations and Maintenance – Less than Significant Impact**

SDG&E currently maintains and operates existing electric facilities throughout the location of the distribution line component. SDG&E’s existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance

activities for the distribution line component would not materially increase in frequency or intensity. All proposed facilities would conform to current applicable seismic standards. Operations and maintenance activities for the related distribution lines would result in less overall structures, with newer, steel structures representing less susceptibility to strong seismic shaking than the existing wood structures. Therefore, no impacts would result.

**6.7.3 Question 7a(iii) – Expose people or structures to potential substantial adverse effects, including seismic-related ground failure, including Liquefaction?**

**Construction – Less Than Significant Impact**

Shaking from a moderate to large regional earthquake can potentially result in liquefaction where groundwater is shallow (i.e., within 40 feet of ground surface) and soils consist of uncompacted, granular materials. Based on the 2012 Geosyntec Consultants geotechnical study and the 2008 URS Corporation engineering geologic reconnaissance reports identified in PEA Section 4.6.6, areas susceptible to liquefaction do not occur in any location where the proposed distribution facilities are in the vicinity of proposed transmission facilities. Furthermore, where the distribution facilities are not in the vicinity of the transmission facilities, there are not located on substantial uncompacted soils potentially susceptible to liquefaction. Therefore, the potential for distribution facilities to be adversely affected by liquefaction is less than significant. Furthermore, because of the short construction period in this area and the low likelihood of a moderate to large earthquake to occur during this time, the risk of construction personnel being exposed to earthquake-induced liquefaction is less than significant.

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Therefore, no increased risk will result from operation and maintenance of the distribution line relocation work. No impacts are anticipated.

**6.7.4 Question 7a(iv) – Expose people or structures to potential substantial adverse effects, including landslides?**

**Construction – Less than Significant Impact**

A geologic hazard evaluation conducted by URS Corporation in 2008 and described in Section 4.6 of the PEA (Geology, Soils, and Mineral Resources) evaluated the landslide hazard potential in areas where the project distribution facilities are within the vicinity with some of the proposed transmission facilities. One small landslide hazard area was identified just east of I-5 that will be spanned by a new overhead distribution line segment, and associated poles are designed to be located outside the identified hazard zone. Furthermore, along Rancho Viejo Road, the new distribution facilities will be placed in existing underground conduit in the road ROW and, therefore, will have no potential to affect slope stability, and risk of adverse affects from landslides is low because these roads are outside of mapped landslide hazard areas. Some portions of the distribution line route to be replaced along La Pata Avenue are within areas mapped as having a landslide hazard. However, because these facilities will be located along the

existing roadway, negligible earthwork is anticipated for removal of existing poles and installation of new poles and grades will be returned to existing conditions as part of work. Therefore, the potential for construction to affect slope stability or be affected by slope stability in these areas is less than significant. Based on these considerations, the risk of landslides would be less than significant.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities would not materially increase in frequency or intensity. Therefore, no increased risk will result from operation and maintenance of the distribution line relocation work. No impacts are anticipated.

### **6.7.5 Question 7b – Result in substantial soil erosion or the loss of topsoil?**

#### **Construction – Less Than Significant Impact**

Much of the relocated distribution lines would be constructed by pulling conductors through existing underground conduit. Where work does occur on the surface, construction would occur along existing ROWs. Soil erosion or loss of topsoil could result from surface disturbances during construction activities.

Soil erosion and topsoil loss would be controlled by implementing SDG&E's BMP Manual during design and construction of the distribution line component. In addition, the Proposed Project would comply with the General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (Construction General Permit) which would include the preparation of a SWPPP (refer to PEA Section 4.8, Hydrology and Water Quality, and Section 6.8 of this Analysis [Hydrology and Water Quality] for additional information on the Construction General Permit). Surface disturbance would be minimized to the extent consistent with safe and efficient completion of the Proposed Project scope of work. Once temporary surface disturbances are complete, areas that would not be subject to additional disturbance would be stabilized by landscaping. Considering these measures, impacts to soil erosion and loss of topsoil would be less than significant.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities for the proposed distribution facilities would not materially increase in frequency or intensity. Therefore the operation and maintenance of the proposed distribution facilities would have no impacts relating to soil erosion or loss of topsoil.

**6.7.6 Question 7c – Be located on a geologic unit that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landsliding, lateral spreading, subsidence, liquefaction, or collapse?**

**Construction – Less than Significant Impact**

The potential for liquefaction and landslide related impacts are addressed in the responses to Questions 6.a.iii and 6.a.iv, above.

No areas of the distribution facilities have been identified to have the characteristics susceptible to lateral spreading as described in Section 4.6 of the PEA. Furthermore, because of the short project construction period, the probability of a moderate to large earthquake occurring during this time is low, and the probability of consequential lateral spreading is even lower since it is not certain that it would occur even if strong ground shaking does. Therefore, the risk of lateral spreading during construction is less than significant.

Construction would have no subsidence impact because the distribution line component does not involve the withdrawal of subsurface fluids that can cause subsidence, nor would it impact sedimentary materials that are particularly prone to subsidence.

As described in PEA Section 4.6.3.5, collapsible soil deposits are not anticipated to be present in the Proposed Project construction areas. A possible exception is at the Talega Substation. However, the proposed distribution facilities at this substation would be within the existing substation footprint or in underground conduit and conductors that do not have the potential to significantly impact or be impacted by collapsible soils even if such soils are present.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities for the project would not materially increase in frequency or intensity. There is nothing about the proposed operations and maintenance that differs from the existing conditions in terms of subsidence or collapsible soils, and thus there are no potential impacts as a result of subsidence or collapsible soils.

**6.7.7 Question 7d – Be located on expansive soil, as defined by article 1803.5 of the California Building Code, creating substantial risk to life or property?**

**Construction – Less Than Significant Impact**

Expansive soils are clayey soils that have a high plasticity index. Typical shallow reinforced concrete spread footing foundations can be affected by expansive soils if they are present close to the ground surface and soils beneath the footings expand or contract unevenly. In contrast, distribution line poles and underground conduit that would be installed are not particularly susceptible to impact from expansive soils. As such, expansive soils are not expected to have a significant adverse impact on distribution facilities.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities for the proposed distribution facilities would not materially increase in frequency or intensity. As with the baseline condition, operation and maintenance of the distribution line component would not include activities that have the potential to impact or be impacted by expansive soils. Therefore, no impact is expected.

#### **6.7.8 Question 7e – 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?**

### **Construction and Operation & Maintenance – No Impact**

The distribution line component would not involve the installation of a septic tank or alternative wastewater disposal system. Therefore, no impact would occur.

#### **6.7.9 Question 7f – Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?**

### **Construction and Operation & Maintenance – No Impact**

No mineral resources are known to exist along the proposed distribution facility ROWs, nor are any designated in the vicinity by the Cities of San Juan Capistrano and San Clemente or by Orange County. Therefore, the proposed distribution line work would not result in the loss of availability of a known mineral resource and no impact would occur.

#### **6.7.10 Question 7g – 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?**

### **Construction and Operation & Maintenance – No Impact**

No mineral resources are known to exist along the proposed distribution facility ROWs, nor are any designated in the vicinity of the proposed distribution line work by the Cities of San Juan Capistrano and San Clemente or by Orange County. Therefore, the proposed distribution line work would not result in the loss of availability of a locally important mineral resource recovery site and no impact would occur.

**6.8 HAZARDS AND HAZARDOUS MATERIALS**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Be located 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	For a project located 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**6.8.1 Question 8a - Create a significant hazard to public health or the environment through the routine transport, use, or disposal of hazardous materials?**

**Construction – No Impact**

*Impacts from Existing Contamination or Hazardous Waste/ Building Materials*

Construction of the distribution line component will not occur in the vicinity of any hazardous materials sites not already identified within the PEA (refer to PEA Section 4.7, Hazards and Hazardous Materials). Specifically, construction of the distribution component would be conducted near the sites identified in Table 10, Hazardous Materials Sites Adjacent to the Distribution Line Route. However, none of these sites has a high potential to create a significant hazard to the environment through routine transport, use, or disposal of hazardous materials or

wastes. Two past hazardous waste sites were located adjacent to the distribution line route on SR-74, however, no construction activities are required within this area (distribution route will utilize existing conduit and cable) and therefore no impacts would occur.

**Table 10: Hazardous Materials Sites Adjacent to the Distribution Line Route**

Site Name, Address, and Closest Distribution Line Work	List <sup>1</sup>	Potential to Impact Proposed Project	Contamination Profile
Plant Depot School Site 31251 Avenida Los Cerritos San Juan Capistrano, CA Near distribution line removal	UST, SCH, ENVIROSTOR	Low – no documented contamination and the site is now developed	Potential arsenic and nitrate contamination from past agricultural operations.
Intown Properties (HUD) 31098 Call San Diego San Juan Capistrano, CA Underground distribution line <sup>2</sup> between San Juan Capistrano Substation and Pole Nos. 1a and 2a	HAZNET	Low – no documented contamination and low likelihood of contamination	Household waste
Marbella Golf Course 30650 Golf Club Drive Near distribution line removal	LUST, SWEEPS UST, CA FID UST, HAZNET	Low – low likelihood of project interaction with existing contamination	Gasoline
Pollo Cleaners 31105 Rancho Viejo Road San Juan Capistrano, CA Near new underground distribution line in Rancho Viejo Road <sup>3</sup>	RCRA-SQG, FINDS, HAZNET	None – No construction activities required within this section of distribution line route	Small quantity generator of hazardous waste, no violations
Notes: <sup>1</sup> Regulatory Agency Listing: see PEA Table 4.7-1 for a description of each database. <sup>2</sup> Distribution lines will follow proposed relocated 138kV transmission lines described within the PEA. Distribution lines will utilize the same poles (1a and 2a) and the same bore pits as the relocated 138kV transmission lines. <sup>3</sup> The portion of new underground distribution line through Rancho Viejo Road will utilize existing trench and conduit and will only require the installation of new conductor cable. Source: Environmental Data Resources, 2012.			

### *Hazardous Materials Utilized During Construction Activities*

Vehicles and equipment used for construction of the distribution line component could contain or require the temporary, short-term use of potentially hazardous substances, such as fuels, lubricating oils, and hydraulic fluid (similar to construction of the transmission and substation components of the Proposed Project, as discussed in PEA Section 4.7). The potential exists for an accidental release of hazardous materials during construction and refueling activities. The release of these materials has the potential to impact construction workers, the public and the

environment if they are not properly contained and removed. Potential impacts from the release of these materials would be mitigated by the implementation of construction BMPs. These BMPs could include, but would not be limited to, construction practices such as the use of absorbent pads for spill containment, specified locations for construction vehicle refueling, and a daily vehicle inspection schedule designed to identify leaking fuels and/or oils as early as possible.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance in relation to the routine use, transportation, or handling of hazardous materials because operation and maintenance of the new/re-routed distribution circuits would be essentially the same they occur today under baseline, existing conditions.

### **6.8.2 Question 8b - 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?**

#### **Construction – Less than Significant Impact**

Construction of the distribution line component will not involve the use or transportation of any hazardous substances other than typical construction-related fuels and lubricants discussed in Section 6.8.1 of this Analysis (Question 8a). While these materials could be released under accident or upset conditions, it is unlikely such a release would result in a significant hazard to the public or the environment. These substances (such as fuels used in construction vehicles) will be present in small amounts and will be contained at work sites. None of these materials are acutely hazardous and the relatively small amounts present are not capable of creating a significant hazard to the public. Therefore, potential impacts are considered to be less than significant.

#### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance in relation to the hazards resulting from reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment because operation and maintenance of the new/re-routed distribution circuits would be essentially the same they occur today under baseline, existing conditions.

**6.8.3 Question 8c - Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**Construction – No Impact**

Construction of the distribution line component would not emit or handle any acutely hazardous substances or wastes. Therefore, no impacts would occur.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Therefore, no impacts from the operation and maintenance of the distribution lines would occur in relation to the emission or handling of acutely hazardous substances within 0.25 mile of an existing or proposed school.

**6.8.4 Question 8d - Be located 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?**

**Construction – No Impact**

Construction of the distribution line component would not occur on a site listed under Government Code Section 65962.8 (Cortese list). There are two sites that are on the Cortese list adjacent to the proposed distribution line route; however, the presence of these sites in the vicinity of the route would not create a significant hazard to the public or the environment.

While the existing Capistrano Substation site is not on the Cortese list or any similar listing of known or suspected hazardous materials sites, there are known hazardous substances at the substation site. Potential impacts relating to the known hazardous substances at the Capistrano Substation site are discussed under PEA Section 4.7.4.2, and these impacts would not change due to the construction of the required distribution line work.

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operation and maintenance would not differ substantially from that of the existing facilities and would not occur on any sites listed under Government Code Section 65962.5. Therefore, operation and maintenance activities would not result in any significant hazard to the public or the environment relating to Government Code Section 65962.5.

**6.8.5 Question 8e - For a project located 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?**

**Construction and Operation & Maintenance – No Impact**

The distribution line component is not located within an airport land use plan or within two miles of an airport. Therefore, no impacts would occur.

**6.8.6 Question 8f - For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**Construction and Operation & Maintenance – No Impact**

The distribution line component is not located within the vicinity of a private airstrip. Therefore, there would be no impacts.

**6.8.7 Question 8g - Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**Construction – Less than Significant**

Distribution line construction would not restrict or interfere with the *City of San Clemente Emergency Plan*, the *City of San Juan Capistrano Emergency Operations Plan*, or emergency response at the State and Operational Area levels under the State Emergency Plan and the California Standardized Emergency Management System (SEMS).

Construction of the distribution lines would involve partial closure of certain streets during construction of underground distribution lines. However, through access would be maintained during construction (as discussed in PEA Section 4.14, Transportation and Traffic and Section 6.15 of this Analysis [Transportation and Traffic]) and therefore impacts would be less than significant.

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. Therefore the proposed distribution line work would not restrict traffic flow at any locations or otherwise interfere with the *City of San Clemente Emergency Plan*, the *City of San Juan Capistrano Emergency Operations Plan*, or emergency response at the State and Operational Area levels under the State Emergency Plan and the SEMS. No impacts to any existing emergency or evacuation plans are anticipated.

### **6.8.8 Question 8h - 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?**

#### **Construction – Less than Significant Impact**

Portions of the proposed distribution line route are located within a SDG&E designated Fire Threat Zone (FTZ). While construction within these areas would place construction workers temporarily within the designated FTZ, construction work would be temporary and workers would only be within each distinct construction area for a relatively short amount of time.

Construction activities along the distribution line route would have the potential to start a fire due to the increased presence of vehicles, equipment, and human activity in areas of elevated fire hazard severity, similar to the transmission line construction analyzed within the PEA (refer to PEA Section 4.7, Hazards and Hazardous Materials). In particular, heat or sparks from construction vehicles or equipment have the potential to ignite dry vegetation. Consistent with current SDG&E standard practices, SDG&E would implement its existing Wildland Fire Prevention and Fire Safety (Electric Standard Practice [ESP] No. 113.1), which includes requirements for carrying emergency fire suppression equipment, conducting “tailgate meetings” that cover fire safety discussions, restrictions on smoking and idling vehicles, and construction restrictions during red flag warnings. Consistent with ESP 113.1, SDG&E would also implement a project-specific fire plan to assist in safe practices to prevent fires within the distribution line work area (refer to PEA Section 4.7.4.9). The required distribution line work would be included within the project-specific fire plan. Additional details concerning ESP 113.1 and the project-specific fire plan that will be prepared are contained in PEA Section 3.9.3 (Fire Prevention and Fire Safety Standards) and PEA Section 4.7.4.9.

During construction activities within the FTZ, workers would follow ESP 113.1 and the project-specific fire plan, which will incorporate existing SDG&E fire standards and safety practices while adding in project-specific conditions and practices to further ensure that the risk of a fire event during construction of the distribution line component is minimized. This project-specific fire plan is incorporated into the distribution line component, and will be used to ensure that potential impacts relating to wildland fires remain less than significant. Therefore, any potential impacts from wildland fires would be less than significant.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E’s existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operation and maintenance of the distribution component would not differ substantially from that of the existing facilities, except that potential fire hazards would be reduced following construction due to the fact that the distribution line poles that are being replaced are made of wood and the new poles would be made of steel. With this design feature, there would be reduced exposure of people or structures to loss, injury, or death involving wildland fires as compared to existing conditions. Thus, the distribution component would result in an overall beneficial long-term effect in this regard, similar to the effect of the proposed transmission line work outlined in the PEA (refer to PEA Section 4.7.4.9).

In addition, operation and maintenance of the distribution line component would not require any additional workers than are currently required for operation and maintenance of existing distribution facilities in the area. The proposed distribution line component would therefore not increase the number of people exposed to potential wildland fires within the vicinity. Therefore there would be no adverse impacts relating to wildland fires.

**6.9 HYDROLOGY AND WATER QUALITY**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Violate any other water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f.	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Place within a 100-year flood hazard area, structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j.	Expose people or structures to inundation by seiche, tsunami or mud flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 6.9.1 Question 9a - Violate any water quality standards or waste discharge requirements?

#### Construction – Less than Significant Impact

Construction work associated with the distribution line component has the potential to affect surface water quality, and BMPs for water quality protection would apply. Construction would use mechanized equipment requiring fuels and lubricants and involve fabrication of facilities that require hazardous materials such as coatings, adhesives, and solvents. Construction also generates trash and debris. Construction materials such as concrete and stockpiled soil could impact water quality if released. In addition, construction would disturb soil surfaces creating a potential for erosion and sediment transport.

Construction work would disturb more than one acre and therefore requires coverage under a NPDES permit for storm water discharges during construction. SDG&E would obtain coverage under the Construction General Permit and comply with its relevant requirements, including implementation of a SWPPP, which would include appropriate BMPs for water quality protection. The distribution line component would fall under the Linear Underground/Overhead Project (LUP) requirements of the Construction General Permit. LUP activities covered under the Construction General Permit include, but are not limited to, those activities necessary for the installation of underground and overhead linear facilities as described in Section 4.8 of the PEA.

The Construction General Permit requires prevention of unauthorized discharges and implementation of a SWPPP with BMPs needed to prevent discharges from construction activities that would otherwise violate water quality standards. The Construction General Permit further requires inspections, monitoring, and reporting to ensure that BMPs are implemented and effective and modified if needed to ensure protection of water quality. SDG&E would implement BMPs consistent with the Construction General Permit requirements and its *BMP Manual*. The *SDG&E Subregional NCCP* (refer to Section 4.4 in the PEA and Section 6.5 of this Analysis) also contains protocols for avoiding and minimizing potential erosion and water quality issues. Specific Construction General Permit requirements for LUPs are provided in the Order and its Attachment A. Other than the Construction General Permit, no waste discharge requirements apply to construction of the distribution line construction because no discharges other than stormwater are anticipated.

Construction of the distribution facilities would not violate any water quality standard or waste discharge requirement because SDG&E will comply with the regulatory requirements for protection of water quality, including implementation of the SWPPP and BMPs, and adopt BMPs through the *BMP Manual* and the *SDG&E Subregional NCCP*. Therefore, potential impacts would be less than significant.

#### Operation & Maintenance – Less than Significant Impact

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities are the baseline against which impacts are evaluated.

Throughout the operation and maintenance of the distribution facilities, SDG&E would continue to implement BMPs consistent with its *BMP Manual* and the *SDG&E Subregional NCCP* and

any future revisions to those documents. SDG&E already does this under the existing conditions.

No waste discharge requirements apply to operation and maintenance of the distribution facilities because no discharges are anticipated to occur. The distribution line component would not violate any water quality standard or waste discharge requirements during operation and maintenance because SDG&E will comply with the regulatory requirements for protection of water quality, including implementation of the SWPPP and BMPs, and adopt BMPs through the *BMP Manual* and the *SDG&E Subregional NCCP*. There would not be a perceptible difference between existing conditions and operation and maintenance of the distribution line component because new distribution poles would be located in the immediate vicinity of existing SDG&E distribution infrastructure. Therefore, there would be no impact.

**6.9.2 Question 9b - Substantially deplete groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

**Construction – No Impact**

The water demand for construction would be minor and short-term, and would be met through existing municipal sources so it would not result in new ground water pumping. Surface disturbance would be limited and negligible compared to the affected watershed areas, so there would be no impact on ground water recharge.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities are the baseline against which the impacts of the proposed distribution line component are evaluated. The new distribution facilities would replace existing distribution facilities, so regular operations and maintenance activities already occur. Operations and maintenance activities for the new facilities would therefore not materially increase in frequency or intensity. There would be no net deficit in aquifer volume or lowering of the groundwater table and no impact on ground water supplies or recharge.

**6.9.3 Question 9c - 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?**

**Construction – Less than Significant Impact**

Construction associated with the distribution line component would result in limited grading and other earthwork that would not substantially alter any existing drainage pattern or alter the course of any stream or river. The majority of the new distribution poles would be placed immediately adjacent to existing distribution structures. Work would occur along existing ROWs, at locations accessible using existing access roads. SDG&E does not propose any grading in creeks or drainages that could alter existing flow patterns. The Construction General Permit would require

BMPs to prevent excessive erosion and sediment transport and would also require that disturbed areas be stabilized. The RWQCB would accept the Notice of Termination of the Construction General Permit only after demonstration of stabilization. Based on these factors, construction of the distribution facilities would not substantially alter existing drainage patterns. Therefore, the impact on existing drainage patterns would be less than significant.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities are the baseline against which impacts of the distribution line component are evaluated. The new distribution facilities would replace existing distribution facilities, so regular operations and maintenance activities already occur, and operations and maintenance activities would not materially increase in frequency or intensity. Therefore, no impacts are anticipated.

#### **6.9.4 Question 9d - 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?**

### **Construction – Less than Significant Impact**

See response to Question 9c, above.

### **Operation & Maintenance – No Impact**

See response to Question 9c, above.

#### **6.9.5 Question 9e - Create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

### **Construction – Less than Significant Impact**

Construction of the distribution facilities will require negligible grading and other earthwork that will be accomplished in a manner that will not alter existing drainage patterns (See response to Question 9c, above). Construction of the distribution facilities would not result in substantial areas of new impermeable surfaces. No material increase in runoff from the distribution line component's footprint is anticipated. Construction of the distribution facilities would not adversely impact the capacity of existing or planned storm water drainage systems because no substantive increase in runoff is expected and grading is designed not to impact existing drainages.

SDG&E would comply with the Construction General Permit and would implement a SWPPP with BMPs for water quality protection. The Construction General Permit requires prevention of unauthorized discharges and implementation of BMPs needed to prevent discharges of polluted runoff. The Construction General Permit also requires inspections, monitoring, and reporting to ensure that polluted runoff is not occurring from the construction site. SDG&E would implement BMPs in accordance with the Construction General Permit and its *BMP Manual*.

Construction of the distribution facilities would not be a substantial source of polluted runoff considering the regulatory requirements for protection of water quality, including implementation of the SWPPP and BMPs. Therefore, potential impacts would be less than significant.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities are the baseline against which the impacts of the distribution line component are evaluated. The new distribution facilities would replace existing facilities, so regular operations and maintenance activities already occur and would not materially increase in frequency or intensity.

SDG&E would continue to implement its *BMP Manual* to ensure water quality protection and restore and stabilize surface drainage patterns. Therefore, operations and maintenance would not affect drainage capacity of existing or planned stormwater drainage systems or cause a substantial additional source of polluted runoff. No impacts are anticipated.

### **6.9.6 Question 9f - Otherwise substantially degrades water quality?**

#### **Construction – Less Than Significant Impact**

Construction of the proposed distribution facilities would comply with the Construction General Permit, which includes BMPs to prevent degradation of water quality from storm water runoff and other permitted discharges. No other discharges to surface or ground water are anticipated during construction. Construction impacts to water quality would be less than significant based on compliance with the Construction General Permit.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates extensive existing electric transmission, distribution, and substation facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities are the baseline against which the impacts of the distribution line component are evaluated. The new distribution facilities would replace existing distribution facilities, so regular operations and maintenance activities already occur. Operations and maintenance activities would not materially increase in frequency or intensity. Therefore, no impacts are anticipated.

### **6.9.7 Question 9g - 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?**

#### **Construction and Operation & Maintenance – No Impact**

There would be no impacts associated with the placement of housing within a 100-year flood hazard area because the distribution facilities do not involve the development of housing or other inhabitable structures.

### **6.9.8 Question 9h – Place structures within a 100-year flood hazard area which would impede or redirect flood flows?**

#### **Construction and Operation & Maintenance – No Impact**

The distribution facilities do not include placement of any fill or structures within the 100-year flood hazard area. No impact on flood flows would occur.

### **6.9.9 Question 9i - 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?**

#### **Construction – No Impact**

The new distribution facilities do not involve housing development or development of facilities that would normally be attended, so there would be no risk of exposing people in those structures to loss, injury, or death involving flooding. Project construction does not require any work that would pose a significant risk of exposure to people or structures due to flooding. The only dam inundation zone in the vicinity is on the flood plain of San Juan Creek. Only a short segment of the distribution line construction would occur within this zone, where new conductors would be installed in existing underground conduit. Due to the short-term nature of work in this area (approximately 1 day) and low probability of dam failure during that period of time, no impact on construction is anticipated.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities are the baseline against which the impacts of the distribution line component are evaluated. The proposed new distribution facilities would replace existing distribution facilities, so regular operations and maintenance activities already occur. Operations and maintenance activities would not materially increase in frequency or intensity. Therefore, no impacts are anticipated.

### **6.9.10 Question 9j – Cause inundation by seiche, tsunami, or mudflow?**

#### **Construction – Less Than Significant Impact**

There are no bodies of water in the vicinity that are large enough to result in a risk of seiche or tsunami. The closest large body of water is the Pacific Ocean, which is located nearly four miles away and well beyond any potentially foreseeable tsunami run-up. Therefore, no impacts are anticipated related to seiche or tsunami.

Grading would be negligible and would not change existing drainage paths, create substantial impermeable areas, or substantially affect any other aspect that could increase the potential for mudflows. Construction stormwater BMPs would include measures to minimize disturbance to soils and drainage and post construction soil stabilization would be required in accordance with the Construction General Permit. Considering these factors, the risk that construction could contribute to inundation by mudflow is less than significant.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E’s existing operations and maintenance activities are the baseline against which the impacts of the distribution line component are evaluated. The new distribution facilities would replace existing distribution facilities, so regular operations and maintenance activities already occur. Operations and maintenance activities would not materially increase in frequency or intensity. As a result, the risk that operation and maintenance could contribute to inundation by mudflow is low, and no impacts are anticipated.

**6.10 LAND USE AND PLANNING**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.10.1 Question 10a – Physically divide an established community?**

**Construction – No Impact**

Construction of the distribution line component would occur within or immediately adjacent to existing franchise or ROW, in the same alignment or the immediate vicinity of existing distribution and transmission facilities, and would not cause or create a new division of any existing communities. In most cases, new distribution poles would be located immediately adjacent to existing poles (i.e., one-for-one replacement). The only exception is within Junipero Serra Park, where distribution structures will be removed from the south side of the park and new structures will be installed on the north side of the park (refer to Figure 2). However, even at this location the new distribution lines will not divide any established community and will remain adjacent to other existing transmission lines. Staging and materials storage for the proposed distribution line work would occur at the sites identified within the PEA. As discussed in PEA Section 4.9, Land Use and Planning, none of the proposed staging sites would divide an established community. Therefore, no impacts would occur.

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E’s existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operation and maintenance would not differ substantially from that of the existing facilities; therefore the distribution component would not divide any established community to any greater extent than already exists under baseline

conditions. All proposed underground distribution lines will be placed within existing roads, parks, or open space such that the division of existing communities would not result. Overhead portions of the proposed distribution lines would almost exclusively be completed as pole-for-pole replacements, thus resulting in no change from existing conditions with respect to land use. No impacts are anticipated.

**6.10.2 Question 10b – Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**Construction – No Impact**

Construction of the distribution line component would occur almost entirely within existing SDG&E ROW, property, and existing electrical transmission/distribution corridors. The distribution component represents a replacement/re-location of existing distribution facilities and almost exclusively utilizes existing distribution line routes, trenches, conduits, and lines. Therefore, construction of the proposed distribution lines would not conflict with existing land use plans or policies adopted for the purpose of avoiding or mitigating an environmental effect.

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity. The distribution component includes the replacement of existing electric distribution facilities, and does not include the installation of new electric distribution facilities in areas where similar facilities do not already exist. In fact, much of the relocated distribution lines will utilize existing facilities, including existing conduit packages and even existing segments of underground cable (refer to Figure 2). Distribution infrastructure would not be extended into existing land uses or parcels that do not currently house similar facilities; therefore no conflicts with existing plans is anticipated and no impacts would occur.

**6.10.3 Question 10c – Conflict with any applicable habitat conservation plan or natural community conservation plan?**

**Construction - No Impact**

Construction activities would fully comply with the *SDG&E Subregional NCCP*, which supersedes *the Southern Orange County Subregional NCCP*. As concluded in Section 6.5 of this Analysis (Biological Resources), construction of the distribution component of the Proposed Project would be consistent with the *SDG&E Subregional NCCP*. Therefore, there would be no impact.

**Operation & Maintenance - No Impact**

The distribution component would be consistent with the *SDG&E Subregional NCCP*, as discussed above and concluded in Section 6.5 of this Analysis (Biological Resources). Therefore, there would be no impact.

**6.11 NOISE**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	For a project located 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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.11.1 Question 11a – 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.**

**Construction – Less than Significant Impact with Incorporation of APMs**

Construction of all of the proposed distribution components would require the temporary use of various types of noise-generating equipment, including drilling rigs, augers, flatbed boom/bucket trucks, rigging and mechanic trucks, bobcats/backhoes, air compressors and generators, mobile cranes, concrete and water trucks, and man lifts. Wire stringing operations would require pullers, tensioners, and cable reel trailers.

As discussed in PEA Section 4.10.3, construction-related noise sources are exempt from the pertinent local noise ordinances, provided that the respective allowable hours of construction activity are followed. These allowable hours are summarized in Table 11, Allowable Times for Construction Activities. Because proposed construction activities would normally be limited to these hours, the project would not normally generate noise in excess of established standards nor expose persons to such noise. Furthermore, if special circumstances arise where

evening/nighttime construction is needed; these activities are expected to generate noise levels that would comply with the municipal code noise limit requirements of the pertinent jurisdiction. Therefore, these impacts would be less than significant. APM Noise-1, as outlined within the PEA, includes measures to ensure that in the unexpected event that construction work is required that cannot meet local standards, then local authorities are notified prior to work so that impacts can be minimized. With implementation of this APM, the impact would be less than significant.

**Table 11: Allowable Times for Construction Activities**

Jurisdiction	Day	Allowable Time Window
Orange County (unincorporated)	Mon – Fri: Saturday: Sunday:	7 AM to 8 PM 7 AM to 8 PM None
City of San Clemente	Mon – Fri: Saturday: Sunday:	7 AM to 6 PM 8 AM to 6 PM None
City of San Juan Capistrano	Mon – Fri: Saturday: Sunday:	7 AM to 6 PM 8:30 AM to 4:30 PM None
Source: Various noise regulations, cited in PEA Section 4.10.3.		

### **Operation & Maintenance – Less Than Significant Impact**

The primary noise sources associated with the operation and maintenance of distribution systems would be (a) transformer hum and cooling fan noise at the San Juan Capistrano Substation, and (b) occasional maintenance activities. These sources are discussed below. Corona effects that can be a material noise source for high voltage transmission conductors would not be a significant source of noise for the distribution systems due to the relatively low voltage of the distribution systems.

#### *San Juan Capistrano Substation Operation*

The source of noise impacts associated with operation of the new San Juan Capistrano Substation would be from the 138kV and 230kV equipment (transformers and cooling fans), as outlined in PEA Section 4.10.4. Since the 12kV distribution facilities at the San Juan Capistrano Substation are of a much lower voltage than the 230kV transmission facilities addressed in the PEA, the 12kV distribution facilities would generate noise levels that would be completely overshadowed by the 230kV facilities. As such, the noise from the 12kV distribution facilities at the San Juan Capistrano Substation would be easily masked by other ambient noise sources at the substation and in the surrounding area. Thus, noise from the 12kV distribution transformer and fan facilities at the San Juan Capistrano Substation would be unnoticeable and impacts would remain as outlined within the PEA.

Based on the noise impact analysis in the PEA and the above considerations of noise levels for the distribution facilities, the Proposed Project would not generate noise in excess of established standards nor expose persons to such noise. Therefore, the noise impact of operating transformers and cooling fans would be less than significant.

### *Maintenance Work*

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Maintenance activities would not materially increase in frequency or intensity. Therefore, no impact would occur.

#### **6.11.2 Question 11b – Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.**

##### **Construction – Less than Significant Impact**

During construction of the distribution facilities, operation of heavy construction equipment has the potential to generate ground vibration. Vibration levels experienced by receptors would be dependent on distance from the source, soil conditions, construction methods, and the equipment used. This analysis evaluates the potential for exposure of persons or property to excessive groundborne vibration caused by construction equipment.

The threshold at which there is a risk of “architectural” damage (visible cracks) to normal dwellings, such as plastered walls or ceilings, is 0.2 inches per second peak particle velocity (PPV). Heavy construction equipment such as bulldozers, backhoe/hoe rams, and jackhammers generally generate vibration levels of less than 0.1 in/sec PPV<sup>2</sup> at a reference distance of 25 feet. Boring or drilling operations, represented by ‘caisson drilling’, would generally generate vibration levels of 0.089 in/sec PPV at a reference distance of 25 feet.

The nearest existing receptor structures to proposed distribution construction activities are residential properties along Calle Bonita (for trenching activities associated with new underground facilities), as well as residential structures at the northeast corner of Junipero Serra Park. These and other residential buildings may be as close as 50 to 100 feet from expected drilling and trenching activities for the proposed distribution facilities. With this distance to closest structures, vibration from the use of large and/or vibration-intensive equipment such as hoe rams, drill rigs, and saw cut machines, pavement rollers, and jackhammers would be expected to be below 0.1 in/sec PPV, which is half of the threshold for risk of “architectural” damage to normal dwellings. For other existing structures that are more distant from the site, the groundborne vibration from distribution line construction sources would be greatly reduced by the relatively long propagation pathways – to the point of negligibility – and would result in construction-related vibration that would be considerably below the Federal Transit Administration’s (FTA’s) 0.2 PPV inches/second criteria for vibration-induced architectural damage. Therefore, no architectural damage from vibration impacts is expected.

In addition to evaluating the potential for architectural damage, the distribution line construction activities have been evaluated for the potential to create vibration-related annoyance responses at the nearest sensitive receptors.<sup>3</sup> Although the maximum vibration could be perceptible in certain instances, events occur infrequently. In addition, construction activities would normally occur during allowable construction hours which are the least sensitive portions of the day. Therefore,

<sup>2</sup> Federal Transit Administration (FTA), 2006. Transit Noise and Vibration Impact Assessment. U. S. Department of Transportation. FTA-VA-90-1003-06.

<sup>3</sup> Note that commercial and industrial land uses are not considered to be noise- or vibration-sensitive land uses.

construction vibration impacts are based on the average vibration levels that would be experienced by sensitive receptors the majority of the time.

Per FTA methodologies, vibration amplitudes with a PPV above 0.032 inch/second (approximately equivalent to 78 Vibration Velocity level decibels) would be detectible by sensitive receptors and could be annoying. Thus, construction activities that might generate more 0.032 inch/second PPV would be considered potentially significant. This amplitude corresponds with a distance of approximately 50 feet from most construction activities.

For the main portion of the distribution lines in and around the San Juan Capistrano Substation and along the distribution line corridor, the closest vibration-sensitive receptors would be no closer than 50 to 75 feet<sup>4</sup>. Given these distances, distribution line-generated construction vibration levels are expected to be at or below the 0.032 inches/second threshold. Other potential vibration-sensitive receptors would be farther away from the construction activities and would experience lower vibration levels due to increased distance attenuation. Therefore, groundborne vibration is expected to remain below levels that could result in annoyance response. Further, the trenching and drilling activities would be short-term at any given location and would take place during allowed construction hours, which is the least noise/vibration-sensitive portion of the day.

Considering expected vibration levels at receptor locations, the short-term nature of proposed construction at any given location, and the hours of construction, the ground-born vibration levels would not be excessive. Therefore, the impact would be less than significant.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Maintenance activities would not materially increase in frequency or intensity. Therefore, no impact would occur.

### **6.11.3 Question 11c – A substantial permanent increase in ambient noise levels in the project vicinity above levels without the project.**

#### **Construction – No Impact**

As distribution construction activities would conclude after a scheduled and defined period, these activities would not be permanent. Since no permanent increase in noise would occur during construction activities, there would be no impact.

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<sup>4</sup> The closest residential properties are the residences along the south side of Calle Bonita, the far northeast corner of Junipero Serra Park, and the Arroyo Park strip, which are approximately 50 to 100 feet from the distribution facilities.

**Operation & Maintenance – Less Than Significant Impact**

*San Juan Capistrano Substation Operation*

As described in the response to Question 11a above, impacts associated with the San Juan Capistrano Substation would be from the higher voltage equipment (230kV) as outlined in the PEA. Also as discussed above, the 12kV equipment at the substation would produce noise levels that are inconsequential in comparison to the higher voltage 230kV equipment. Since no substantial permanent noise increases would occur from the higher voltage 230kV equipment (refer to PEA Section 4.10.4.2) and since the 12kV distribution equipment is much quieter in comparison, long-term operations of the San Juan Capistrano Substation 12kV distribution equipment would result in less than significant impacts, as outlined within the PEA.

*Maintenance Work*

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E’s existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Maintenance activities would not materially increase in frequency or intensity. Therefore, no impact would occur.

**6.11.4 Question 11d – A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

**Construction – Less than Significant Impact with Incorporation of APMs**

Typical noise levels from construction equipment are provided in Table 12, Typical Noise Levels Generated by Construction Equipment. Table 12 shows that energy-average ( $L_{eq}$ ) noise from typical construction equipment ranges from 75 to 89 dBA, measured at 50 feet. No helicopter operations are expected as part of the distribution line component.

**Table 12: Typical Noise Levels Generated by Construction Equipment**

<b>Equipment Item</b>	<b>Range of <math>L_{eq}</math> Noise Levels at approximately 50 Feet (dBA)</b>
<b>Earth-Moving</b>	
Front loader	79 – 80
Backhoe	78 – 80
Tractor, dozer	82 – 85
Scraper, grader	84 – 85
Paver	77 – 85
Truck	74 – 84
<b>Materials-Handling</b>	
Concrete mixer truck	79 – 85
Concrete pump	81 – 82

**Table 12 (cont.): Typical Noise Levels Generated by Construction Equipment**

<b>Equipment Item</b>	<b>Range of L<sub>eq</sub> Noise Levels at approximately 50 Feet (dBA)</b>
Crane (movable)	81– 85
<b>Stationary</b>	
Pump	77 – 81
Generator	70 – 82
Compressor	78 – 80
<b>Impact</b>	
Jackhammers and rock drills	81 – 89
Compactors	80 – 83
Source: The Federal Highway Administration (FHWA), 2006	

Construction noise would be temporary and would normally occur only during allowed construction hours in each jurisdiction (see Table Noise Addendum-1 above). Noise-sensitive receptors would experience a temporary increase in ambient noise levels during the construction activities.

Construction of the distribution facilities at the San Juan Capistrano Substation would be conducted concurrently with the remainder of the substation, as analyzed within the PEA (refer to PEA Section 4.10.4).

There are no nighttime activities or special circumstances that are anticipated for the distribution portion of the San Juan Capistrano Substation upgrade effort. However, if during the course of actual 12kV distribution work, such nighttime and/or weekend activities become necessary, they would be limited to the extent feasible so that noise would not exceed the hourly L<sub>50</sub> of 45 dBA when measured at the nearest residential property. If activities cannot be limited to meet this noise threshold, SDG&E would communicate the exception to the City of San Juan Capistrano in advance of conducting the work that may exceed the threshold. This is addressed via APM NOISE-1.

For the distribution line construction, construction activities are expected to last approximately one week at each pole site, but they are expected to occur intermittently over that duration. As work is completed at one portion of the distribution line, work crews would move on to other portions and the construction noise levels would subside for any given receptor location. Projected noise levels associated with the construction area around each distribution pole were calculated based on the estimated equipment profile<sup>5</sup>. This aggregate noise emissions profile, using standard noise ratings and usage factors for each equipment type, as well as the forecasted daily activity durations, was calculated to be an average noise level of 86 dBA at 50 feet from the center of activities. For distance attenuation due to

<sup>5</sup> This profile included a drilling rig (at 8 hours usage per day), a fork lift (at 6 hours usage per day), a water truck (used ¼-time), a boom truck (used ½-time), a flatbed truck and a 1-ton pick-up truck (each used 3 hours per day), a concrete truck (used 1.6 hours per day), and one air compressor (at 8 hours usage per day).

spreading loss, a conservative value of 6 dB per doubling of distance was used, even though the majority of areas around the transmission line corridor would reasonably qualify as ‘soft site’ areas that could be expected to experience a higher 7.5 dB per distance doubling. Beyond the basic spreading loss attenuation, additional reduction(s) were applied on a location-by-location basis to account for shielding from topographical features, shielding from intervening structures, and/or ground absorption effects over particularly long propagation pathways. The results of these transmission corridor noise projections for construction activities are summarized in Table 13, Predicted Aggregate Average ( $L_{eq}$ ) Construction Noise along the Distribution Line Route at Nearest Receptors to each Pole.

**Table 13: Predicted Aggregate Average ( $L_{eq}$ ) Construction Noise along the Distribution Line Route at Nearest Receptors to each Pole<sup>a</sup>**

Pole #	Distance (feet)	Spreading Atten <sup>b</sup>	Other Atten <sup>c</sup>	Total Atten	Expected SPL(A) <sup>d</sup>	Closest Sensitive Receptor Type
D1	235	13.4	–	13.4	73	Residential
D2	82	4.3	–	4.3	82	Residential
D3	82	4.3	–	4.3	82	Residential
D4	150	9.5	–	9.5	76	Residential
D5	150	9.5	–	9.5	76	Residential
D6	2450	33.8	–	33.8	52	Residential
D7	2450	33.8	–	33.8	52	Residential
D8	2310	33.3	–	33.3	53	Residential
D9	2050	32.3	–	32.3	54	Residential
D10	1850	31.4	–	31.4	55	Residential
D11	1650	30.4	–	30.4	56	Residential
D12	1415	29.0	–	29.0	57	Residential
D13	1170	27.4	–	27.4	59	Residential
D14	870	24.8	–	24.8	61	Residential
D15	720	23.2	–	23.2	63	Residential
D16	640	22.1	5	27.1	59	Residential
D17	670	22.5	5	27.5	58	Residential
D18	840	24.5	10	34.5	51	Residential
D19	965	25.7	10	35.7	50	Residential
D20	900	25.1	10	35.1	51	Residential
D21	980	25.8	10	35.8	50	Residential
D22	1125	27.0	10	37.0	49	Residential
D23	1300	28.3	10	38.3	48	Residential
D24	1340	28.6	5	33.6	52	San Juan Hills High School
D25	1140	27.2	–	27.2	59	San Juan Hills High School
D26	975	25.8	–	25.8	60	San Juan Hills High School
D27	900	25.1	–	25.1	61	San Juan Hills High School

**Table 13 (cont.): Predicted Aggregate Average ( $L_{eq}$ ) Construction Noise along the Distribution Line Route at Nearest Receptors to each Pole<sup>a</sup>**

Pole #	Distance (feet)	Spreading Atten <sup>b</sup>	Other Atten <sup>c</sup>	Total Atten	Expected SPL(A) <sup>d</sup>	Closest Sensitive Receptor Type
D28	860	24.7	5	29.7	56	San Juan Hills High School
D29	890	25.0	–	25.0	61	San Juan Hills High School
D30	900	25.1	–	25.1	61	San Juan Hills High School
D31	1700	30.6	–	30.6	55	San Juan Hills High School
D32	1770	31.0	–	31.0	55	San Juan Hills High School
D33	1940	31.8	–	31.8	54	San Juan Hills High School
D34	2125	32.6	–	32.6	53	San Juan Hills High School
D35	2300	33.3	5	38.3	48	San Juan Hills High School
D36	2500	34.0	10	44.0	42	San Juan Hills High School
D37	2700	34.6	10	44.6	41	San Juan Hills High School
D38	2950	35.4	10	45.4	41	San Juan Hills High School
D39	800	24.1	–	24.1	62	Residential (across Avenida Pico)

Notes:  
\*Based upon preliminary engineering.  
a. Using an aggregate sound emissions profile for the collection of equipment at 86 dBA at 50 feet  
b. Assuming 6 dB per doubling of distance for spreading loss attenuation  
c. Accounting for topographical shielding, intervening structure shielding, and/or excess ground attenuation over particularly long propagation distances.  
d. Energy average ( $L_{eq}$ ) sound pressure level (SPL) at the closest noise-sensitive receptor.  
Source: Alliance Acoustical Consulting, Inc., 2012

At the San Juan Capistrano Substation, the construction of the 12kV substation would be concurrent with the overall substation reconfiguration. As such, the noise contributions from the distribution facilities would be part of the previously assessed construction activities at the site (refer to PEA Section 4.10.4.5 for additional details; particularly PEA Table 4.10-14: Predicted Aggregate Average ( $L_{eq}$ ) Construction Noise around the San Juan Capistrano Substation Site).

In summary, due to the short-term nature of the earth-moving, erection, and finishing activities at both the substation site and along the transmission line corridor, along with normally conducting construction only during allowed construction hours in each jurisdiction, construction noise impacts for the distribution line component of the Proposed Project would be less than significant. Furthermore, if special circumstances arise where evening/nighttime construction is needed, these activities would be minimized and are expected to generate noise levels that would comply with the municipal code noise limit requirements of the pertinent jurisdictions and, therefore, would be less than significant. APM Noise-1 includes measures to ensure that in the unexpected event that construction work is required that cannot meet local standards, then local authorities are notified prior to work so that impacts can be minimized. With implementation of this APM, the impact would be less than significant.

**Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E’s existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Maintenance activities would not materially increase in frequency or intensity. Therefore, no impact would occur.

**6.11.5 Question 11e – For a project located 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 expose people residing or working in the project area to excessive noise levels.**

**Construction and Operations & Maintenance – No Impact**

The closest public airport to the distribution line component is the John Wayne/Orange County Airport, which is located approximately 15 miles to the northwest of the proposed San Juan Capistrano Substation. Helicopter operations are not expected as part of distribution line construction. The project is not located in an airport land use plan or within two miles of a public airport. Therefore, there would be no impact.

**6.11.6 Question 11f – For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.**

**Construction and Operations & Maintenance – No Impact**

The closest private airstrips are helicopter facilities at San Onofre Nuclear Generating Station located approximately six miles to the southeast, and at Saddleback Memorial Medical Center located approximately seven miles to the northwest. Operations from these private airports would not change as a result of the distribution line component and the project would not expose people to noise from these sources. Therefore, there would be no impact.

**6.12 POPULATION AND HOUSING**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.12.1 Question 12a - Induce substantial population growth in the project area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

**Construction – Less than Significant Impact**

Construction of the distribution line component is anticipated to take approximately 11 months spread over a 2 year period. During peak construction times, the Proposed Project is anticipated to employ up to approximately 75 workers per day (including construction monitors and support staff). As outlined in PEA Section 4.11, Population and Housing, the potential project-related work force represents an insignificant amount of people in relation to the existing population within the Proposed Project area. Construction of the proposed distribution line is anticipated to only require up to 15 workers at one time, and thus is anticipated to only have a very minor direct effect on population and housing (as would the Proposed Project).

The distribution lines will be replacement and relocations of existing distribution lines and the Proposed Project will not provide electrical utility to currently un-served areas; nor will the Proposed Project involve any other form of catalyst for the creation of new development that could result in increases in population. No impacts are anticipated from construction of the distribution lines and overall impacts would be less than significant (refer to PEA Section 4.11, Population and Housing).

**Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would be no effect on population because operation and maintenance activities are virtually the same as existing conditions, and there would be no need for additional workers as compared to current, baseline conditions. The distribution component would not extend service into new areas. Therefore, no impacts would occur.

**6.12.2 Question 12b – Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**Construction and Operation & Maintenance – No Impact**

Construction and operation of the distribution line component would not require the displacement of any existing housing (similar to the transmission and substation components of the Proposed Project analyzed within the PEA). The proposed distribution lines would be located within existing roads, parks, and similar areas where housing or other similar development does not currently exist. Therefore, no replacement housing would be required and there would be no impacts.

**6.12.3 Question 12c – Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere**

**Construction and Operation & Maintenance – No Impact**

As described under Section 6.12.2 of this Analysis (Question 12b), proposed distribution lines would be located within existing roads, parks, and similar areas where housing or other similar development does not currently exist. Construction and operation of the distribution component (and the entire Proposed Project) would not require the displacement of any people. Therefore, no replacement housing would be required and there would be no impacts.

**6.13 PUBLIC SERVICES**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i.	Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii.	Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii.	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv.	Parks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v.	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.13.1 Question 13a (i & ii) – Impacts to fire and police protection?**

**Construction – Less than Significant Impact**

Construction of the distribution line component would not result in significant temporary or permanent increases in local population, would be short-term, and would not include any new facilities that would require new or expanded police or fire protection services.

Construction activities associated with the distribution component would not unduly burden local police or fire services. At the completion of each work day, construction crews would lock up and secure each worksite to prevent theft or vandalism associated with work equipment or supplies. SDG&E would also implement its project-specific fire plan which will include private fire patrol monitoring, as appropriate. Furthermore, SDG&E will have private security personnel monitoring construction sites where materials are stored, which may include staging yards as well as individual construction sites. Therefore, the distribution line component would have less than significant impacts on police and fire protection services.

Traffic control measures associated with underground construction would be implemented pursuant to all applicable industry standards and applicable local jurisdictional agency review, as discussed in PEA Section 4.14, Transportation and Traffic, and Section 6.15 of this Analysis (Transportation and Traffic). Along the underground segments (where new trenching is required) of the distribution line component of the Proposed Project (west, south, and east of the proposed San Juan Capistrano Substation site [within Camino Capistrano, Calle Bonita, and Calle Santa Rosalia] and at Rancho Viejo Road east of the I-5 [refer to Figure 2, Sheet1]), SDG&E would coordinate with the appropriate emergency (fire and police) personnel prior to construction to ensure that construction activities and associated lane closures would not substantially affect emergency response vehicles. Additionally, all streets would remain open to vehicular circulation during construction of the underground segments of the distribution line component. Therefore, impacts would be less than significant.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the proposed distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities for the distribution line component would not materially increase in frequency or intensity and would not require hiring any new workers or any increase in local population. As a result, there would be no impact as a result of operation and maintenance.

### **6.13.2 Question 13a (iii) – Impacts to schools?**

#### **Construction – No Impact**

The distribution line component (and the Proposed Project) would not significantly affect school enrollment since construction of the Proposed Project is short-term, and would not require a large work force. The volume of construction workers would be minimal relative to the local population and thus would not be expected to generate a substantial number of new students for the area's schools.

No new or physically altered schools would be necessary as a result of the distribution component and no impacts to schools would result from construction of the distribution line component. No impacts are anticipated.

#### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Operation and maintenance would be handled just as it is today under baseline conditions. The distribution component work involves replacement of existing facilities which already have assigned operations and maintenance staff. Therefore, no new schools would be necessary as a result of the distribution component and no impacts to schools would result from operation and maintenance.

### **6.13.3 Question 13a (iv) – Impacts to parks?**

#### **Construction – Less than Significant Impact with Implementation of APMs**

Access to Junipero Serra Park would be temporarily restricted during construction of new underground distribution line and two new cable poles located along the northern border of the park. While some access to the park would be restricted, the construction of this new underground distribution line would not directly increase the demand for the local public park system as construction activities would be short-term and would not substantially increase the local populations (refer to PEA Section 4.11, Population and Housing, and Section 6.12 of this Analysis [Population and Housing]). Restricted access to Junipero Serra Park may indirectly cause increased demand for other local, non-restricted public parks; however, due to the quantity of parks in the Proposed Project area and relatively short duration of the Proposed Project's construction within local parks, these impacts would be less than significant.

Construction within Junipero Serra Park is expected to last two to four weeks spread out over a non-consecutive 2 month period and would not result in the need to close the entire park and would not create significant restricted access to key park facilities such as the playground and large grassy open spaces. Implementation of APM PS-1, as outlined within the PEA, would ensure that impacts relating to access to the park would not restrict access to the entire park. The noise and presence of heavy equipment associated with construction may temporarily reduce visitation to the park, however, the park is currently subject to noise from the adjacent I-5 freeway. Therefore, impacts to Junipero Serra Park would be less than significant.

#### **Operations and Maintenance – Less than Significant Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area, including within Junipero Serra Park. SDG&E's existing operations and maintenance activities constitute the baseline against which impacts are evaluated. Operations and maintenance activities would not materially increase in frequency or intensity. The distribution component would not create any increased demand on the local public park system because no new workers would be added for operation and maintenance.

One new spur road would be required within Junipero Serra Park, leading from the existing SDG&E spur road and work pads at the southeastern corner of the park to the northeastern corner of the park where two new distribution cable poles would be located (refer to Figure 2, Sheet 1). The new road would be approximately 130 feet long and would run in a north/south alignment along the eastern border of the park. The eastern border of the park is adjacent to the I-5 freeway. No other new permanent impacts to any existing parks would result from operation and maintenance. Therefore, impacts would be less than significant.

The Proposed Project, including the distribution line component, would not require the construction of any new public parks, and therefore would not create any adverse impacts associated with the construction of new parks.

**6.13.4 Question 13a(v) – Impacts to other public facilities (hospitals)?**

**Construction – No Impact**

No additional need for libraries or other government or public services would be required as a result of the distribution line component. The distribution component neither increases the demand for, nor alters the level of, local public services required because it would not measurably increase local population or housing opportunities and/or requirements. Therefore, the distribution component would not create a need for new hospitals or other public services and there would be no impacts in this regard.

**Operations and Maintenance – No Impact**

No additional need for libraries or other government or public services would be required as a result of the distribution line component. Operation and maintenance would be completed by existing work crews. Therefore, the distribution component would neither increase the demand for, nor alter the level of, local public services required. The distribution component would not create a need for new hospitals or other public services and there would be no impacts in this regard.

**6.14 RECREATION**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.14.1 Question 4.14a – Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**Construction – No Impact**

The population of South Orange County may increase very slightly during construction of the Proposed Project as a result of the approximately 75 workers (15 for the distribution line) per day (maximum number of workers during peak of construction, refer to Section 6.12 of this Analysis [Population and Housing]) required during the various phases of construction. The potential minor increase in population would not create substantial additional demand on existing recreation facilities due to the small, temporary nature of the potential increase in local population. Any small increase in the use of existing recreational facilities as a result of the distribution component would not create or accelerate the physical deterioration of any existing recreational facilities. Thus, no impact would occur.

**Operation & Maintenance – No Impact**

The distribution line component would not create a need for additional housing or long-term population immigration that could result in increased utilization of existing recreational facilities in the vicinity of the distribution component, as described in Section 6.12 of this Analysis (Population and Housing). No new employees would be hired to operate or maintain the distribution component facilities. The facilities would be operated and maintained by existing SDG&E personnel in the same manner that the existing facilities are operated and maintained. Thus, no impact would occur.

**6.14.2 Question 4.14b – Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**Construction and Operation & Maintenance – No Impact**

The distribution line component involves replacement existing SDG&E electrical facilities, all of which is within franchise. The distribution component work does not include construction or expansion of any recreational facilities. Thus, no impacts would occur.

**6.15 TRANSPORTATION AND TRAFFIC**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.15.1 Question 15a - Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

**Construction – Less than Significant Impact with Implementation of APMs**

*Impacts to LOS from Construction-Related Traffic*

Construction activities related to the distribution line component would result in a negligible increase in daily vehicle trips on roadways that would be utilized for construction access. Access routes to each construction location are shown in Table 14, Anticipated Distribution Construction Access Routes, and Table 15, Estimated Distribution Line Construction Generated Average Daily Trips, outlines the average daily trips associated with construction of the distribution lines. PEA Figure 4.14-1 depicts the access routes listed in Tables 14 and 15. Tables 4.14-6 and 4.14-7 within the PEA provide the same information for the transmission and substation components of the Proposed Project.

**Table 14: Anticipated Distribution Construction Access Routes**

Proposed Project Construction Site	Access Route
Pole No. D1 and new underground trench west and south of San Juan Capistrano Substation	I-5 to Junipero Serra Road to Camino Capistrano
Pole Nos. D2 and D3 and new underground trench from San Juan Capistrano Substation to I-5	I-5 to Junipero Serra Road to Camino Capistrano to Calle Bonita Road
Pole Nos. D4 and D5, new underground trench near Rancho Viejo Road, and new cable installation within Rancho Viejo Road	I-5 to Junipero Serra Road to Rancho Viejo Road
Pole Nos. D6 through D38, New cable installation within La Pata Avenue and Vista Montana	I-5 to Junipero Serra Road to Rancho Viejo Road to SR-74 to La Pata Avenue
Pole No. D39 and new trenching/cable installation	I-5 to Avenida Pico to SDG&E access road
*Based upon preliminary engineering Source: SDG&E	

**Table 15: Estimated Distribution Construction Generated Trips**

<b>Distribution Line Work Area</b>	<b>Duration of Construction Activities<sup>1</sup></b>	<b>Affected Roadways</b>	<b>Max Daily Trips<sup>2</sup></b>
Work between Capistrano and I-5	6 days (new trenching)	I-5, Junipero Serra Road, Camino Capistrano, Calle Bonita	40
Work along Rancho Viejo Road	8 days (pole foundation and installation)	I-5, Junipero Serra Road, Rancho Viejo Road	26
Work along La Pata Avenue	6 days (stringing new conductor)	I-5, Junipero Serra Road, Rancho Viejo Road, SR-74, La Pata Avenue	26
Work north of Talega Substation	2 days (new trenching)	I-5 and Avenida Pico	30
Notes: *Based upon preliminary engineering. <sup>1</sup> Duration of construction corresponds to the max number of trips presented in the far right column. The duration of all construction activities at a certain area could be longer. Trips include estimates for workers and deliveries.			

Three road segments that would be used for the Proposed Project have been specifically designated by either the City of San Juan Capistrano or the City of San Clemente due to special conditions or existing traffic-related congestion problems. PEA Table 4.14-8, Existing Traffic Congestion Problem Areas and Designated Special Land Use Areas, outlines those roadway segments or special land uses that either city has designated as a potential area of concern with respect to traffic and circulation.

Construction of the distribution line component could affect two of those roadway segments by increasing traffic on the following roadways:

- Camino Capistrano (near Junipero Serra Road and Oso Road), and
- I-5 interchange with Avenida Pico.

Camino Capistrano (near Oso and Junipero Serra Road) has two schools, which can create localized traffic congestion during certain times of the day during the school year. The City of San Juan Capistrano identifies schools as Special Land Uses with respect to circulation. The substation and transmission line components of the Proposed Project would also affect Camino Capistrano in the same manner as the distribution line component.

In general, the increases in daily trips outlined in Table 13 (maximum construction generated trips of approximately 40 two way trips [20 vehicles]), when compared to the existing roadway average daily traffic (ADT) of 3,000 to 271,000 (refer to Table 4.14-2, Existing Average Daily Trips for Affected Roadways), represent an insignificant increase in traffic volume that would not have a significant detrimental impact on existing level of service (LOS) for any roadway affected by the Proposed Project. Even when the maximum anticipated construction traffic from the distribution line construction is combined with transmission line and substation construction-generated traffic (72 trips per day – refer to PEA Table 4.14-7).

Although the amount of construction-related traffic is minimal compared to the overall capacity of the majority of the roadways in the Proposed Project area, other factors could affect traffic flow within the Proposed Project vicinity. Specifically, the following factors can create significant adverse impacts on traffic:

- The length of time that construction activities would be impacting roadways; and
- The locations of specific special land uses (such as schools) that can create short term traffic delays on roadway segments that otherwise have acceptable LOS.

Of note with respect to the construction of the distribution lines is that the individual distribution line construction activities would not last for extended periods of time. For example, trenching between the San Juan Capistrano Substation and I-5 would only take approximately six days (total) to complete. This construction activity would generate the highest potentially daily traffic (40 trips per day) of any of the distribution line components. The construction equipment would be kept onsite during construction activities and, therefore, would not generate daily traffic trips.

As with construction of the San Juan Capistrano Substation, distribution line work between the substation site and I-5 would have the potential to combine with school-related traffic to create congestion. Immediately north of the existing Capistrano Substation site is the Saddleback Valley Christian School, which includes an early childhood center, elementary school, junior high school, and high school and the JSerra Catholic High School. Access to all of these schools is provided via Camino Capistrano, which already experiences a high amount of pedestrian and vehicular traffic during the school year (September to June), especially during the mornings (the schools start at 7:45 AM to 8:30 AM) and afternoons (the schools end from 2:25 PM to 3:00 PM). Therefore, the addition of construction-related traffic along Camino Capistrano during the school year and especially during the morning and afternoon peak periods would reduce the performance of this roadway for the duration of construction activities. Implementation of APM TR-1, as outlined within the PEA, would ensure that any potential impacts associated with construction-generated traffic along Camino Capistrano would be less than significant. APM TR-1 would ensure that construction workers working at or near the San Juan Capistrano Substation site would arrive and depart work at hours that would avoid school-generated traffic. Workers would arrive before 7:30 AM and depart after 3:30 PM. APM TR-1 would reduce the potential overload between this school-related traffic and construction-related traffic.

Another potential impact could arise where construction generated traffic would combine with areas of existing sub-standard LOS. There are two roadway segments where existing LOS reaches F: SR-74 (between Del Obispo [west of I-5] and La Novia [east of I-5]) and along the I-5 itself. While congestion on the I-5 can be significant due to high volumes of traffic, the construction generated daily trips would not substantially increase ADT on the I-5. Although because the I-5 is the primary regional north-south transportation route use of the I-5 cannot feasibly be avoided, the impacted section of SR-74 can be largely avoided by construction-related traffic. The largest problem area for SR-74 is at the I-5 interchange, where ADT can reach 46,000. This area is also highlighted in the *Orange County Congestion Management Program* (CMP). Implementation of the APM TR-2, which requires construction traffic associated with the San Juan Capistrano Substation and the 138kV getaways to avoid the SR-74 off-ramp from I-5, would also ensure that construction traffic associated with distribution line activities between the substation site and I-5 by way of the impacted SR-74 off ramp.

Construction traffic would access these areas by way of the Junipero Serra Road exit to the north. Construction traffic associated with the San Juan Capistrano Substation and adjacent areas would generate so few additional trips (approximately 90 trips per day maximum combined for distribution, substation, and transmission) along the alternate route when compared to the existing traffic volumes (9,400 to 14,300 ADT) and would not be likely to have a substantial adverse effect on existing average daily LOS (A-C). Therefore, impacts resulting from construction generated ADT would be less than significant.

#### *Impacts from Construction of Underground Transmission Lines within Roadways*

The distribution line component includes installation of new underground lines within existing roadways, which would require partial closure of the affected roadways during construction. Specifically, construction would occur within Camino Capistrano, Calle Bonita, Calle Santa Rosalia, and Rancho Viejo Road. However, most of these closures would be short in duration (1 to 4 days).

However, traffic control plans would be prepared (and approved by the City of San Juan Capistrano) for all work conducted within roadways within the City of San Juan Capistrano. The approved traffic control plans would describe lane closures and other methods for reducing adverse construction-related traffic impacts and require SDG&E to coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles, to ensure that emergency vehicle access is maintained and that impacts to traffic flow are minimized. However, short-term significant impacts to traffic flow could still occur where localized traffic congestion events coincide with the required lane closures. Transmission line Segment 2 of the Proposed Project (underground construction within Vista Montana) would meet this criterion; however, construction of the distribution line component would not. Therefore, construction of the distribution lines within public roadways would only result in less than significant impacts.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance of the distribution line component because operation and maintenance would occur in the same or essentially the locations as they occur today under baseline, existing conditions. SDG&E does not anticipate that any additional trips beyond those currently required for operation and maintenance of the existing distribution facilities. As a result, there would be no long-term increase in traffic and, therefore, no long-term impact.

#### **6.15.2 Question 15b – Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highway?**

#### **Construction – Less Than Significant Impact with Incorporation of APMs**

There is only one CMP-designated arterial and intersection in the Proposed Project study area, I-5 at SR-74. As discussed in Section 6.15.1 of this Analysis (Question 15a), construction of the distribution line and Proposed Project would generate so few additional trips in that area

compared to the existing volume that the distribution component would not result in any significant impact. Furthermore, construction traffic would be directed to avoid the I-5/SR-74 interchange and utilize less impacted access points (refer to APM TR-2 as outlined within the PEA).

Besides the official CMP designated intersection discussed above, however, there also are road segments that the City of San Juan Capistrano or the City of San Clemente have designated as having special conditions or existing traffic congestion issues. As previously discussed in Section 6.15.1 of this Analysis, the Proposed Project would result in significant short-term impacts to traffic circulation on Vista Montana during construction of transmission line Segment 2 (Rancho San Juan). While the distribution line component would involve construction in the vicinity of Vista Montana, no actual work will be required on Vista Montana or at the intersection of Vista Montana and La Pata Avenue (refer to Section 2.3.3 of this Analysis and Figure 2). Therefore, construction of the distribution line is not anticipated to this significant effect. As with the Proposed Project (refer to PEA Section 4.14.4.3) potential impacts relating to construction generated traffic combining with existing traffic congestion to create or exacerbate significant conflicts with acceptable LOS would be less than significant with implementation of APMs TR-1 and TR-2 for all other roadways.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance would occur in the same or essentially the same locations as they occur today under baseline, existing conditions. As a result, there would be no long-term impacts to the existing LOS standards or other adopted traffic control standards as a result of operations and maintenance of the distribution component.

### **6.15.3 Question 15c – Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?**

#### **Construction – No Impact**

As described in PEA Section 3.6.6, Helicopter Usage during Transmission Line Construction, helicopters may be used as a construction tool during the stringing of overhead conductor cable and other transmission line construction activities associated with the Proposed Project for proposed Pole Nos. 11 through 14 (refer to PEA Figure 3-7). However, construction of the proposed distribution line relocation is not anticipated to require the utilization of helicopters. Therefore, no impact to air traffic would occur as a result of helicopter usage.

The John Wayne Airport is the closest airport and is located approximately 15 miles northwest of the existing Capistrano Substation. The distribution component is not subject to airport land use approvals because of its distance from John Wayne Airport. Therefore, no Federal Aviation Administration (FAA) clearance would be required and no impact would occur.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the locations as they occur today under baseline, existing conditions. SDG&E does not anticipate that helicopter use beyond that currently required for existing facilities would be necessary to operate or maintain the distribution lines. As a result, there would be no impact to air traffic due to the operation and maintenance of the distribution component.

#### **6.15.4 Question 15d – Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

### **Construction – Less than Significant Impacts**

Construction of the distribution line component would not result in any permanent modification to existing public roadways (similar to the transmission line component of the Proposed Project as described within the PEA). As previously discussed (refer to PEA Section 4.14 and Section 2.4.1.4 of this Analysis), temporary road or lane closures would be required to provide safety to the public and workers during certain activities (i.e. trenching within existing roadways). Road closures and encroachment into public roadways could increase hazards if appropriate safety measures are not in place, such as proper signage, safety cones, and flaggers. However, SDG&E would be required to obtain encroachment permits in order to complete work with public roadways. The encroachment permits would include traffic control plans that would ensure work is completed in a safe manner, in accordance with applicable local regulations. Therefore, impacts would be less than significant.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the locations as they occur today under baseline, existing conditions. As a result, there would not be any impacts associated with increased hazards due to design features.

#### **6.15.5 Question 15e – Result in inadequate emergency access?**

### **Construction – Less Than Significant Impact with Implementation of APMs**

Construction of the distribution line component would involve construction within existing public roadways, including Camino Capistrano, Calle Bonita, Calle Santa Rosalia, and Rancho Viejo Road. Emergency access would not be directly impacted during construction because all streets would remain open to emergency vehicles throughout construction. Increased vehicle traffic during construction and temporary lane closures during the undergrounding of new underground trench packages would occur. Although this can impact emergency access, the

increase in increased vehicle traffic during construction would be minor (refer to Section 6.15.1 of this Analysis) and is not expected to significantly affect response times, and construction within public roadways would be conducted pursuant to approved traffic control plans that would ensure emergency vehicle access is preserved during construction activities. In addition, to ensure that emergency response access is maintained, SDG&E will coordinate with all of the local emergency response agencies during all construction within roadways as outlined in APM TR-3, as included within the PEA. Thus, while construction of the distribution line component will increase the amount of construction within public roadways, impacts would be less than significant.

### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the locations as they occur today under baseline, existing conditions. Therefore, no impacts to emergency vehicle access would occur as a result of operation and maintenance of the distribution component.

### **6.15.6 Question 15f – Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

#### **Construction – No Impact**

Construction of the distribution line component would occur almost exclusively within existing SDG&E ROW areas and on SDG&E-owned land. The distribution line component would not involve any activities that would conflict with transportation policies, plans, or programs, including bus transportation in the area. However, there is one bus stop in front of the existing Capistrano Substation site, adjacent to proposed distribution line construction (trenching) as part of Route 91 (along Camino Capistrano). However, construction activities would not restrict the utilization of this bus stop. There is also a bus stop located near the intersection of Rancho Viejo Road and Golf Club Drive (Route 191). While the proposed distribution route would be located within this area, the distribution route will utilize existing trench and conduit within Rancho Viejo Road and no impacts to Bus Stop 7088/7081 would result. Therefore, there would be no impact.

#### **Operation & Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would not be any new impacts resulting from operation and maintenance because operation and maintenance of the distribution line component would occur in the same or essentially the locations as they occur today under baseline, existing conditions. Rail, bus, and bicycle traffic are not affected by current operation and maintenance activities, and there would be no change to these activities as a result of the distribution component. Therefore, no impact would occur.

**6.16 UTILITIES AND SERVICE SYSTEMS**

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? In making this determination, the City shall consider whether the project is subject to the water supply assessment requirements of Water Code Section 10910, et. Seq. (SB 610), and the requirements of Government Code Section 664737 (SB 221).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6.16.1 Question 16a – Exceed wastewater treatment requirements of the applicable RWQCB?**

**Construction – No Impact**

Construction of the distribution line component is not anticipated to generate wastewater (similar to the transmission and substation components analyzed within the PEA). Portable toilets would be provided for on-site use by construction workers and would be maintained by a licensed sanitation contractor. Portable toilets would be used in accordance with applicable sanitation regulations established by the Occupational Safety and Health Administration, which generally requires one portable toilet for every 10 workers. The licensed contractor would dispose of the waste at an off-site location and in compliance with standards established by the RWQCB.

During excavation activities, dewatering may be necessary in some locations. Construction dewatering procedures that would be implemented during construction are outlined in PEA Section 3.0, Project Description. In addition, the water would be discharged in accordance with

the Cities of San Juan Capistrano and San Clemente and San Diego RWQCB requirements (refer to PEA Section 4.8, Hydrology and Water Quality). As a result, it would not require treatment at a wastewater facility and there would be no impacts.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. No impacts are anticipated because operation and maintenance of the distribution line component would not materially increase in frequency or intensity, and current operations do not exceed the RWQCB's wastewater treatment requirements.

#### **6.16.2 Question 16b – Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

### **Construction – No Impact**

Water would be utilized during construction of the distribution line component in order to control dust on access roads, prepare concrete for foundations, and for site development. Because this water would be dispersed on-site and would either evaporate or be absorbed into the ground, no wastewater is anticipated. In addition, during excavation activities, dewatering may be necessary (though none is anticipated). As previously described, the Proposed Project includes procedures that would be implemented during construction and the water would be discharged in accordance with the Cities of San Juan Capistrano and San Clemente and San Diego RWQCB requirements (refer to PEA Section 4.8, Hydrology and Water Quality). These same procedures would apply to the distribution component. There would not be any need for new or expanded water or wastewater treatment facilities because the construction needs would be so minimal; therefore, no impact would occur.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. No impacts are anticipated because operation and maintenance of the distribution line component would not materially increase in frequency or intensity, and current operations do not require new water or wastewater facilities.

#### **6.16.3 Question 16c – Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

### **Construction – No Impact**

Impacts resulting from non-point water pollution associated with construction activities are discussed in more detail in Section 6.9 of this Analysis (Hydrology and Water Quality). As concluded in Section 6.9, construction of the distribution line component of the Proposed Project would result in only less than significant impacts by implementing SDG&E's *BMP Manual*, and

by adhering to existing regulations, including compliance with NPDES regulations and preparation of a SWPPP, which would control discharge and preclude the need for construction of new or expanded off-site storm water drainage facilities. These same requirements would apply to the distribution line component. As a result, there would be no impacts resulting from construction or expansion of such facilities.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. No impacts are anticipated because operation and maintenance of the distribution line component would not materially increase in frequency or intensity from existing, baseline conditions, and current operations do not require new stormwater drainage facilities.

#### **6.16.4 Question 16d – Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

### **Construction – No Impact**

Water is anticipated to be the primary means for dust control during construction of all components of the Proposed Project, including the relocated distribution lines. Water for these uses would be obtained from municipal water sources. The Municipal Water District of Orange County currently has 485,311 acre-feet per year of water in their distribution system; therefore, a sufficient water supply is available to meet water demands for construction needs. The demand for water would be temporary and short-term, and would only be generated during the construction phase. Therefore, no impacts are anticipated.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. Future operation and maintenance would not require significantly more water than is currently utilized for operation and maintenance activities because operation and maintenance of the distribution line component would not materially increase in frequency or intensity. Therefore, no impacts are anticipated.

#### **6.16.5 Question 16e – Result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

### **Construction – No Impact**

As previously analyzed in responses to Questions 16a and 16b, the generation of wastewater during construction would be limited to portable toilets that would be provided for on-site use by construction workers and would be maintained by a licensed sanitation contractor. The licensed contractor would dispose of the waste at an off-site location and in compliance with standards established by the San Diego RWQCB. Therefore, the wastewater treatment provider would

have adequate capacity to serve the distribution component's projected demand in addition to the provider's existing commitments, and no impacts would occur.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. No impacts are anticipated because operation and maintenance of the distribution line component would not materially increase in frequency or intensity, and current operations do not require increased wastewater capacity.

### **6.16.6 Question 16f – Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

#### **Construction – Less than Significant Impact**

As outlined within PEA Section 4.15 (Utilities and Service Systems), the Proposed Project could be served by a total of three possible landfills in Orange County, including; Prima Deshecha Landfill, Olinda Alpha Sanitary Landfill, and Frank R. Bowerman Sanitary Landfill, for disposal of typical construction debris (Landfill Class III). As illustrated in PEA Table 4.15-1, Capacity of Landfills Serving the Proposed Project, the total remaining capacity of the three Class III landfills is 185.4 million cubic yards, with a daily throughput capacity of 20,500 tons per day (tons/day). Solid waste generated from construction of the distribution line component is anticipated to be limited to excess soil and concrete/pavement during trenching and old poles and associated equipment. As outlined in PEA Table 3-12, Common Destination for Retired Project Components, many of these materials would be recycled and/or donated for re-use prior to being hauled to a disposal facility. Large amounts of cut and fill are not anticipated and no large-scale demolition would be required. Therefore, it is not anticipated that the distribution line component would generate large amounts of solid waste and impacts are anticipated to be less than significant.

#### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. There would be no impacts because operation and maintenance of the distribution line component would not materially increase in frequency or intensity and no new solid waste is anticipated.

### **6.16.7 Question 16g - Comply with federal, state, and local statutes and regulations related to solid waste?**

#### **Construction – No Impact**

Construction of the distribution line component is not anticipated to generate a substantial amount of solid waste. As analyzed in response to Question 16f, solid waste produced during construction would be disposed of at the Prima Deshecha Landfill. Management and disposal of solid waste would comply with all applicable federal, state, and local statutes and regulations.

Similarly, waste generated by the demolition of the existing facilities would be properly disposed of in accordance with all applicable federal, state, and local statutes and regulations, with particular regard for the management and disposal of any hazardous materials. All treated wooden poles removed from the site would be properly handled, transported, and disposed of at the Prima Deshecha Landfill, consistent with federal, state, and local statutes and regulations and SDG&E protocols. Thus, the distribution component would not violate any solid waste statutes or regulations.

In addition, any waste generated during construction and/or demolition that is hazardous or otherwise regulated hazardous waste control laws would be handled and disposed of according to applicable regulations. Hazardous and other regulated wastes are anticipated to be disposed of at either the Waste Management Kettleman Hills Facility (located in Kettleman, California) or at the Clean Harbor Environmental Services facility in Buttonwillow, California. Refer to PEA Section 4.7 (Hazards and Hazardous Materials) and 6.8 of this Analysis (Hazards and Hazardous Materials), for more detailed information concerning anticipated hazardous wastes and potential impacts relating to the handling and disposal of such wastes.

### **Operations and Maintenance – No Impact**

SDG&E currently maintains and operates existing electric facilities throughout the distribution line alignment area. SDG&E's existing operations and maintenance activities constitute the baseline against which the impacts are evaluated. No impacts are anticipated because operation and maintenance of the distribution line component would not materially increase in frequency or intensity, and current operations conform to all applicable solid waste regulations.

### **6.17 GROWTH-INDUCING IMPACTS**

Potential growth-inducing impacts for the substation and transmission line components of the Proposed Project are discussed in PEA Section 5.3 (Growth-Inducing Impacts). The Proposed Project is being proposed in order to improve transmission system reliability and flexibility, and increase capacity for projected load growth in the South Orange County service area based on existing regionally and locally adopted land use plans. The distribution line component is needed in order to replace distribution facilities that are being displaced by the transmission line component of the Proposed Project. As such, no new distribution lines are being installed and the proposed distribution line work represents replacement and relocation of portions of existing distribution circuits. The distribution component would not include extending existing distribution line infrastructure to currently un-serviced areas or the construction of any new distribution circuits. The distribution component would in fact result in a reduction in the overall distribution line footprint. Therefore, the distribution component alignment would not induce or stimulate new growth through the extension of infrastructure and there would be no impacts.

As discussed in Section 6.12 of this Analysis, construction of the Proposed Project and distribution line component would not result in a significant increase in the local population and would require the construction of new or expanded housing. Therefore, any impact resulting from increases in employment from construction of the Proposed Project and distribution line component would be less than significant.

## 6.18 CUMULATIVE IMPACTS

The potential cumulative projects outlined in PEA Table 4.16-1, Planned and Proposed Projects within One Mile of the Proposed Project, would apply to the distribution component of the Proposed project because the required distribution line work would be located in the immediate vicinity of the transmission and substation components of the Proposed Project. Construction of the distribution line component would contribute to cumulatively considerable adverse impacts resulting from emission of criteria pollutants during construction activities in a similar manner to the transmission component of the Proposed Project. Construction of the distribution line component will not include work (i.e., trenching) within Vista Montana or La Pata Avenue and, therefore, it is unlikely that construction of the distribution lines would contribute to the potentially significant cumulative impact to congestion and deterioration of LOS that would arise from construction of transmission line Segment 2 (Rancho San Juan) and the La Pata Avenue Gap Closure and Camino Del Rio Extension Project. Construction of the distribution lines would only result in less than significant cumulative impacts, similar to those impacts described within PEA Section 4.16, Cumulative Impacts, for the transmission line and substation components of the Proposed Project.

It is unlikely that any cumulative impacts will result during operation and maintenance of the Proposed Project, including the distribution line component, because operation and maintenance of the distribution lines (as well as the Proposed Project) will not change substantially (if at all) from current, baseline conditions,.

## 6.19 SIGNIFICANT IMPACTS AND APPLICANT PROPOSED MEASURES

The consecution, operation, and maintenance of the distribution line component, as designed, would not create any new significant impacts. However, emission of criteria pollutants during construction of the distribution line would contribute to short-term significant air quality impacts identified within the PEA. No new APMs would be required to ensure that impacts are less than significant (significant air quality impacts are reduced to the extent feasible through adherence to SCAQMD rules and BMPs for fugitive dust and construction emissions [refer to PEA Section 4.3.4.3]) and all other potentially significant impacts can be minimized through implementation of APMs included with the PEA). The following APMs relating to Aesthetics, Cultural Resources, Noise, Public Services, and Transportation and Traffic would be applied to the distribution line component of the Proposed Project to ensure that impacts are minimized, and reduced to a level less than significant:

- AES-1 and AES-2;
- CUL-1 through CUL-9;
- NOISE-1;
- PS-1 and PS-2; and
- TR-1 through TR-3.

These APMs are outlined in Table 16, Applicant Proposed Measures Applicable to the Distribution Line Component of the Proposed Project.

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**Table 16: Applicant Proposed Measures Applicable to the Distribution Line Component of the Proposed Project**

APM Number	APM Description	Applicable Project Component		
		Distribution	Transmission	Substation
<b>AES-1</b>	Clean Construction Work Areas. SDG&E will keep construction activities as clean and inconspicuous as practical.	<b>X</b>	<b>X</b>	<b>X</b>
<b>AES-2</b>	Restoring Appearance of Disturbed Areas. When Proposed Project construction has been completed, all disturbed terrain will be restored through recontouring and revegetation in order to re-establish a natural appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-1</b>	Prior to the initiation of construction or ground-disturbing activities, all SDG&E, contractor, and subcontractor personnel would receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including the potential for exposing subsurface cultural resources and paleontological resources and to recognize possible buried resources. Training shall inform all construction personnel of the anticipated procedures that would be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains, and their treatment, as well as of paleontological resources.	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-2</b>	A qualified archaeologist would attend preconstruction meetings, as needed, and a qualified archaeological monitor would monitor ground disturbing activities in the vicinity of all known cultural resources within the Proposed Project area. The requirements for archaeological monitoring would be noted on the construction plans. The archaeologist's duties would include monitoring, evaluation of any finds, analysis of collected materials, and preparation of a monitoring results report conforming to Archaeological Resource Management Reports guidelines.	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-3</b>	Known cultural resources that can be avoided would be demarcated as Environmentally Sensitive Areas. Construction crews would be instructed to avoid disturbance of these areas.	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-4</b>	In the event that cultural resources are discovered, the archaeologist would have the authority to divert or temporarily halt ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist would contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist, would determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program would be prepared and carried out to mitigate impacts.	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-5</b>	All collected cultural remains would be cataloged, and permanently curated with an appropriate institution. All artifacts would be analyzed to identify function and chronology as they relate to the history of the area. Faunal material would be identified as to species.	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-6</b>	An archaeological monitoring results report (with appropriate graphics), which describes the results, analyses, and conclusions of the monitoring program, would be prepared and submitted to SDG&E's Cultural Resource Specialist and Environmental Project Manager following termination of the program. Any new cultural sites or features encountered would be recorded with the SCCIC or South Coast Information Center (SCIC).	<b>X</b>	<b>X</b>	<b>X</b>
<b>CUL-7</b>	Native American monitoring may be implemented if transmission line construction has the potential to impact identified and mapped traditional locations or places. The role of the Native American monitor shall be to represent tribal concerns and communicate with the tribal council. Appropriate representatives will be identified based on the location of the identified traditional location or place.	<b>X</b>	<b>X</b>	

**Table 16 (cont.): Applicant Proposed Measures Applicable to the Distribution Line Component of the Proposed Project**

APM Number	APM Description	Applicable Project Component		
		Distribution	Transmission	Substation
<b>CUL-8</b>	A paleontological monitor would work under the direction of a qualified Project paleontologist and would be on site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high paleontological resource sensitivity (i.e., Monterey, Santiago, and Capistrano Formations). A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.	<b>X</b>	<b>X</b>	
<b>CUL-9</b>	In the event that fossils are encountered, the paleontological monitor would 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 would 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 would determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on site. When fossils are discovered, the paleontologist (or paleontological monitor) would recover them along with pertinent stratigraphic data. In most cases, this fossil salvage can be completed in a short period of time. 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 would be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections, and a paleontological monitoring report would be written.	<b>X</b>	<b>X</b>	
<b>NOISE-1</b>	Any endeavors during the construction phase wherein nighttime and weekend activities are necessary (such as due to Caltrans transportation constraints for oversized/ overweight loads), will be limited to the extent feasible so that noise will not exceed the pertinent maximum noise level limits or the hourly L <sub>50</sub> limits when measured at the nearest residential property. For example, to minimize potential noise disturbances during nighttime deliveries of transformers, the Applicant will make every reasonable effort to minimize the duration of trucking activities at the project site. This will entail pulling the delivery vehicle onto the project site, parking it overnight, and unloading/installing the item(s) during normal, daytime construction hours. If nighttime or weekend activities cannot be conducted to meet the city's noise standards, SDG&E will communicate the exception to the City of San Juan Capistrano in advance of conducting the work that may exceed the threshold(s).	<b>X</b>	<b>X</b>	<b>X</b>
<b>PS-1</b>	Construction within existing public parks would not completely restrict access through the parks. Where necessary, SDG&E will create temporary foot and bicycle paths along with appropriate advanced notice and signage to direct and allow for the pedestrian and bicycle access through each affected park.	<b>X</b>	<b>X</b>	
<b>PS-2</b>	All recreational facilities that are physically impacted during construction activities will be returned to an approximate pre-construction state, allowing for SDG&E operation and maintenance activities, following the completion of the Proposed Project. SDG&E will make replacements of any public damaged or removed equipment, facilities, and infrastructure, in a timely manner.	<b>X</b>	<b>X</b>	
<b>TR-1</b>	Construction generated traffic associated with the San Juan Capistrano Substation and construction of the 138kV getaways (new underground cable packages and new Pole Nos. 1a through 7a) would avoid the start and ending time for the Saddleback Valley Christian School and the JSerra Catholic High School. Workers would arrive at construction sites by 7:30 AM and would not leave prior to 3:30 PM.	<b>X</b>	<b>X</b>	<b>X</b>

**Table 16 (cont.): Applicant Proposed Measures Applicable to the Distribution Line Component of the Proposed Project**

APM Number	APM Description	Applicable Project Component		
		Distribution	Transmission	Substation
<b>TR-2</b>	Construction generated traffic associated with the San Juan Capistrano Substation and construction of the 138kV getaways (new underground cable packages and new Pole Nos. 1a through 7a) would avoid the SR-74 off ramp from I-5. Avoidance of the SR-74 and I-5 interchange would ensure that construction generated traffic would not exacerbate existing conditions on the stretch of road between the intersections of SR-74 and Rancho Viejo Road and SR-74 and Del Obispo.	<b>X</b>	<b>X</b>	<b>X</b>
<b>TR-3</b>	SDG&E will coordinate with local emergency response agencies during all construction within existing roadways. Coordination with local emergency response agencies (such as Orange County Sheriff's Department and Orange County Fire Authority) would ensure that impacts to emergency access are less than significant.	<b>X</b>	<b>X</b>	

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BACK OF TABLE 16

## 7.0 REFERENCES

In general, references used within the PEA were utilized in the preparation of this Analysis. Only new references utilized solely for the preparation of this Analysis have been included herein.

California State Water Resources Control Board. GeoTracker Database. Online: <http://geotracker.waterboards.ca.gov/>. Accessed July 5, 2012.

Department of Toxic Substances Control. ENVIROSTOR Database. Online: <http://www.envirostor.dtsc.ca.gov/public/>. Accessed July 5, 2012.

Morton, P. K., and Miller, R. V. 1981. Geologic Map of Orange County California, *California Division of Mines and Geology: Bulletin*. 204, plate 1, scale 1:48,000.

San Diego Gas & Electric Company. May 2012. *Proponent's Environmental Assessment for the South Orange County Reliability Enhancement Project*.

## **APPENDIX A**

### **Typical Distribution Structure Diagrams**

## **APPENDIX B**

### **Detailed Equipment Use Table**

## **APPENDIX C**

### **Air Quality Emissions Calculations**

## **APPENDIX D**

### **Biological Resources Assessment Addendum**

## **APPENDIX E**

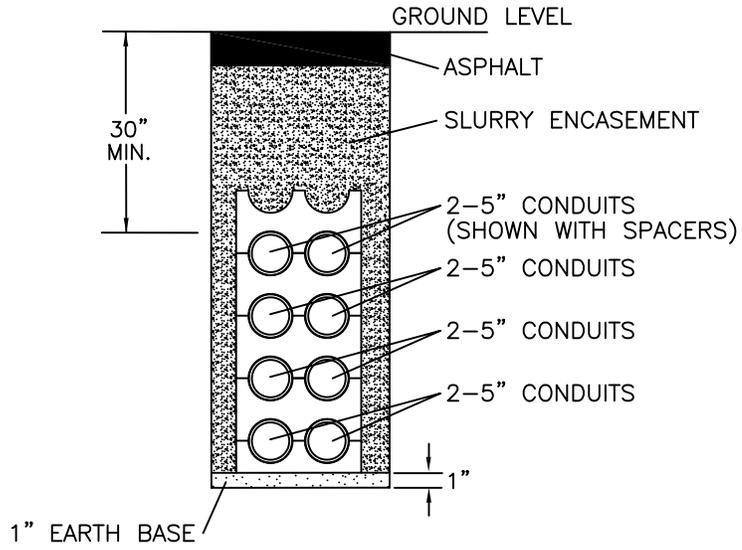
### **Cultural Resources Assessment Addendum**

**APPENDIX F**

**Records Search Results (CONFIDENTIAL – SUBMITTED UNDER  
SEPARATE COVER)**

## **APPENDIX A**

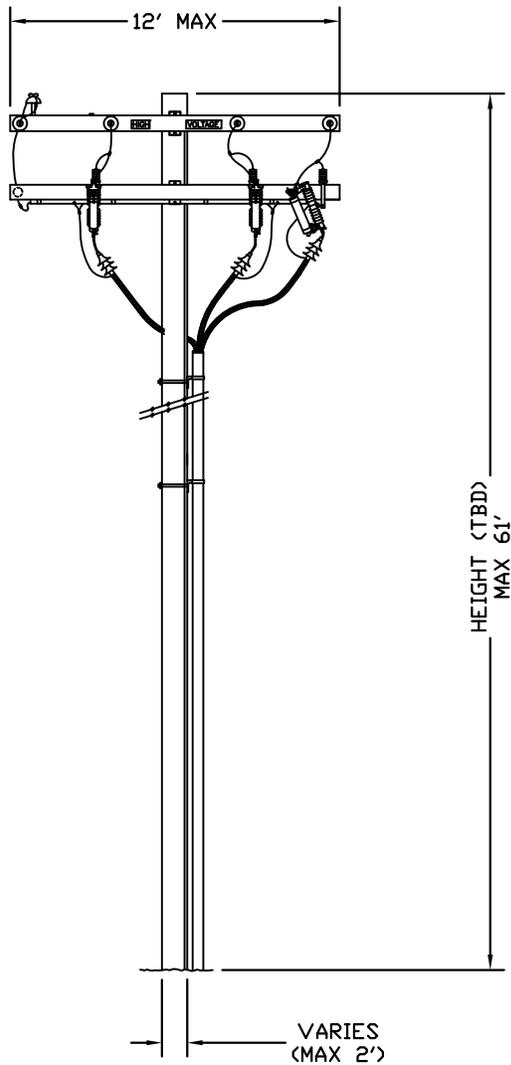
### **Typical Distribution Structure Diagrams**



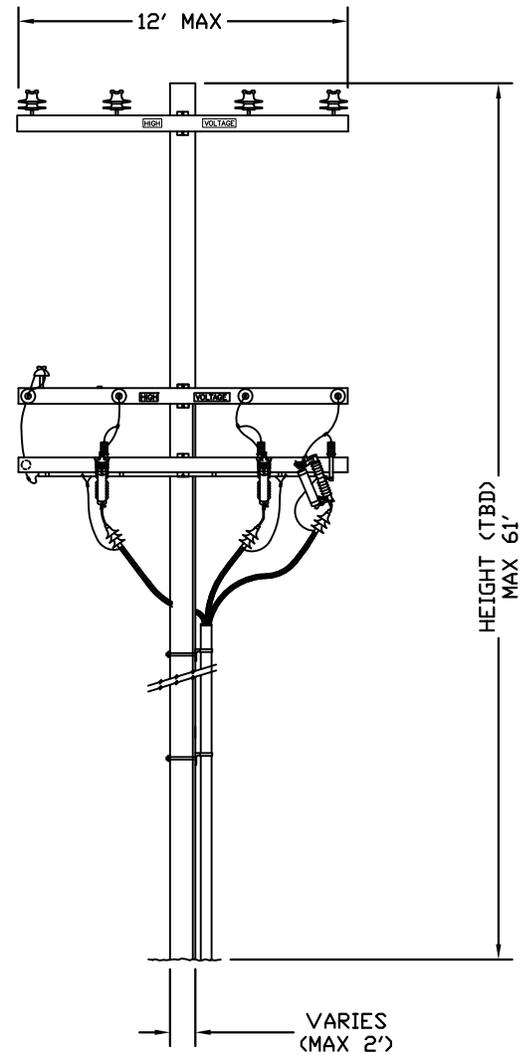
TRENCH CROSS-SECTION  
NO SCALE

**Typical Distribution Trench Cross-Section**

UNDERGROUND TO  
OVERHEAD TRANSITION  
(CABLE POLE)  
FIRST CIRCUIT

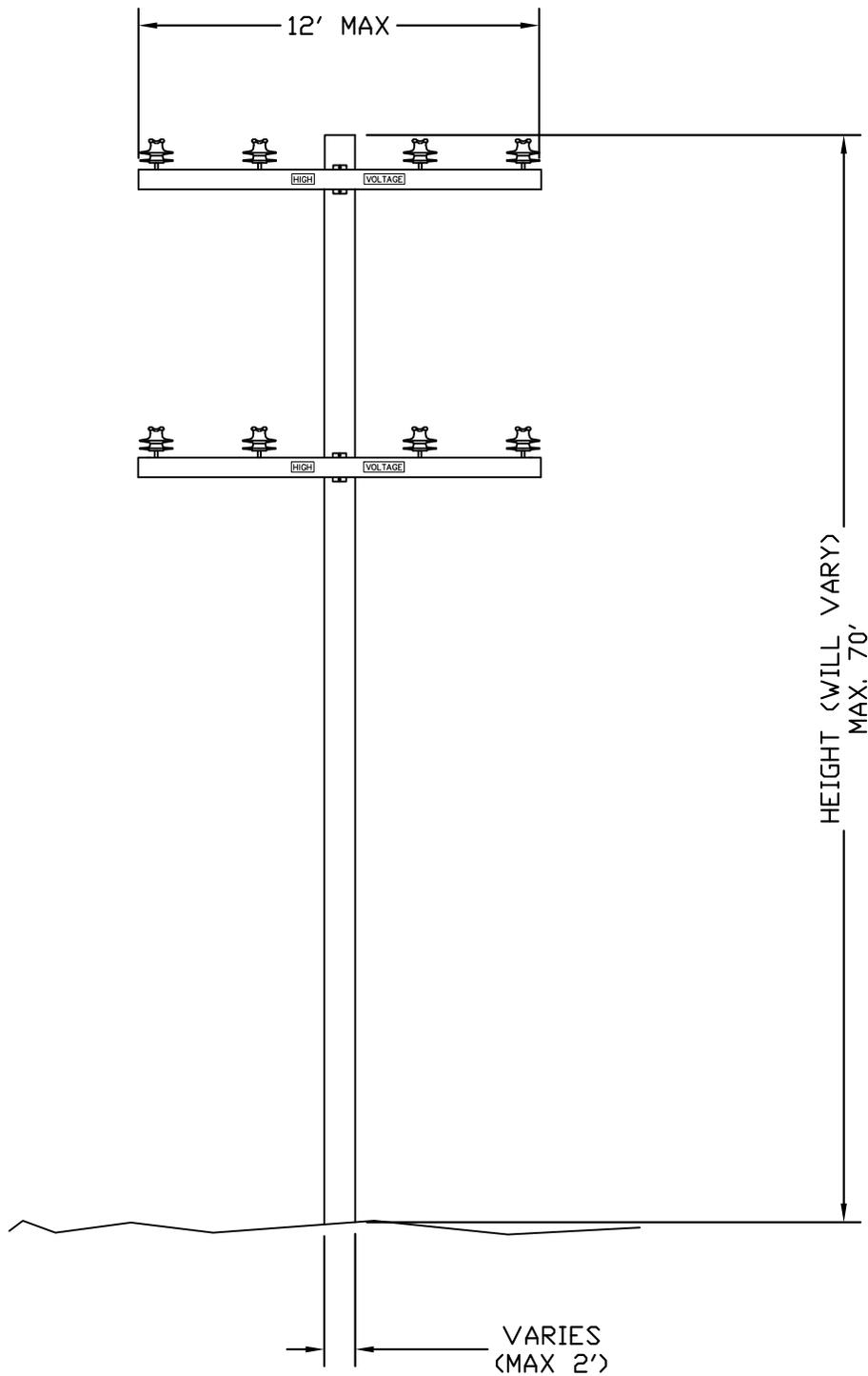


UNDERGROUND TO  
OVERHEAD TRANSITION  
(CABLE POLE)  
SECOND CIRCUIT



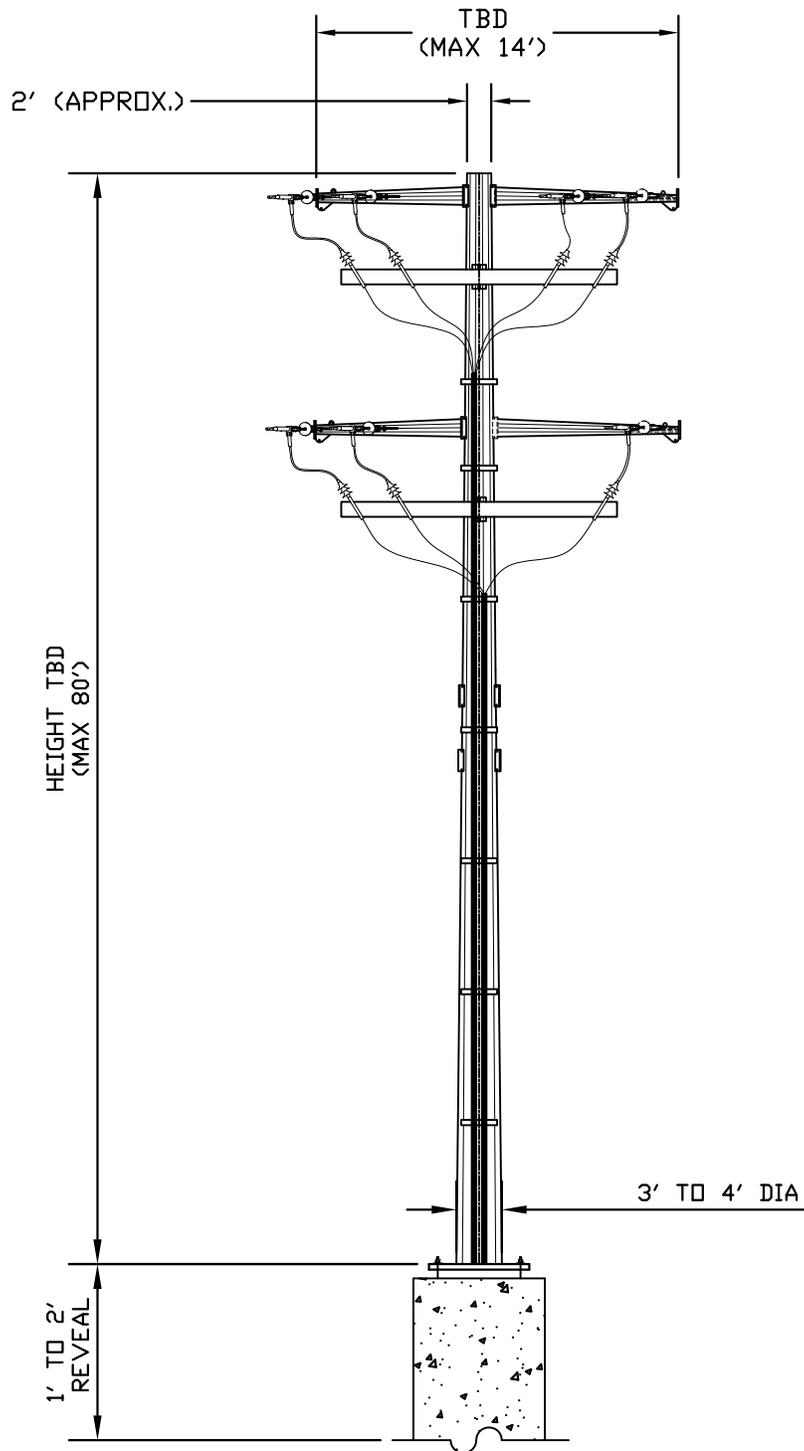
THIS DRAWING REPRESENTS A VISUAL DEPICTION OF THE BEST ESTIMATE OF HOW THIS POLE IS TO BE CONSTRUCTED. ACTUAL DIMENSIONS AND CONFIGURATION WILL VARY BASED ON FINAL DESIGN CRITERIA, ENVIRONMENTAL REVIEW, AND LANDS RIGHTS ACQUISITION.

# TYPICAL TWO-CIRCUIT 12KV STEEL POLE



THIS DRAWING REPRESENTS A VISUAL DEPICTION OF THE BEST ESTIMATE OF HOW THIS POLE IS TO BE CONSTRUCTED. ACTUAL DIMENSIONS AND CONFIGURATION WILL VARY BASED ON FINAL DESIGN CRITERIA, ENVIRONMENTAL REVIEW, AND LANDS RIGHTS ACQUISITION.

# STEEL CABLE POLE 1-5 CROSSING



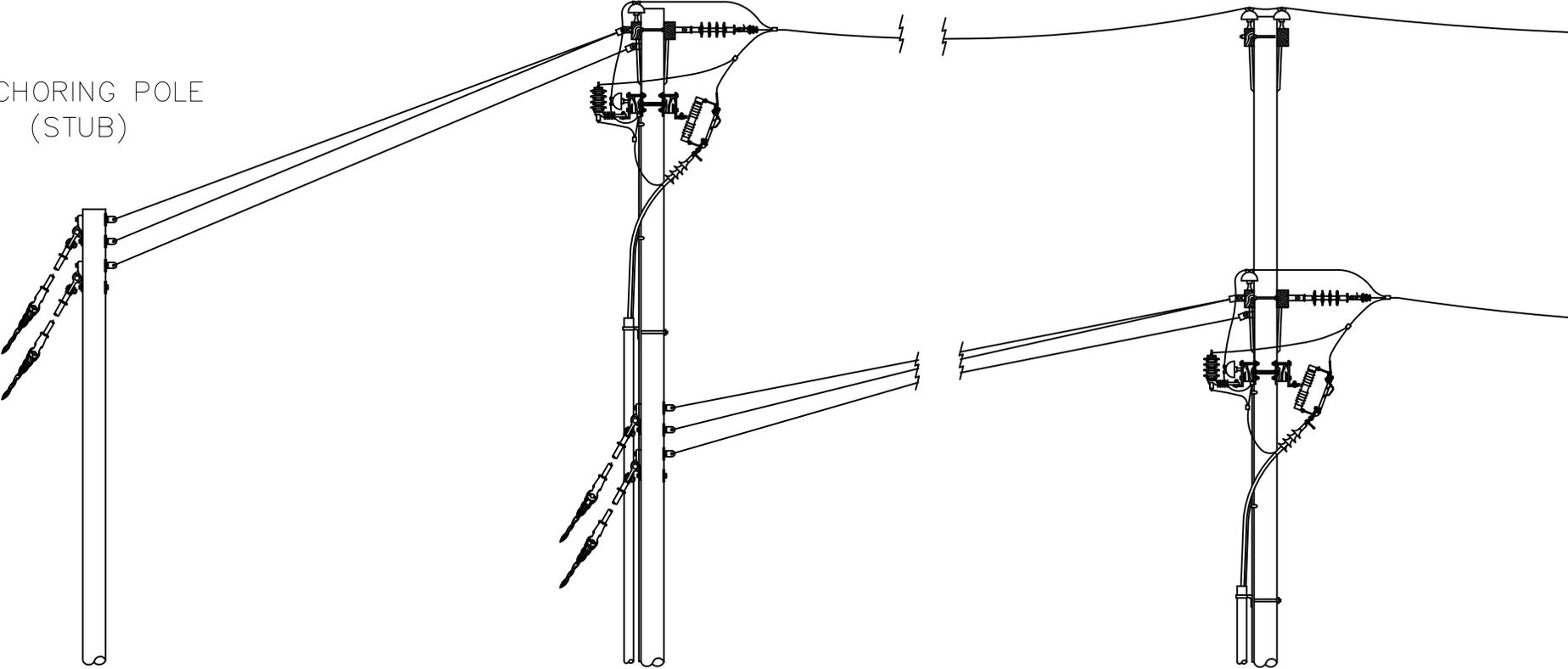
THIS DRAWING REPRESENTS A VISUAL DEPICTION OF THE BEST ESTIMATE OF HOW THIS POLE IS TO BE CONSTRUCTED. ACTUAL DIMENSIONS AND CONFIGURATION WILL VARY BASED ON FINAL DESIGN CRITERIA, ENVIRONMENTAL REVIEW, AND LANDS RIGHTS ACQUISITION.

PROFILE VIEW

UNDERGROUND TO OVERHEAD TRANSITION  
(CABLE POLE)  
FIRST CIRCUIT

UNDERGROUND TO OVERHEAD TRANSITION  
(CABLE POLE)  
SECOND CIRCUIT

ANCHORING POLE  
(STUB)



THIS DRAWING REPRESENTS A VISUAL DEPICTION OF THE BEST ESTIMATE OF HOW THIS POLE IS TO BE CONSTRUCTED. ACTUAL DIMENSIONS AND CONFIGURATION WILL VARY BASED ON FINAL DESIGN CRITERIA, ENVIRONMENTAL REVIEW, AND LANDS RIGHTS ACQUISITION.

## **APPENDIX B**

### **Detailed Equipment Use Table**

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 1: Underground Distribution re-route (west of Capistrano Substation) – November 2013 start date</b>	Install New Cable Pole (2 days)	Drilling rig	Drill hole	1	2	6.4
		Loader	Load spoils, wastes	1	2	3.2
		Water Truck	Dust/fire control	1	2	0.8
		Air compressor	Operate tools	1	2	6.4
		Concrete Truck	Deliver concrete/slurry	1	2	1.6
		Bucket Truck	Set up top section of pole	1	2	1.6
		Flatbed truck	Deliver pole	1	2	2.4
		1-ton pickup truck	Transport personnel	1	2	2.4
		Boom truck	Set base and top section of pole	1	2	1.6
	Trenching – west and south of Capistrano Substation site (2 days)	Saw cut	Cut pavement and road materials	1	2	8
		Backhoe	Excavation	2	2	8
		Bobcat	Moving dirt and steel plates	1	2	2
		Dump truck	Remove soil/waste	3	2	8
		Water truck	Dust/fire control	1	2	8
		Concrete truck	Deliver concrete/slurry	5	2	2
Foreman truck		Transport personnel	3	2	8	
Crew truck		Transport personnel	2	2	8	

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 1 (cont): Underground Distribution re-route (west of Capistrano Substation) – November 2013 start date</b>	Trenching (cont) – west and south of Capistrano Substation site	Air compressor	Operate tools	1	2	8
		Pavement roller	Asphalt (road repair)	1	2	8
		Vibrating plate	Asphalt (road repair)	1	2	2
		Bitumen (emulsion) sprayer	Final road repair	1	2	1
		4-inch grinder	Final road repair	1	2	3
		Spreader box	Final road repair	1	2	2
		Arrow board	Traffic control	2	2	8
	Conductor pulling – west and south of Capistrano Substation site (1 day)	Boom truck	Pull cable	1	1	8
		Reel trailer	Feed cable into structure	1	1	8
		1-ton pickup	Transport personnel	2	1	8
		Arrow board	Traffic control	1	1	8

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 2: Construct Distribution Circuits - Capistrano to Prima Deschecha and at Talega – December 2014 start date</b>	Cable Pole (at I-5) Foundations (4 days)	Drilling rig	Drill hole	1	4	8
		Fork lift	Move equipment to the ROW	1	4	6
		Water Truck	Dust/fire control	1	4	2
		Air compressor	Operate tools	1	4	8
		Concrete Truck	Deliver concrete/slurry	1	4	1.6
		Boom Truck	Set plate	1	4	4
		Flatbed truck	Deliver materials	1	4	3
	1-ton pickup truck	Transport personnel	1	4	3	
	Cable Pole (at I-5) – Set Poles (4 days)	Boom truck	Set base and top section of poles	1	4	3
		Bucket truck	Set top section	1	4	3
		Water truck	Dust/fire control	1	4	2
		1-ton pickup	Transport personnel	1	4	2
		Flat bed truck	Deliver pole sections	1	4	2

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 2 (cont): Construct Distribution Circuits - Capistrano to Prima Deschecha and at Talega – December 2014 start date</b>	String Conductor between new cable poles at I-5 (3 days)	Puller and tensioner	Pull new conductor	1	3	3
		Reel trailer	Feed conductor into puller	1	3	3
		Bucket truck	Install conductor, act as guard structure	2	3	3
		1-ton pickup truck	Transport personnel	2	3	3
		Water truck	Dust/fire control	2	3	3
	Trenching from Capistrano to Rancho Viejo Road (4 days)	Saw cut	Cut pavement and road materials	1	4	8
		Backhoe	Excavation	2	4	8
		Bobcat	Moving dirt and steel plates	1	4	2
		Dump truck	Remove soil/waste	3	4	8
		Water truck	Dust/fire control	1	4	8
		Concrete truck	Deliver concrete/slurry	5	4	2
		Foreman truck	Transport personnel	3	4	8
		Crew truck	Transport personnel	2	4	8
		Air compressor	Operate tools	1	4	8
Pavement roller	Asphalt (road repair)	1	4	8		

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 2 (cont): Construct Distribution Circuits - Capistrano to Prima Deschecha and at Talega – December 2014 start date</b>	Trenching (cont) from Capistrano to Rancho Viejo Road (4 days)	Vibrating plate	Asphalt (road repair)	1	4	2
		Bitumen (emulsion) sprayer	Final road repair	1	4	1
		4-inch grinder	Final road repair	1	4	3
		Spreader box	Final road repair	1	4	2
		Arrow board	Traffic control	2	4	8
	Pull conductor from Capistrano to Rancho Viejo Road (8 days)	Boom truck	Pull cable	1	8	8
		Reel trailer	Feed cable into structure	1	8	8
		1-ton pickup	Transport personnel	2	8	8
		Arrow board	Traffic control	1	6	8
	Pull conductor within Rancho Viejo Road (4 days)	Boom truck	Pull cable	1	4	8
		Reel trailer	Feed cable into structure	1	4	8
		1-ton pickup	Transport personnel	2	4	8
		Arrow board	Traffic control	1	4	8
	Pull conductor within La Pata Ave. (1 day)	Boom truck	Pull cable	1	1	8
		Reel trailer	Feed cable into structure	1	1	8
		1-ton pickup	Transport personnel	2	1	8
		Arrow board	Traffic control	1	1	8

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 2 (cont): Construct Distribution Circuits - Capistrano to Prima Deschecha and at Talega – December 2014 start date</b>	Construct overhead along La Pata Avenue (10 days)	Drilling rig	Drill hole	1	8	6.4
		Loader	Load spoils, wastes	1	8	3.2
		Water truck	Dust/fire control	1	10	0.8
		Air compressor	Operate tools	1	8	2
		Bucket truck	Set top section of poles	1	8	1.6
		Flatbed truck	Deliver pole sections	1	1	2.4
		1-ton pickup truck	Transport personnel	1	8	2.4
		Boom truck	Set base and top section of poles	1	8	1.6
	Conductor stringing along La Pata Avenue (6 days)	Puller and tensioner	Pull new conductor	1	6	6
		Reel trailer	Feed new conductor	1	6	6
		Bucket truck	Install new conductor, act as guard structure	1	6	6
		1-ton pickup truck	Transport personnel	2	6	6
		Water truck	Dust/fire control	1	6	2
	Conductor pulling – underground along La Pata and Vista Montana (2 days)	Boom truck	Pull cable	1	2	8
		Reel trailer	Feed cable into structure	1	2	8
		1-ton pickup	Transport personnel	2	2	8
Arrow board		Traffic control	1	2	8	

Project Component	Activity	Equipment	Use	Approximate Quantity	Approximate Duration On Site (days)	Average Duration of Use (hours per day)
<b>Part 2 (cont): Construct Distribution Circuits - Capistrano to Prima Deschecha and at Talega – December 2014 start date</b>	Remove poles and conductor along La Pata Avenue (6 days)	Puller and tensioner	Pull existing conductor	1	6	3
		Reel trailer	Feed existing conductor onto reel	1	6	3
		Bucket truck	Remove conductor, act as guard structure	1	6	3
		1-ton pickup truck	Transport personnel	2	6	6
		Water truck	Dust/fire control	1	2	6
		Boom truck with hydraulic pole puller	Remove poles	1	6	3
	Trenching – north of Talega substation (2 days)	Saw cut	Cut pavement and road materials	1	2	8
		Backhoe	Excavation	2	2	8
		Bobcat	Moving dirt and steel plates	1	2	2
		Dump truck	Remove soil/waste	3	2	8
		Water truck	Dust/fire control	1	2	8
		Concrete truck	Deliver concrete/slurry	5	2	2
		Foreman truck	Transport personnel	3	2	8
		Crew truck	Transport personnel	2	2	8
		Air compressor	Operate tools	1	2	8
	Pavement roller	Asphalt (road repair)	1	2	8	

<b>Project Component</b>	<b>Activity</b>	<b>Equipment</b>	<b>Use</b>	<b>Approximate Quantity</b>	<b>Approximate Duration On Site (days)</b>	<b>Average Duration of Use (hours per day)</b>
<b>Part 2 (cont): Construct Distribution Circuits - Capistrano to Prima Deschecha and at Talega – December 2014 start date</b>	Trenching (cont) – north of Talega substation (2 days)	Vibrating plate	Asphalt (road repair)	1	2	2
		Bitumen (emulsion) sprayer	Final road repair	1	2	1
		4-inch grinder	Final road repair	1	2	3
		Spreader box	Final road repair	1	2	2
		Arrow board	Traffic control	2	2	8
	Conductor pulling – north of Talega Substation (2 days)	Boom truck	Pulling cable	1	2	8
		Reel trailer	Feeding cable into structure	1	2	8
		1-ton pickup	Transport personnel	2	2	8
		Arrow board	Traffic control	1	2	8

## **APPENDIX C**

### **Air Quality Emissions Calculations**



C-2  
Emissions - Foundations at I-5 Crossing (2014/2015)

Construct 4 Foundations

Emission Factors

Emissions

Equipment/Phase	FUEL	HP	ROG (lb/hr)	CO (lb/hr)	NOX (lb/hr)	SOX (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	CO2 (lb/hr)	CH4 (lb/hr)	N2O (lb/hr)	No of Equipment	Hrs Per Day	Total Hours	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	
<b>Construct Foundations</b>	2014																							
Water Truck	DIESEL	175	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	2	8	0.27	0.75	2.21	0.00	0.07	0.07	333.09	0.02	0.21	
Forklift	DIESEL	250	0.1262	0.3887	1.3124	0.0017	0.0451	0.0401412	153.0898	0.0114	0.1247	1	6	12	0.76	2.33	7.87	0.01	0.27	0.24	918.54	0.07	0.75	
Drill Rig	DIESEL	82	0.0409	0.4684	0.4254	0.0009	0.0204	0.0181324	77.1	0.0037	0.0404	1	8	32	0.33	3.75	3.40	0.01	0.16	0.15	616.97	0.03	0.32	
Air Compressor	DIESEL	45	0.0747	0.2360	0.2056	0.0003	0.0183	0.0162811	22.3	0.0067	0.0195	1	8	32	0.60	1.89	1.64	0.00	0.15	0.13	178.17	0.05	0.16	
Boom Trucks	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	4	16	0.53	1.50	4.42	0.01	0.15	0.13	666.18	0.05	0.42	
<b>Subtotal</b>															<b>2.48</b>	<b>10.22</b>	<b>19.55</b>	<b>0.03</b>	<b>0.80</b>	<b>0.71</b>	<b>2712.96</b>	<b>0.22</b>	<b>1.86</b>	
<b>Set Poles</b>	2014																							
Boom Trucks	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	12	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Bucket Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	12	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Water Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	2	8	0.27	0.75	2.21	0.00	0.07	0.07	333.09	0.02	0.21	
<b>Subtotal</b>															<b>1.06</b>	<b>3.01</b>	<b>8.84</b>	<b>0.01</b>	<b>0.29</b>	<b>0.26</b>	<b>1332.36</b>	<b>0.10</b>	<b>0.84</b>	
<b>Stringing Conductor</b>	2014																							
Puller and Tensioner	DIESEL	300	0.1310	0.4963	1.1867	0.0025	0.0394	0.0350431	254.2	0.0118	0.1127	1	3	12	0.39	1.49	3.56	0.01	0.12	0.11	762.72	0.04	0.34	
Reel Trailer	DIESEL	300	0.1310	0.4963	1.1867	0.0025	0.0394	0.0350431	254.2	0.0118	0.1127	1	3	12	0.39	1.49	3.56	0.01	0.12	0.11	762.72	0.04	0.34	
Bucket Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	2	3	24	0.80	2.26	6.63	0.01	0.22	0.20	999.27	0.07	0.63	
<b>Subtotal</b>															<b>1.58</b>	<b>5.23</b>	<b>13.75</b>	<b>0.03</b>	<b>0.46</b>	<b>0.41</b>	<b>2524.70</b>	<b>0.14</b>	<b>1.31</b>	
<b>Total</b>															<b>5.12</b>	<b>18.47</b>	<b>42.14</b>	<b>0.07</b>	<b>1.55</b>	<b>1.38</b>	<b>6570.02</b>	<b>0.46</b>	<b>4.00</b>	

Emission, tons (total)

Equipment/Phase	FUEL	HP	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)
<b>Construct Foundations</b>											
Water Truck			0.001	0.003	0.009	0.000	0.000	0.000	1.332	0.000	0.001
Forklift			0.005	0.014	0.047	0.000	0.002	0.001	5.511	0.000	0.004
Drill Rig			0.005	0.060	0.054	0.000	0.003	0.002	9.872	0.000	0.005
Air Compressor			0.010	0.030	0.026	0.000	0.002	0.002	2.851	0.001	0.002
Boom Trucks			0.004	0.012	0.035	0.000	0.001	0.001	5.329	0.000	0.003
<b>Subtotal</b>			<b>0.025</b>	<b>0.119</b>	<b>0.172</b>	<b>0.000</b>	<b>0.008</b>	<b>0.007</b>	<b>24.895</b>	<b>0.002</b>	<b>0.016</b>
<b>Set Poles</b>											
Boom Trucks			0.002	0.007	0.020	0.000	0.001	0.001	2.998	0.000	0.002
Bucket Truck			0.002	0.007	0.020	0.000	0.001	0.001	2.998	0.000	0.002
Water Truck			0.001	0.003	0.009	0.000	0.000	0.000	1.332	0.000	0.001
<b>Subtotal</b>			<b>0.006</b>	<b>0.017</b>	<b>0.049</b>	<b>0.000</b>	<b>0.002</b>	<b>0.001</b>	<b>7.328</b>	<b>0.001</b>	<b>0.005</b>
<b>Stringing Conductor</b>											
Puller and Tensioner			0.002	0.009	0.021	0.000	0.001	0.001	4.576	0.000	0.002
Reel Trailer			0.002	0.009	0.021	0.000	0.001	0.001	4.576	0.000	0.002
Bucket Truck			0.010	0.027	0.080	0.000	0.003	0.002	11.991	0.001	0.008
<b>Subtotal</b>			<b>0.014</b>	<b>0.045</b>	<b>0.122</b>	<b>0.000</b>	<b>0.004</b>	<b>0.004</b>	<b>21.144</b>	<b>0.001</b>	<b>0.012</b>
<b>Total</b>			<b>0.04</b>	<b>0.18</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>53.37</b>	<b>0.00</b>	<b>0.03</b>

C-3  
Emissions - 2014 2015 (San Juan Capistrano to Talega)

Emission Factors

Emissions

Equipment/Phase	FUEL	HP	ROG (lb/hr)	CO (lb/hr)	NOX (lb/hr)	SOX (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	CO2 (lb/hr)	CH4 (lb/hr)	N2O (lb/hr)	No of Equipment	Hrs Per Day	Total Hours	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	
<b>Undergrounding 2</b>	2014																							
Concrete Saws	DIESEL	81	0.0978	0.4796	0.6733	0.0009	0.0538	0.0478631	74.1498	0.0088	0.0640	1	8	612.48	0.78	3.84	5.39	0.01	0.43	0.38	593.20	0.07	0.51	
CAT 416 Rubber Tire Backhoe	DIESEL	85	0.0902	0.4119	0.5654	0.0007	0.0477	0.0424203	58.9	0.0081	0.0537	2	8	1224.96	1.44	6.59	9.05	0.01	0.76	0.68	942.62	0.13	0.86	
Skid Steer Loaders	DIESEL	37	0.0443	0.2196	0.2161	0.0003	0.0134	0.0119526	25.5	0.0040	0.0205	1	2	191.4	0.09	0.44	0.43	0.00	0.03	0.02	51.04	0.01	0.04	
Dump/Haul Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	3	3	36	1.19	3.39	9.94	0.02	0.33	0.30	1498.91	0.11	0.94	
Water Truck	DIESEL	175	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Air Compressor	DIESEL	45	0.0534	0.1694	0.1765	0.0003	0.0142	0.0126297	19.6	0.0048	0.0168	1	8	76.56	0.43	1.36	1.41	0.00	0.11	0.10	156.90	0.04	0.13	
Roller	DIESEL	250	0.1180	0.3717	1.2002	0.0017	0.0407	0.036263	153.0898	0.0106	0.1140	1	8	382.8	0.94	2.97	9.60	0.01	0.33	0.29	1224.72	0.09	0.91	
Plate Compactor	DIESEL	8	0.0050	0.0263	0.0314	0.0001	0.0012	0.0010907	4.3	0.0005	0.0030	1	2	95.7	0.01	0.05	0.06	0.00	0.00	0.00	8.63	0.00	0.01	
Sprayer	DIESEL	88	0.0991	0.5098	0.6481	0.0009	0.0543	0.0483083	75.0	0.0089	0.0616	1	1	95.7	0.10	0.51	0.65	0.00	0.05	0.05	75.04	0.01	0.06	
Grinder	DIESEL	85	0.1284	0.5703	0.8000	0.0010	0.0704	0.0626995	83.1	0.0116	0.0760	1	3	287.1	0.39	1.71	2.40	0.00	0.21	0.19	249.42	0.03	0.23	
Spreader	DIESEL	82	0.1028	0.3923	0.6241	0.0006	0.0538	0.0478838	54.5	0.0093	0.0593	1	2	191.4	0.21	0.78	1.25	0.00	0.11	0.10	109.00	0.02	0.12	
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015641	6.2	0.0006	0.0043	2	8	1531.2	0.11	0.60	0.72	0.00	0.03	0.03	98.72	0.01	0.07	
<b>Subtotal</b>															<b>6.09</b>	<b>23.37</b>	<b>44.22</b>	<b>0.06</b>	<b>2.51</b>	<b>2.23</b>	<b>5507.82</b>	<b>0.55</b>	<b>4.20</b>	
<b>Conductor Pulling - UG2</b>																								
Boom Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	8	64	1.10	4.06	10.77	0.02	0.35	0.31	2033.91	0.10	1.02	
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015621	6.2	0.0006	0.0043	1	8	64	0.06	0.30	0.36	0.00	0.01	0.01	49.36	0.01	0.03	
<b>Subtotal</b>															<b>1.56</b>	<b>5.49</b>	<b>14.44</b>	<b>0.03</b>	<b>0.48</b>	<b>0.42</b>	<b>2582.90</b>	<b>0.14</b>	<b>1.37</b>	
<b>Conductor Pulling - Rancho Viejo</b>																								
Boom Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	8	32	1.10	4.06	10.77	0.02	0.35	0.31	2033.91	0.10	1.02	
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015621	6.2	0.0006	0.0043	1	8	32	0.06	0.30	0.36	0.00	0.01	0.01	49.36	0.01	0.03	
<b>Subtotal</b>															<b>1.56</b>	<b>5.49</b>	<b>14.44</b>	<b>0.03</b>	<b>0.48</b>	<b>0.42</b>	<b>2582.90</b>	<b>0.14</b>	<b>1.37</b>	
<b>Conductor Pulling - La Pata</b>																								
Boom Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	8	8	1.10	4.06	10.77	0.02	0.35	0.31	2033.91	0.10	1.02	
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015621	6.2	0.0006	0.0043	1	8	8	0.06	0.30	0.36	0.00	0.01	0.01	49.36	0.01	0.03	
<b>Subtotal</b>															<b>1.56</b>	<b>5.49</b>	<b>14.44</b>	<b>0.03</b>	<b>0.48</b>	<b>0.42</b>	<b>2582.90</b>	<b>0.14</b>	<b>1.37</b>	
<b>Wood-Steel Structures</b>																								
<b>Construct New Poles</b>																								
Drill Rig	DIESEL	82	0.0409	0.4684	0.4254	0.0009	0.0204	0.0181324	77.1	0.0037	0.0404	1	6.4	204.8	0.26	3.00	2.72	0.01	0.13	0.12	493.58	0.02	0.26	
Loader	DIESEL	200	0.1186	0.3553	1.0966	0.0017	0.0375	0.0333776	149.0	0.0107	0.1042	1	3.2	102.4	0.38	1.14	3.51	0.01	0.12	0.11	476.73	0.03	0.33	
Water Truck	DIESEL	175	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Air Compressor	DIESEL	45	0.0534	0.1694	0.1765	0.0003	0.0142	0.0126297	19.6	0.0048	0.0168	1	6.4	64	0.34	1.08	1.13	0.00	0.09	0.08	125.52	0.03	0.11	
Bucket Trucks	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Boom Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
<b>Subtotal</b>															<b>2.18</b>	<b>8.60</b>	<b>17.30</b>	<b>0.03</b>	<b>0.67</b>	<b>0.60</b>	<b>2594.74</b>	<b>0.20</b>	<b>1.64</b>	
<b>Stringing (OH)</b>																								
Puller and Tensioner	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	4	36	0.55	2.03	5.38	0.01	0.18	0.16	1016.95	0.05	0.51	
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	4	36	0.55	2.03	5.38	0.01	0.18	0.16	1016.95	0.05	0.51	
Bucket Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Water Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	12	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
<b>Subtotal</b>															<b>1.90</b>	<b>6.32</b>	<b>17.39</b>	<b>0.03</b>	<b>0.57</b>	<b>0.51</b>	<b>3033.18</b>	<b>0.17</b>	<b>1.65</b>	
<b>Conductor Pulling (UG) - La Pata &amp; Montana</b>																								
Boom Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31	
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	8	16	1.10	4.06	10.77	0.02	0.35	0.31	2033.91	0.10	1.02	
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015621	6.2	0.0006	0.0043	1	8	16	0.06	0.30	0.36	0.00	0.01	0.01	49.36	0.01	0.03	
<b>Subtotal</b>															<b>1.56</b>	<b>5.49</b>	<b>14.44</b>	<b>0.03</b>	<b>0.48</b>	<b>0.42</b>	<b>2582.90</b>	<b>0.14</b>	<b>1.37</b>	

**C-3**  
**Emissions - 2014 2015 (San Juan Capistrano to Talega)**

<b>Remove Poles and Conductor - La Pata</b>																							
Puller and Tensioner	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	3	36	0.41	1.52	4.04	0.01	0.13	0.12	762.72	0.04	0.38
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	3	36	0.41	1.52	4.04	0.01	0.13	0.12	762.72	0.04	0.38
Bucket Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	2	3	36	0.80	2.26	6.63	0.01	0.22	0.20	999.27	0.07	0.63
Water Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	2	3	12	0.80	2.26	6.63	0.01	0.22	0.20	999.27	0.07	0.63
Boom Truck with Hole Puller	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	2	3	36	0.80	2.26	6.63	0.01	0.22	0.20	999.27	0.07	0.63
<b>Subtotal</b>															<b>3.21</b>	<b>9.82</b>	<b>27.96</b>	<b>0.05</b>	<b>0.93</b>	<b>0.83</b>	<b>4523.25</b>	<b>0.29</b>	<b>2.66</b>
<b>Undergrounding Talega</b>																							
Concrete Saws	2014	81	0.0978	0.4796	0.6733	0.0009	0.0538	0.0478631	74.1498	0.0088	0.0640	1	8	12.8	0.78	3.84	5.39	0.01	0.43	0.38	593.20	0.07	0.51
CAT 416 Rubber Tire Backhoe	DIESEL	85	0.0902	0.4119	0.5654	0.0007	0.0477	0.0424203	58.9	0.0081	0.0537	2	8	25.6	1.44	6.59	9.05	0.01	0.76	0.68	942.62	0.13	0.86
Skid Steer Loaders	DIESEL	37	0.0443	0.2196	0.2161	0.0003	0.0134	0.0119526	25.5	0.0040	0.0205	1	2	4	0.09	0.44	0.43	0.00	0.03	0.02	51.04	0.01	0.04
Dump/Haul Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	3	3	36	1.19	3.39	9.94	0.02	0.33	0.30	1498.91	0.11	0.94
Water Truck	DIESEL	175	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31
Air Compressor	DIESEL	45	0.0534	0.1694	0.1765	0.0003	0.0142	0.0126297	19.6	0.0048	0.0168	1	8	1.6	0.43	1.36	1.41	0.00	0.11	0.10	156.90	0.04	0.13
Roller	DIESEL	250	0.1180	0.3717	1.2002	0.0017	0.0407	0.036263	153.0898	0.0106	0.1140	1	8	8	0.94	2.97	9.60	0.01	0.33	0.29	1224.72	0.09	0.91
Plate Compactor	DIESEL	8	0.0050	0.0263	0.0314	0.0001	0.0012	0.0010907	4.3	0.0005	0.0030	1	2	2	0.01	0.05	0.06	0.00	0.00	0.00	8.63	0.00	0.01
Sprayer	DIESEL	88	0.0991	0.5098	0.6481	0.0009	0.0543	0.0483083	75.0	0.0089	0.0616	1	1	2	0.10	0.51	0.65	0.00	0.05	0.05	75.04	0.01	0.06
Grinder	DIESEL	85	0.1284	0.5703	0.8000	0.0010	0.0704	0.0626995	83.1	0.0116	0.0760	1	3	6	0.39	1.71	2.40	0.00	0.21	0.19	249.42	0.03	0.23
Spreader	DIESEL	82	0.1028	0.3923	0.6241	0.0006	0.0538	0.0478838	54.5	0.0093	0.0593	1	2	4	0.21	0.78	1.25	0.00	0.11	0.10	109.00	0.02	0.12
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015641	6.2	0.0006	0.0043	2	8	32	0.11	0.60	0.72	0.00	0.03	0.03	98.72	0.01	0.07
<b>Subtotal</b>															<b>6.09</b>	<b>23.37</b>	<b>44.22</b>	<b>0.06</b>	<b>2.51</b>	<b>2.23</b>	<b>5507.82</b>	<b>0.55</b>	<b>4.20</b>
<b>Conductor Pulling (UG) - Talega</b>																							
Boom Truck	DIESEL	235	0.1326	0.3761	1.1048	0.0019	0.0368	0.0327961	166.5	0.0120	0.1050	1	3	36	0.40	1.13	3.31	0.01	0.11	0.10	499.64	0.04	0.31
Reel Trailer	DIESEL	300	0.1379	0.5080	1.3457	0.0025	0.0441	0.0392193	254.2	0.0124	0.1278	1	8	16	1.10	4.06	10.77	0.02	0.35	0.31	2033.91	0.10	1.02
Signal Board	DIESEL	6	0.0072	0.0377	0.0450	0.0001	0.0018	0.0015621	6.2	0.0006	0.0043	1	8	16	0.06	0.30	0.36	0.00	0.01	0.01	49.36	0.01	0.03
<b>Subtotal</b>															<b>1.56</b>	<b>5.49</b>	<b>14.44</b>	<b>0.03</b>	<b>0.48</b>	<b>0.42</b>	<b>2582.90</b>	<b>0.14</b>	<b>1.37</b>
<b>Total</b>															<b>27.26</b>	<b>98.95</b>	<b>223.29</b>	<b>0.37</b>	<b>9.57</b>	<b>8.52</b>	<b>34081.32</b>	<b>2.46</b>	<b>21.21</b>

**Emission, tons (total)**

Equipment/Phase	FUEL	HP	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)
<b>Undergrounding 2</b>											
Concrete Saws			0.030	0.147	0.206	0.000	0.016	0.015	22.708	0.003	0.020
CAT 416 Rubber Tire Backhoe			0.055	0.252	0.346	0.000	0.029	0.026	36.083	0.005	0.033

C-4  
Worker Trips

Construction Phase	Vehicle Class	No. of Daily Workers Per Construction Phase	Speed (mph)	VMT (mi/vehicle-day)	CO		NO <sub>x</sub>		ROG					SO <sub>x</sub>		PM10				PM2.5				CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		
					Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Hot-Soak (g/vehicle-day)	Resting Loss (g/vehicle-day)	Running Evaporative (g/mi)	Diurnal Evaporative (g/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Tire Wear (g/mi)	Brake Wear (g/mi)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Tire Wear (g/mi)	Brake Wear (g/mi)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/vehicle-day)
Undergrounding 1	Light-Duty Truck, catalyst	15	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Conductor Pulling	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Cable Poles	Light-Duty Truck, catalyst	12	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Construct 4 Foundations	Light-Duty Truck, catalyst	12	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Set Poles	Light-Duty Truck, catalyst	12	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Stringing Conductor	Light-Duty Truck, catalyst	12	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Undergrounding 2	Light-Duty Truck, catalyst	15	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Conductor Pulling - UG2	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Conductor Pulling - Rancho Viejo	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Conductor Pulling - La Pata	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Wood to Steel - Construct New Poles	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Stringing (OH)	Light-Duty Truck, catalyst	12	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Conductor Pulling	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Remove Poles and Conductor La Pata	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Undergrounding Talega	Light-Duty Truck, catalyst	15	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933
Conductor Pulling - Talega	Light-Duty Truck, catalyst	8	35	80	3.0975	38.14685	0.3012839	2.236171	0.094167	3.031413	1.876347	0.796436	0.2005096	1.078687	0.004048	0.005841	0.004371	0.03404	0.008	0.03675	0.004	0.031111	0.002	0.01575	372.0084	488.7328	0.0177	0.02407547	0.03	0.0105933

EMFAC2011 emission factors for 2013 - 2017  
Assume startup after 8 hours  
Assume 45 minutes run time total



C-6  
Emissions Summary

Summary	Emissions										Emission, tons (total)								
	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)	
<b>Undergrounding 1: Construction 800' of UG</b>																			
Emissions, lbs/day																			
Heavy Construction Equipment	9.61	32.08	73.03	0.10	3.64	3.24	8860.00	0.87	6.94	0.17	0.59	1.30	0.00	0.07	0.06	156.04	0.02	0.12	
Worker Vehicles	0.48	9.46	0.87	0.01	0.26	0.11	1000.33	0.05	0.09	0.05	0.00	0.00	0.00	0.00	0.00	6	0.00	0.00	
Construction Trucks	0.30	1.17	7.31	0.01	0.45	0.29	1175.52	0.07	0.03	0.02	0.06	0.40	0.00	0.02	0.02	65	0.00	0.00	
<b>Total Daily</b>	<b>10.38</b>	<b>42.70</b>	<b>81.21</b>	<b>0.12</b>	<b>4.35</b>	<b>3.64</b>	<b>11035.85</b>	<b>0.98</b>	<b>7.05</b>	<b>0.24</b>	<b>0.66</b>	<b>1.70</b>	<b>0.00</b>	<b>0.09</b>	<b>0.08</b>	<b>226.19</b>	<b>0.02</b>	<b>0.13</b>	
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A										
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A										

Conductor Pulling	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)
	Emissions, lbs/day																	
Heavy Construction Equipment	2.28	7.26	22.05	0.03	0.72	0.64	3366.27	0.21	2.09	0.00	0.00	0.01	0.00	0.00	0.00	1.68	0.00	0.00
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.06	533.51	0.03	0.05	0.03	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00
Construction Trucks	0.01	0.07	0.16	0.00	0.03	0.02	78.12	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	5	0.00	0.00
<b>Total Daily</b>	<b>2.55</b>	<b>12.37</b>	<b>22.67</b>	<b>0.04</b>	<b>0.89</b>	<b>0.72</b>	<b>3977.90</b>	<b>0.24</b>	<b>2.14</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.77</b>	<b>0.00</b>	<b>0.00</b>
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A									
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A									

Cable Poles Foundation	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)
	Emissions, lbs/day																	
Heavy Construction Equipment	2.12	8.26	15.52	0.02	0.68	0.61	2094.85	0.19	1.47	0.06	0.22	0.41	0.00	0.02	0.02	55.30	0.01	0.04
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.09	800.27	0.04	0.07	0.04	0.00	0.00	0.00	0.00	0.00	4	0.00	0.00
Construction Trucks	0.06	0.23	1.46	0.00	0.09	0.06	235.10	0.01	0.01	0.00	0.02	0.10	0.00	0.01	0.00	16	0.00	0.00
<b>Total Daily</b>	<b>2.56</b>	<b>16.06</b>	<b>17.68</b>	<b>0.04</b>	<b>0.98</b>	<b>0.75</b>	<b>3130.22</b>	<b>0.24</b>	<b>1.55</b>	<b>0.10</b>	<b>0.24</b>	<b>0.51</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>75.22</b>	<b>0.01</b>	<b>0.04</b>
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A									
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A									

Construct Foundations	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)
	Emissions, lbs/day																	
Heavy Construction Equipment	2.48	10.22	19.55	0.03	0.80	0.71	2712.96	0.22	1.86	0.02	0.12	0.17	0.00	0.01	0.01	24.90	0.00	0.02
Worker Vehicles	0.38	0.01	0.10	0.05	0.21	0.09	800.27	0.04	0.07	0.42	0.04	0.02	0.00	0.01	0.00	44.01	0.00	0.00
Construction Trucks	0.06	0.23	1.46	0.00	0.09	0.06	235.10	0.01	0.01	0.00	0.01	0.03	0.00	0.00	0.00	5.17	0.00	0.00
<b>Total Daily</b>	<b>2.92</b>	<b>10.47</b>	<b>21.12</b>	<b>0.08</b>	<b>1.10</b>	<b>0.86</b>	<b>3748.33</b>	<b>0.28</b>	<b>1.93</b>	<b>0.44</b>	<b>0.16</b>	<b>0.23</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>74.08</b>	<b>0.00</b>	<b>0.02</b>
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A									
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A									

Set Poles	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)
	Emissions, lbs/day																	
Heavy Construction Equipment	1.06	3.01	8.84	0.01	0.29	0.26	1332.36	0.10	0.84	0.01	0.02	0.05	0.00	0.00	0.00	7.33	0.00	0.00
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.09	800.27	0.04	0.07	0.42	0.04	0.02	0.00	0.01	0.00	44.01	0.00	0.00
Construction Trucks	0.06	0.23	1.46	0.00	0.09	0.06	235.10	0.01	0.01	0.00	0.02	0.10	0.00	0.01	0.00	15.52	0.00	0.00
<b>Total Daily</b>	<b>1.50</b>	<b>10.81</b>	<b>11.00</b>	<b>0.03</b>	<b>0.59</b>	<b>0.41</b>	<b>2367.73</b>	<b>0.15</b>	<b>0.91</b>	<b>0.43</b>	<b>0.07</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>66.86</b>	<b>0.00</b>	<b>0.01</b>
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A									
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A									

C-6  
Emissions Summary

	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)	
<b>Stringing Conductor</b>																			
Emissions, lbs/day																			
Heavy Construction Equipment	1.58	5.23	13.75	0.03	0.46	0.41	2524.70	0.14	1.31	0.01	0.04	0.12	0.00	0.00	0.00	21.14	0.00	0.01	
Worker Vehicles	0.38	7.56	0.70	0.01	0.21	0.09	800.27	0.04	0.07	0.42	0.04	0.02	0.00	0.01	0.00	44	0.00	0.00	
Construction Trucks	0.01	0.07	0.16	0.00	0.03	0.02	78.12	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	5	0.00	0.00	
<b>Total Daily</b>	<b>1.98</b>	<b>12.87</b>	<b>14.61</b>	<b>0.04</b>	<b>0.70</b>	<b>0.51</b>	<b>3403.09</b>	<b>0.19</b>	<b>1.38</b>	<b>0.43</b>	<b>0.09</b>	<b>0.15</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>70.31</b>	<b>0.00</b>	<b>0.02</b>	
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A										
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A										

	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)	
<b>Undergrounding 2</b>																			
Emissions, lbs/day																			
Heavy Construction Equipment	6.09	23.37	44.22	0.06	2.51	2.23	5507.82	0.55	4.20	0.16	0.69	1.09	0.00	0.08	0.07	122.95	0.01	0.10	
Worker Vehicles	0.48	9.46	0.87	0.01	0.26	0.11	1000.33	0.05	0.09	0.52	0.05	0.03	0.00	0.01	0.01	55.02	0.00	0.00	
Construction Trucks	0.30	1.17	7.31	0.01	0.45	0.29	1175.52	0.07	0.03	0.02	0.06	0.40	0.00	0.02	0.02	64.65	0.00	0.00	
<b>Total Daily</b>	<b>6.87</b>	<b>33.99</b>	<b>52.39</b>	<b>0.09</b>	<b>3.21</b>	<b>2.63</b>	<b>7683.68</b>	<b>0.66</b>	<b>4.32</b>	<b>0.69</b>	<b>0.80</b>	<b>1.52</b>	<b>0.00</b>	<b>0.11</b>	<b>0.09</b>	<b>242.62</b>	<b>0.02</b>	<b>0.11</b>	
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A										
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A										

	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)	
<b>Conductor Pulling - UG2</b>																			
Emissions, lbs/day																			
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42	2582.90	0.14	1.37	0.01	0.02	0.06	0.00	0.00	0.00	11.33	0.00	0.01	
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05	533.51	0.03	0.05	0.55	0.05	0.03	0.00	0.02	0.00	58.69	0.00	0.01	
Construction Trucks	0.01	0.07	0.16	0.00	0.03	0.02	78.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.00	0.00	
<b>Total Daily</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>	<b>3194.53</b>	<b>0.17</b>	<b>1.42</b>	<b>0.56</b>	<b>0.08</b>	<b>0.10</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>71.74</b>	<b>0.00</b>	<b>0.01</b>	
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A										
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A										

	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)	
<b>Conductor Pulling - Rancho Viejo</b>																			
Emissions, lbs/day																			
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42	2582.90	0.14	1.37	0.00	0.02	0.04	0.00	0.00	0.00	7.16	0.00	0.00	
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05	533.51	0.03	0.05	0.55	0.05	0.03	0.00	0.02	0.00	58.69	0.00	0.01	
Construction Trucks	0.01	0.07	0.16	0.00	0.03	0.02	78.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.00	0.00	
<b>Total Daily</b>	<b>1.83</b>	<b>10.61</b>	<b>15.07</b>	<b>0.03</b>	<b>0.65</b>	<b>0.49</b>	<b>3194.53</b>	<b>0.17</b>	<b>1.42</b>	<b>0.56</b>	<b>0.07</b>	<b>0.07</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>67.57</b>	<b>0.00</b>	<b>0.01</b>	
Significance Threshold	75	550	100	150	150	55	N/A	N/A	N/A										
Above Threshold?	No	No	No	No	No	No	N/A	N/A	N/A										

	ROG lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day	PM10 lbs/day	PM2.5 lbs/day	CO2 lbs/day	CH4 lbs/day	N2O lbs/day	ROG tons (total)	CO tons (total)	NOX tons (total)	SOX tons (total)	PM10 tons (total)	PM2.5 tons (total)	CO2 tons (total)	CH4 tons (total)	N2O tons (total)	
<b>Conductor Pulling - La Pata</b>																			
Emissions, lbs/day																			
Heavy Construction Equipment	1.56	5.49	14.44	0.03	0.48	0.42	2582.90	0.14	1.37	0.00	0.01	0.03	0.00	0.00	0.00	4.04	0.00	0.00	
Worker Vehicles	0.26	5.04	0.46	0.01	0.14	0.05	533.51	0.03	0.05	0.55	0.05	0.03	0.00	0.02	0.00	58.69	0.00	0.01	
Construction Trucks	0.01	0.07	0.16	0.00	0.03	0.02	78.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.00	0.00	

## **APPENDIX D**

### **Biological Resources Assessment Addendum**

# **Addendum to Biological Resources Assessment and Jurisdictional Delineation**

**San Diego Gas & Electric Company**

**South Orange County Reliability Enhancement Project**

**Orange County, California**

**USGS Cañada Gobernadora, San Juan Capistrano,**

**San Clemente and Dana Point Quadrangles**



**August 2012**

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**Acronyms List**

Addendum	Addendum to the Biological Resources Assessment and Jurisdictional Delineation
APMs	Applicant Proposed Measures
ACOE	United States Army Corps of Engineers
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CFG	California Fish and Game
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utilities Commission
CSS	coastal sage scrub
CWA	Clean Water Act
FESA	Federal Endangered Species Act
GIS	Geographic Information Systems
GPS	Global Positioning System
I-5	Interstate 5
kV	kilovolt
NCCP	Natural Community Conservation Plan
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEA	Proponent's Environmental Assessment
Proposed Project	South Orange County Reliability Enhancement Project
SDG&E	San Diego Gas & Electric Company
SR-74	State Route 74
SWS	southern willow scrub
TRC	TRC Solutions, Inc.
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WUS	Waters of the United States

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## 1.0 INTRODUCTION

This report is an addendum to the following reports prepared for the South Orange County Reliability Enhancement Project (Proposed Project):

1. Biological Resources Assessment (dated May 2012)
2. Jurisdictional Waters and Wetlands Delineation (dated May 2012)

This addendum was prepared by TRC Solutions, Inc. (TRC) in order to identify the presence, or potential for presence, of sensitive biological resources on the distribution line component of the South Orange County Reliability Enhancement Project (Proposed Project), which were not addressed in the Biological Resources Assessment and Jurisdictional Waters and Wetlands Delineation. The Biological Resources Assessment was included as Appendix 4.4-A to the Proponent's Environmental Assessment (PEA) prepared for the Proposed Project as part of an application for Certificate of Public Convenience and Necessity (CPCN) submitted to the California Public Utilities Commission (CPUC) by the San Diego Gas & Electric Company (SDG&E). The Jurisdictional Waters and Wetlands Delineation was included as Appendix C of the Biological Resources Assessment.

The purpose of this addendum to the Biological Resources Assessment and Jurisdictional Waters and Wetlands Delineation (Addendum) is to document the findings of reconnaissance-level review of potential sensitive biological resources (including jurisdictional waters and wetlands) located within work areas associated with proposed relocated distribution facilities (distribution line component of the Proposed Project), analyze potential impacts, and outline mitigation measures to compensate for unavoidable impacts. The relocated distribution facilities addressed within this Addendum will generally include the installation of new overhead distribution lines, removal and partial replacement of existing overhead distribution lines, replacement of cable in existing underground conduits, and the installation of new underground distribution line (trench, conduit, and cable). The distribution facilities are located in the immediate vicinity of the transmission lines that were addressed within the Biological Resources Assessment (see Figure 1, Distribution Overview Map). A description of the distribution facilities covered within this Addendum is included within Section 2.0, Distribution Line Project Description

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## **2.0 DISTRIBUTION LINE PROJECT DESCRIPTION**

Certain distribution facilities that are affected by the San Juan Capistrano Substation rebuild and/or construction of new 230 kilovolt (kV) transmission lines will be relocated. The preliminary preferred distribution line routes are discussed, as applicable, in the following subsections.

### **2.1 DISTRIBUTION GETAWAYS (SAN JUAN CAPISTRANO SUBSTATION)**

Seven distribution (12kV) circuits will leave the proposed San Juan Capistrano Substation from the 12kV switchgear in an underground position west into Camino Capistrano (see Figure 2, Proposed Distribution Map). Two circuits will travel north, two circuits will travel west (adjacent to proposed 138kV transmission lines) and the final three circuits will travel south and then east.

### **2.2 DISTRIBUTION FACILITIES AT THE SAN JUAN CAPISTRANO SUBSTATION**

Required distribution work at the proposed San Juan Capistrano Substation was described, and impacts analyzed, within the Biological Resources Assessment and PEA. Therefore, biological resources within this area (and potential impacts to such resources) are not discussed within this Addendum.

### **2.3 PROPOSED NEW DISTRIBUTION FACILITIES**

The proposed relocated distribution lines will involve new underground installation (new trenching, conduit, and cable), utilization of existing underground facilities, and replacement of existing overhead poles and conductor. Specifically, the distribution facilities will require the following:

- New underground distribution line (trenching, conduit, and cable) within the vicinity of the proposed San Juan Capistrano Substation (including approximately 2,000 feet of new underground distribution line between the substation site and the Interstate 5 (I-5) freeway to the east (refer to Figure 2, Sheet 1).
- New overhead distribution line (including four new cable poles) from Junipero Serra Park east over the I-5 freeway (refer to Figure 2, Sheet 1).
- A small portion of new underground distribution line between I-5 and Rancho Viejo Road (refer to Figure 2, Sheet 1).
- Utilization of a combination of existing underground conduit and cable (no trenching or other ground disturbance required) for approximately 15,650 feet (2.95 miles) south through Rancho Viejo Road, east through State Route 74 (SR-74), and south adjacent to La Pata Avenue (refer to Figure 2, Sheets 2 and 3).
- Approximately 6,000 feet (1.15 miles) of new double-circuit overhead distribution line (including one-for-one replacement of approximately 23 distribution poles) that will replace an existing single-circuit distribution line along La Pata Avenue (refer to Figure 2, Sheets 2 and 3).

- Utilization of a combination of existing conduit and cable near the intersection of La Pata Avenue and Vista Montana (refer to Figure 2, Sheets 3 and 4).
- Approximately 1,400 feet of new overhead distribution line (including one-for-one replacement of approximately eight distribution poles) that will replace an existing single-circuit distribution line adjacent to La Pata Avenue as it enters the Prima Deshecha Landfill site (refer to Figure 2, Sheet 4).
- Installation of new underground distribution line (new trenching, conduit, and cable) as well as the utilization of existing conduit north of the Talega Substation (refer to Figure 2, Sheet 5).
- Removal of existing distribution lines between the existing Capistrano Substation and the Rancho San Juan Development (refer to Figure 2, Sheets 1, 3, and 4).

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### **3.0 REGULATORY BACKGROUND**

A complete discussion of applicable regulations is included within Section 3.0 of the Biological Resources Assessment. There are no additional applicable regulations pertaining to the distribution line component of the Proposed Project that are covered within this Addendum.

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## **4.0 METHODS**

### **4.1 LITERATURE REVIEW**

Prior to performing the biological field surveys (see Figure 3, Survey Area Map), documentation relevant to the distribution facilities and surrounding area was reviewed. The same special status species applicable to the transmission line and substation components of the Proposed Project were found to be applicable to the proposed distribution facilities (see Biological Resources Assessment Appendix A).

#### **4.1.1 Special Status Species**

A special status species list was prepared from record searches for the United States Geological Survey (USGS) 7.5-minute San Juan Capistrano, San Clemente, and Dana Point quadrangles within 3 miles of the distribution facilities. Special status species include all federally and state listed endangered and threatened species, candidates for listing, species proposed for listing, fully protected species, and species of special concern, species listed as rare or endangered by the California Native Plant Society (CNPS), and special status species that are identified under the *SDG&E Subregional Natural Community Conservation Plan (NCCP)* that had ranges within Orange County. A sensitive species was considered a potential inhabitant if its known geographical distribution either encompassed part of the distribution facilities or was within the vicinity of the distribution facilities (within approximately 3 miles), and its general habitat requirements (e.g., roosting, nesting, or foraging habitat, specific soil type, permanent water source) were within the boundaries of the distribution facilities. Sources of information that were used to compile the species list included the California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDDB) (CNDDDB, 2012), the CNPS online inventory (CNPS, 2012), and the *SDG&E Subregional NCCP Covered Species List* (SDG&E, 1995a; Pages 43-45 and Table 3.1) (see Figure 4-A, CNDDDB Flora Species within a 3 mile radius of Distribution Lines, Figure 4-B, CNDDDB Birds and Mammals Species within a 3 mile radius of Distribution Lines, and Figure 4-C, CNDDDB Reptiles, Amphibians, Fish, and Invertebrates Species within a 3 mile radius of Distribution Lines).

#### **4.1.2 Critical Habitat**

The United States Fish and Wildlife Service (USFWS) critical habitat areas for listed species within 3 miles of the distribution facility alignment were searched using Geographic Information Systems (GIS) shapefiles provided by the USFWS.

#### **4.1.3 Drainages and Other Water Features**

The potential presence of drainages and other water resources was assessed by reviewing USGS topographic maps to identify any blue line streams (USGS, 1975, 1981, 1995, 1997), searching the USFWS National Wetlands Inventory (NWI) (USFWS, 2012), and by reviewing recent aerial images of the distribution line route (Google, 2012). This map is included as Figure 6, Soils Map, within the Biological Resources Assessment.

#### 4.1.4 Soils

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) online Soil Survey (NRCS, 2012) was used to assess soils mapped along the distribution facility alignment, and GIS data was used to create a map.

### 4.2 FIELD SURVEYS

Field surveys were conducted in appropriate habitat within a 500-foot corridor (refer to Figure 3), including approximately 250 feet on either side of the proposed distribution facilities (herein referred to as the survey area). The following sections describe the methods used for reconnaissance-level and habitat assessment surveys and jurisdictional delineation. In all instances, resources were mapped in the field using a Trimble handheld Global Positioning System (GPS) unit or drawn on a 200-scale color aerial photograph.

#### 4.2.1 Reconnaissance-level and Habitat Assessment Surveys

A general habitat assessment was conducted within the survey area by TRC Biologist, Travis Kegel, and biological assistant, Susan Underbrink, on July 5, 2012 to map existing vegetation communities and assess the potential for sensitive or listed plant and wildlife species, including species covered under the *SDG&E's Subregional NCCP*. Surveys were conducted using vehicles and on foot along access roads and around proposed the distribution facilities. Areas within the distribution facility survey area that overlapped with areas previously surveyed under the Proposed Project were not re-surveyed. Meandering transects were also conducted on foot through the surrounding habitat within the 500-foot survey corridor. A meandering transect is a type of survey search pattern that minimizes overlap and maximizes survey coverage in a given area. Suitable habitat for special status species was determined by the presence of diagnostic habitat elements, including, but not limited to, appropriate vegetation communities. The habitat assessment surveys were conducted within the survey area in areas supporting vegetation.

Vegetation communities were recorded on aerial photographs and GPS. Mapped data was then digitized or downloaded in GIS. The vegetation mapping was based upon descriptions provided by Sawyer and Keeler-Wolf (1995 and 2009), *SDG&E's Subregional NCCP* Section 3.1 and Holland (1986).

#### 4.2.2 Drainages and Other Water Features

Fieldwork for the delineation was conducted by TRC Biologist, Travis Kegel, and biological assistant, Susan Underbrink, on July 5, 2012. While in the field, the jurisdictional areas (lengths and widths) were recorded onto a 200-scale color aerial photograph using visible landmarks or were mapped with a handheld Trimble GPS unit. Field data was then digitized using GIS to determine acreages. Additional details on the methodology are provided in the Jurisdictional Waters and Wetlands Delineation, dated May 2012 (Biological Resources Assessment Appendix C).

The survey area was assessed for the presence of drainages, wetlands, and vernal pools, including all suspected jurisdictional areas identified during the literature review. This involved

physically identifying hydrologic, vegetative, and geomorphic characteristics within the survey area in order to delineate potentially jurisdictional waters and wetlands.

Waters of the United States (WUS) were identified pursuant to criteria outlined in Section 401 and Section 404 of the Clean Water Act (CWA), including but not limited to the presence of an ordinary high water mark (OHWM) and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. “Waters of the State” regulated by CDFG were identified pursuant to criteria outlined in Section 1600 of the California Fish and Game (CFG) Code, including the presence of a defined bed and bank and any associated vegetation. Drainages that appeared to meet the criteria for “Waters of the State” were considered potentially jurisdictional, as any determination is subject to verification by the regulatory agencies.

Potential wetland habitats were evaluated using the methodology set forth in the United States Army Corps of Engineers (ACOE) Manual (ACOE, 1987) and the *Regional Supplement to the Wetland Delineation Manual for the Arid West Region* (ACOE, 2006 and 2008). This involved digging pits to inspect soils in suspected wetland areas. Soil pits were generally at locations where hydrophytic vegetation was observed, or where other wetland indicators were observed or suspected. Soils were assessed for hydric indicators, texture, consistency, and color. The color was assessed using a Munsell chart and then cross-referenced with hydric soil lists. The locations of the soil pits were recorded using a handheld GPS unit. Hydrological and vegetation conditions were recorded for each soil pit using ACOE wetland delineation data forms. The wetland indicator status of the plants was determined using *The National List of Plant Species that Occur in Wetlands* (Lichvar, 2009).

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## 5.0 RESULTS

### 5.1 LITERATURE REVIEW

#### 5.1.1 Special Status Species

Special status species were identified as having a potential to occur in the survey area based on the database searches and known occurrences of species in the area. No new species were identified that were not evaluated within the Biological Resources Assessment. CNDDDB maps for areas within 3 miles of the proposed distribution line route are provided as Figures 4-A through 4-C. For a complete list of special status species with the potential to occur refer to Appendix A of the Biological Resources Assessment report.

#### 5.1.2 Critical Habitat

The distribution facility survey area is within 3 miles of USFWS critical habitat for the coastal California gnatcatcher, Arroyo toad, San Diego fairy shrimp (*Branchinecta sandiegonensis*) and thread-leaved brodiaea (*Brodiaea filifolia*). Distribution facilities will traverse critical habitat for the Arroyo toad and for coastal California gnatcatcher along a corridor owned by SDG&E which is covered under the *SDG&E Subregional NCCP* and specifically excluded in the designation of critical habitat (SDG&E, 1995a). A critical habitat map for areas within 3 miles of the proposed distribution line route is provided as Figure 5, Critical Habitat Map.

#### 5.1.3 Drainages and Other Water Features

Potential drainages were identified based on the review of aerial and USGS maps. These maps were considered during the field surveys to ensure the identified drainages were studied, in addition to any drainage not mapped by USGS or visible on aerials. The named drainages identified on the USGS include Horno Creek and San Juan Creek.

#### 5.1.4 Soils

Two potentially hydric soil types were identified with the distribution facility survey area. Specifically, the Myford Sandy Loam series and Riverwash soil types are identified as hydric in the NRCS's publication, *Field Indicators of Hydric Soils of the United States* (NRCS, 2012). For a complete description of these soil types and all the soil types occurring within the distribution facility survey area, refer to Section 5.1.4 of the Biological Resources Assessment. It should be noted that per the Arid West Supplement, all hydric soils must be confirmed in the field.

## 5.2 VEGETATION

Eleven vegetation communities were observed in the distribution facility survey area as mapped on Figure 6, Distribution Vegetation Maps (Sheets 1 – 8). Vegetation within the distribution facility survey area included coastal sage scrub (CSS), Disturbed CSS, Coastal Freshwater Marsh, southern willow scrub (SWS), Disturbed SWS, Riparian Scrub, Ruderal, Disturbed, Ornamental, Dirt Road, and Developed areas. These vegetation communities are the same as those communities described in the BRA, no new vegetation communities were identified within the distribution facility survey area. Detailed vegetation descriptions are included within Section

5.2 of the Biological Resources Assessment. Table 1, Vegetation Communities in Distribution Facilities Survey Area summarizes acreages of each vegetation community found exclusively within the distribution facilities survey area.

**Table 1: Vegetation Communities in Distribution Facilities Survey Area**

Vegetation Community	Acres
Coastal Sage Scrub	5.36
Disturbed Coastal Sage Scrub	12.71
Coastal Freshwater Marsh	0.27
Southern Willow Scrub	2.67
Disturbed Southern Willow Scrub	0.06
Riparian Scrub	2.34
Ruderal	69.92
Disturbed	28.42
Ornamental	33.90
Dirt Roads	1.37
Developed	131.19
<b>Total</b>	<b>288.21</b>

### 5.3 COMMON WILDLIFE

During the field surveys, numerous common and special status wildlife species, both native and non-native, were observed within the distribution facilities survey area. No new species were observed that were not observed during surveys conducted for the transmission line and substation components of the Proposed Project (refer to Biological Resources Assessment Section 5.3 and Appendix B). Species commonly observed during all surveys include the following (for special status wildlife see Section 5.5 of this Addendum):

- Avifauna commonly observed included red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus cassinii*), lesser goldfinch (*Carduelis psaltria*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), Bewick’s wren (*Thryomanes bewickii*), and western kingbird (*Tyrannus verticalis*).
- Reptiles commonly observed included side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*).

- Mammals commonly observed or deduced through diagnostic sign, included coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), and Audubon's cottontail (*Sylvilagus audubonii*).

#### **5.4 SPECIAL STATUS VEGETATION COMMUNITIES**

Some of the vegetation communities occurring within the Proposed Project's survey area are considered sensitive or have special status due to their natural rarity and their decline as a result of development, or due to the number of sensitive plant or animal species dependent upon them. Sensitive habitats also include those regulated by the federal government under the CWA (i.e., jurisdictional wetlands) or the Federal Endangered Species Act (FESA) (i.e., site-specific designated critical habitat areas for federally listed wildlife species). Special status vegetation communities in the survey area include CSS, disturbed CSS, and riparian communities (SWS, Emergent Freshwater Marsh, and Riparian Scrub) which include jurisdictional areas (see Section 5.6 of this Addendum). The special status vegetation communities present within the distribution facilities survey area are the same as those described within the Biological Resources Assessment (Section 5.4). No additional special status habitats were identified during the literature review or field surveys conducted for the distribution facilities.

#### **5.5 SPECIAL STATUS PLANTS AND WILDLIFE**

The distribution facilities survey area contains, or has the potential to contain, similar special status plants and wildlife as previously described within the Biological Resources Assessment (Sections 5.5 and 5.6). No additional special status plants or wildlife were identified during the literature review or field surveys conducted for the distribution facilities.

#### **5.6 JURISDICTIONAL DELINEATION OF WATERS AND WETLANDS**

The distribution facility survey area supports nine different drainages. These drainages include three previously described relatively permanent waters that are included within the May 2012 Biological Resources Assessment, known as Horno Creek and San Juan Creek and Tributary to Christianitos Creek 1. The remaining six drainages are ephemeral waters tributary to San Juan Creek. Areas that overlap with the May 2012 assessment area with the distribution facility survey area were not re-surveyed or double counted when totaling jurisdiction. The new jurisdiction identified within the distribution facility survey area total approximately 3.01 acres of WUS of which 2.92 acres are wetland, and 4.10 acres of "Waters of the State," of which 4.06 acres are riparian. The locations and boundaries of these jurisdictional waters are depicted in Figure 7, Distribution Delineation Map. A summary of jurisdiction by acreage is provided below in Table 2, Potentially Jurisdictional Waters in Proposed Project Survey Area. A description of each drainage is provided below. Photographs of each drainage are provided in Appendix A, Photo Exhibit. Wetland data taken during this survey are recorded on wetland delineation data forms, which are included as Appendix B, Wetland Delineation Data Forms.

**Table 2: Potentially Jurisdictional Waters in Proposed Project Survey Area**

Drainage Name	ACOE Wetland	Total ACOE <sup>1</sup>	CDFG Riparian	Total CDFG <sup>2</sup>	Linear Feet
Horno Creek	0.17	<b>0.17</b>	0.75	<b>0.75</b>	580
San Juan Creek	2.21	<b>2.21</b>	2.21	<b>2.21</b>	350
Tributary to San Juan Creek 1	-	<b>0.01</b>	0.55	<b>0.56</b>	670
Tributaries to San Juan Creek 2 through 6	-	<b>0.04</b>	0.01	<b>0.04</b>	1300
Tributary to Christianitos Creek 1	0.54	<b>0.54</b>	0.54	<b>0.54</b>	250
<b>Totals</b>	<b>2.92</b>	<b>2.97</b>	<b>4.06</b>	<b>4.10</b>	<b>3150</b>

### 5.6.1 Horno Creek

The jurisdiction of the Horno Creek is contained within a perennial drainage and adjacent wetland, both of which are fed by nuisance flow from surrounding developments. The ACOE jurisdiction associated with Horno Creek totals 0.17 acre, of which 0.17 is wetland. The CDFG jurisdiction associated with Horno Creek totals 0.75 acre, of which 0.75 is riparian. The character and function of the drainage was consistent with the description of Horno Creek contained within the Biological Resources Assessment, which covered areas approximately 500 feet upstream. Specifically, this description is included as Section 3.4.1 of Appendix C of the Biological Resources Assessment (Jurisdictional Waters and Wetlands Delineation). The results of the field survey are mapped on Figure 7, Sheet 1.

The adjacent wetland associated with Horno Creek consists of a patch of cattails (*Typha latifolia*) fed by street runoff directly east of the distribution facility survey area. This monoculture of cattails was wet at the time of the survey and contained wetland soils. The result of the data pit is recorded in Appendix B of this Addendum (Sampling Point 1). Photographs of this drainage and habitat conditions are included as Appendix A (Photograph 1).

The distribution lines will cross Horno Creek within an existing underground conduit.

### 5.6.2 San Juan Creek

The ACOE jurisdiction associated with San Juan Creek within the distribution facility survey area totals 2.21 acres, of which 2.21 acres are wetland. The CDFG jurisdiction associated with San Juan Creek totals 2.21 acres, of which 2.21 acres are riparian. San Juan Creek is a relatively

<sup>1</sup> Includes all wetlands and waters (RPW and non-RPW).

<sup>2</sup> Includes bed and bank and associated riparian habitat, where present.

permanent waters that traverses the distribution facility survey area from northeast to southwest and ultimately connects to the Pacific Ocean, the closest traditional navigable waters. The character and function of the drainage were consistent with the description of San Juan Creek contained within the BRA, which covered areas approximately 1.3 miles downstream. Specifically, a description of San Juan Creek is included as Section 3.4.2 of Appendix C of the Biological Resources Assessment (Jurisdictional Waters and Wetlands Delineation). The results of the field survey are mapped on Figure 7, Sheet 2. A photograph of this drainage and habitat conditions is included in Appendix A (Photograph 3).

The distribution lines will cross San Juan Creek within an existing underground conduit. Soil pits were not excavated in San Juan Creek; it is assumed that all areas within the jurisdictional limits meet wetland parameters.

### **5.6.3 Tributary to San Juan Creek 1**

The ACOE jurisdiction associated with the Tributary to San Juan Creek 1 totals 0.01 acre, none of which is wetland. The CDFG jurisdiction associated with the drainages totals 0.56 acre, of which 0.55 acre is riparian. The Tributary to San Juan Creek 1 is a large ephemeral drainage originating east of La Pata Road. As no access was provided in the east of La Pata, widths and vegetation structure are estimated based on observations through binoculars and observation of similar areas west of La Pata Road. The drainage transverses the survey corridor following a generally southeast to northwest direction, travelling under La Pata Road, and continuing to San Juan Creek. The results of the field survey are mapped on Figure 7, Sheet 3.

Vegetation associated with Tributary to San Juan Creek 1 consisted primarily of shrubby or herbaceous riparian vegetation. Dominant species included mulefat (*Baccharis salicifolia*), mugwort (*Artemisia douglasiana*), and giant nettles (*Urtica dioica*). In addition patches of arroyo willow (*Salix lasiolepis*), coast live oak (*Quercus agrifolia*), and sycamore (*Platanus racemosa*) were present. West of La Pata Road, the drainage was maintained and cleared with little vegetation on the drainage bottom. East of La Pata road, the drainage appeared to be relatively undisturbed with vegetation growing within the drainage bottom. Photographs of this drainage and habitat conditions are included as Appendix A (Photographs 4 and 5).

A soil pit was excavated in Tributary to San Juan Creek 1 indicating a lack of wetland soils. Soils consisted primarily of hard clay and cobbles associated with high water velocities. No wetlands soils were identified with the drainage. Results of the data pit are recorded in Appendix B (Sampling Point 2).

### **5.6.4 Tributaries to San Juan Creek 2 through 6**

Tributaries to San Juan Creek 2 through 6 have similar character. The ACOE jurisdiction associated with the four drainages totals 0.04 acre, none of which is wetland. The CDFG jurisdiction associated with the drainages totals 0.04 acre, of which 0.01 acre is riparian. The drainages correspond with steep topography and are bisected by La Pata Road. The drainages are ephemeral in nature and are expected to flow only during and directly after storm events. The drainages transverse the survey corridor following an east to northwest direction, travelling under La Pata Road, and continuing to San Juan Creek. The results of the field survey are mapped on Figure 7, Sheets 3 through 6.

Vegetation associated with Tributaries to San Juan Creek 2 through 6 consists of mainly upland coastal sage scrub species and a few scattered riparian species. The drainage bottoms were generally vegetated with upland species. Species observed included buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), coyote bush, monkey flower, mulefat, tree tobacco (*Nicotiana glauca*), telegraph weed (*Heterotheca grandifolia*), non-native bromes, black mustard, Mexican elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Photographs of this drainage and habitat conditions are included in Appendix A (Photographs 6 and 7).

Soils associated with Tributaries to San Juan Creek 2 through 6 were relatively uniform and appeared to be correlated with the storm water velocities coming through the ephemeral washes. Much of the drainages were vegetated with areas in the steeper topography having exposed clays and rock associated with higher velocity water flow. No wetland soils were identified within the drainages. The result of the soil pit is recorded in Appendix B (Sampling Point 3).

### **5.6.5 Tributary to Christianitos Creek 1**

The ACOE jurisdiction associated with the Tributary to Christianitos Creek 1 totals 0.54 acre, all of which is wetland. The CDFG jurisdiction associated with the drainage totals 0.54 acre, all of which is riparian. This portion of Tributary to Christianitos Creek 1 is entirely within a flood control basin. The character and function of the drainage was consistent with the description of Tributary to Christianitos Creek 1 contained within the Proposed Project Delineation, which covered areas within the flood control basin directly adjacent to the distribution facility survey area. Specifically, a description of the flood control portion of Tributary to Christianitos Creek 1 is included as Section 3.4.10 of Appendix C of the Biological Resources Assessment (Jurisdictional Waters and Wetlands Delineation). The results of the field survey are mapped on Figure 7, Sheet 7.

No new soil samples were excavated; however, soils are expected to be consistent with those taken within the flood control basin. Wetland soils were identified within the basin. Photographs of this drainage and habitat conditions are included within Appendix A (Photograph 8).

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## 6.0 POTENTIAL IMPACTS

Construction, operation, and maintenance of the proposed distribution facilities could result in impacts to biological resources located within the Proposed Project area. However, these impacts would not differ from those outlined within the Biological Resources Assessment and Section 4.4 of the PEA. Potential impacts resulting from the construction, operation, and maintenance of the distribution facilities would be avoided or minimized through implementation of the operational protocols, habitat enhancement measures, and mitigation set forth in Sections 7.1, 7.2, and 7.4, respectively, of the *SDG&E Subregional NCCP*. Similar to the potential impacts for the transmission and substation components of the Proposed Project, these measures would be sufficient to reduce any impacts to biological resources, including special status species (species covered and not covered under the *SDG&E Subregional NCCP*) to a less-than-significant level. Therefore, no additional Applicant Proposed Measures (APMs) were determined to be required to avoid or minimize potential impacts to biological resources.

### 6.1 CONSTRUCTION IMPACTS

Construction of the distribution facilities could result in temporary disturbance to or permanent loss of sensitive vegetation communities, rare plant communities, and sensitive plant species. Temporary disturbance includes short-term impacts during construction for new pole structures and removal of existing poles and work at staging/laydown areas. Permanent loss involves long-term impacts associated with permanent distribution facility features such as new distribution poles, or any new access roads or improvements to existing access roads.

SDG&E would be operating under *SDG&E Subregional NCCP* that was established according to the FESA and California Endangered Species Act (CESA) and the state's NCCP Act. This would include compliance with Section 7.1, *Operation Protocols* and Section 7.2, *Habitat Enhancement Measures* of the *SDG&E Subregional NCCP*. Descriptions of the types of potential impacts to biological resources from construction of the distribution facilities are described in Section 6.1 of the Biological Resources Assessment. Construction of the distribution facilities could include impacts to vegetation communities and sensitive habitats, sensitive wildlife species, raptors, and nesting birds.

### 6.2 OPERATIONS AND MAINTENANCE IMPACTS

Standard operational and maintenance activities, such as road grading, tree trimming, structure installation, and replacement and repairs, could potentially impact special status species, including *SDG&E Subregional NCCP* Covered Species, if present in the distribution facility area (refer to Section 6.2 of the Biological Resources Assessment for a description of potential operation and maintenance impacts to biological resources). However, operation and maintenance of the distribution facilities will be substantially the same as currently exist under baseline conditions. All of the proposed distribution facilities would be located in the immediate vicinity of similar existing features, including transmission and distribution lines. Therefore, the proposed distribution facilities will not create any new potential for impacts to biological resources within the Proposed Project area that does not already exist, and there would be zero net impacts.

### **6.3 SUMMARY OF IMPACTS**

Direct and indirect impacts to special status habitats, plant and wildlife species, including covered species, will be avoided, minimized, or mitigated through compliance with measures outlined in the *SDG&E Subregional NCCP* and implementation of the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines; thereby, reducing impacts to a less-than-significant level. Details on those compliance measures are provided in Sections 6.1 and 6.2 of this Biological Resources Assessment. Since compliance with the existing *SDG&E Subregional NCCP* and regulatory permitting is considered adequate to address impacts to sensitive biological resources, no additional APMs are necessary.

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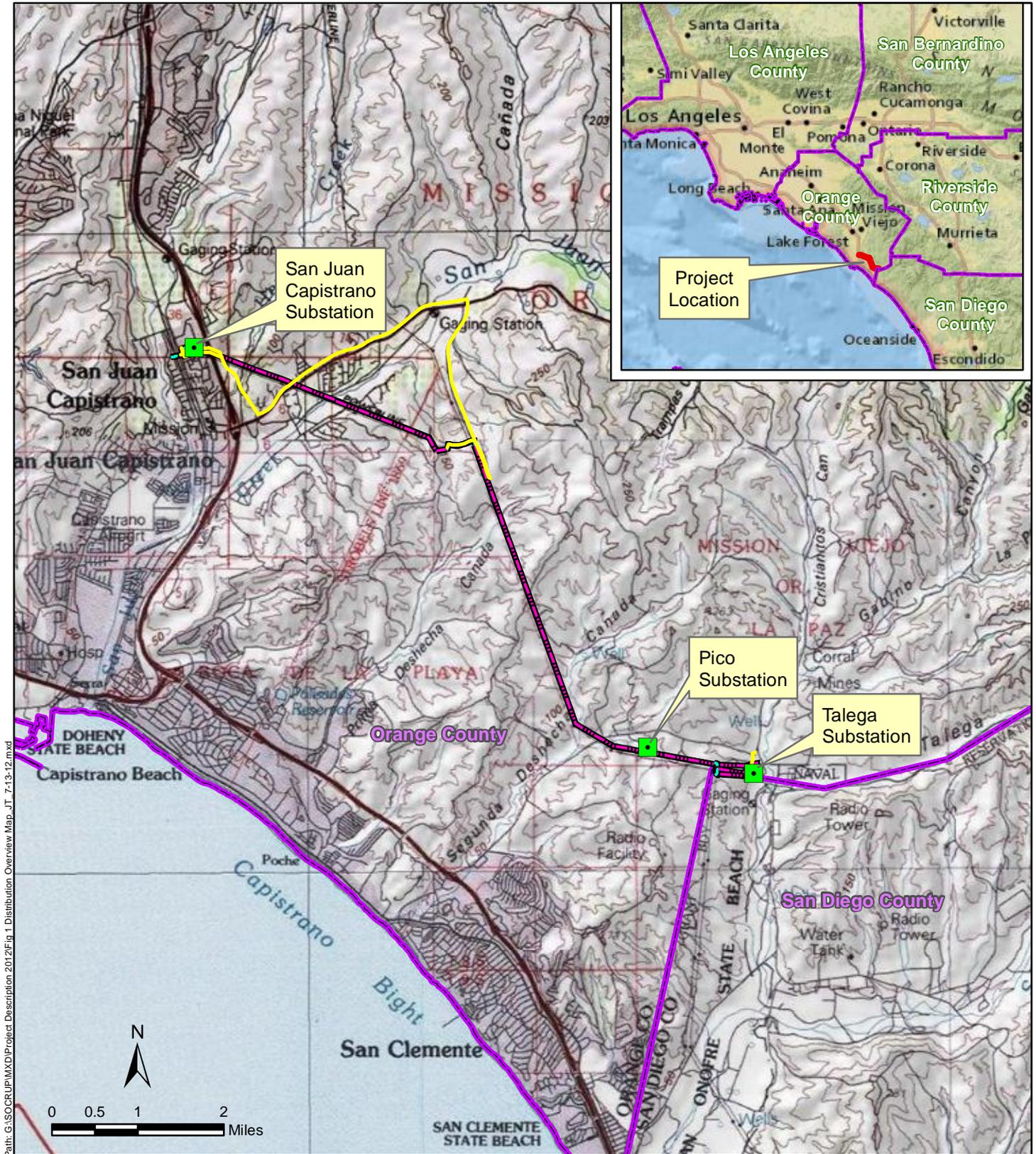
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## Figures



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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

### South Orange County Reliability Enhancement Project

- Legend**
- Proposed Distribution Lines
  - Substations
  - Proposed Overhead Transmission Lines
  - Proposed Underground Transmission Lines
  - County Boundary

Distribution Overview Map

Figure 1





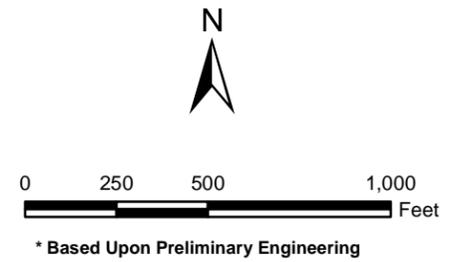
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 Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**





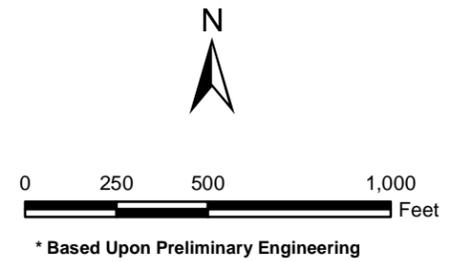
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



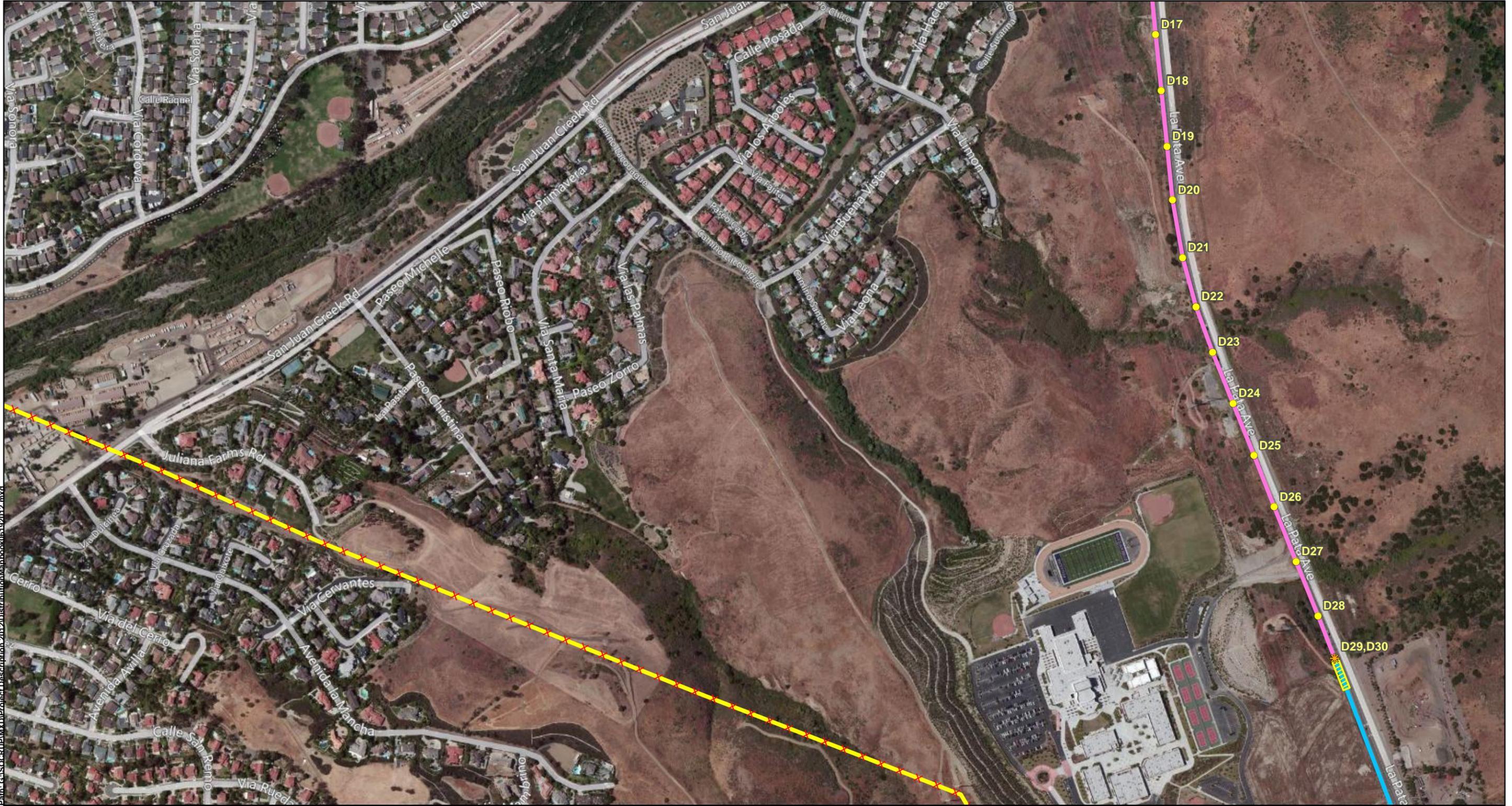
- Legend**
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**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**





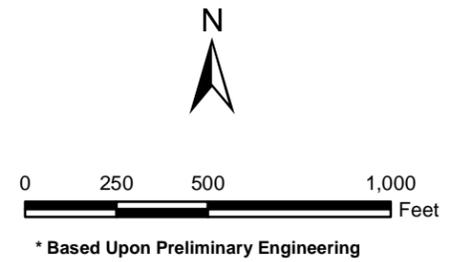
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

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  - New Overhead Distribution Line
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  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
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**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**



A Sempra Energy utility



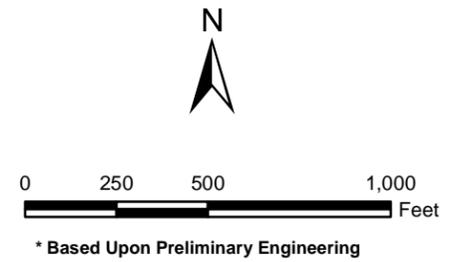
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

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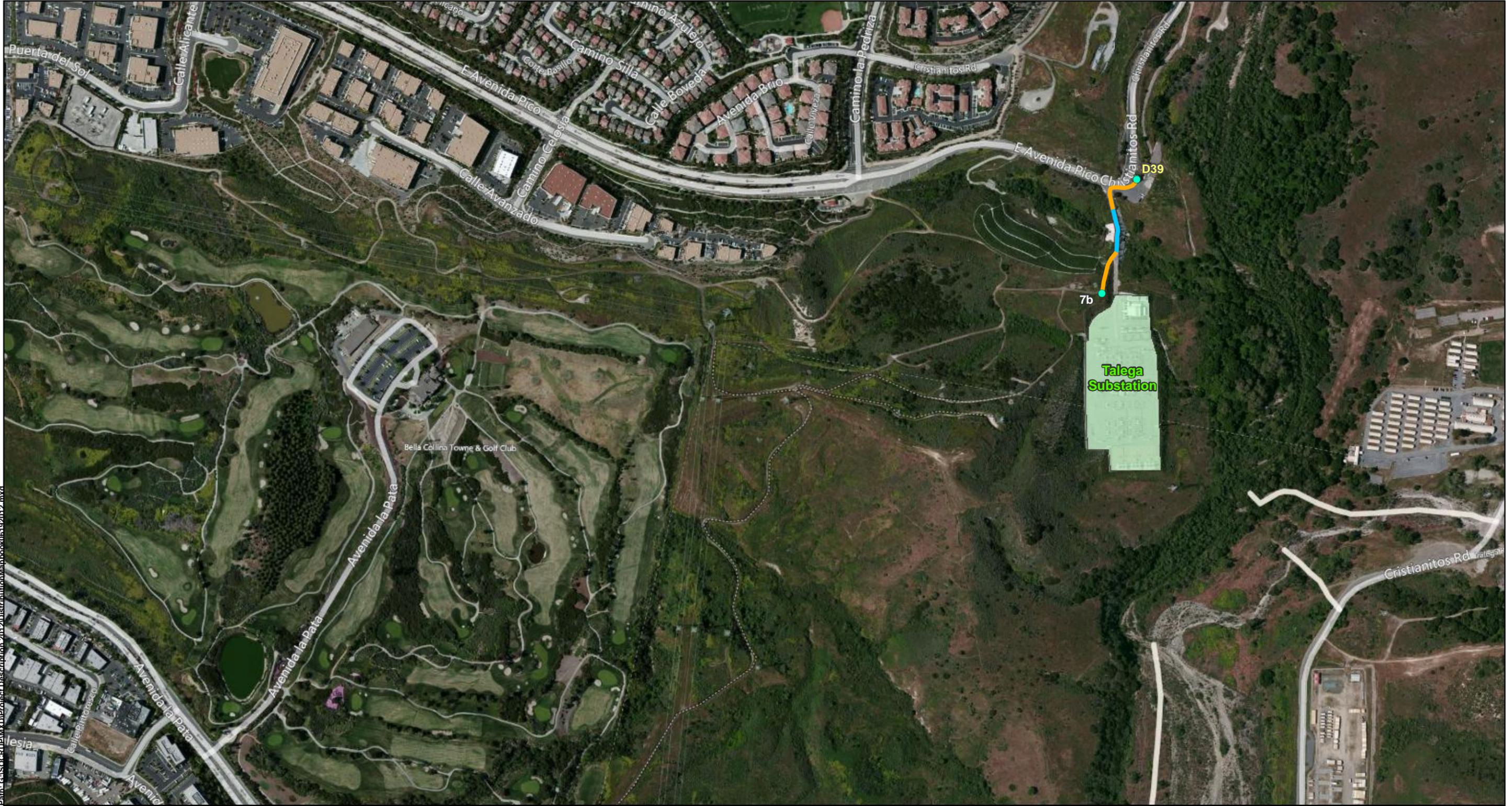
- Legend**
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  - Stringing Site
  - New Road (14ft width)
  - Substation



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**





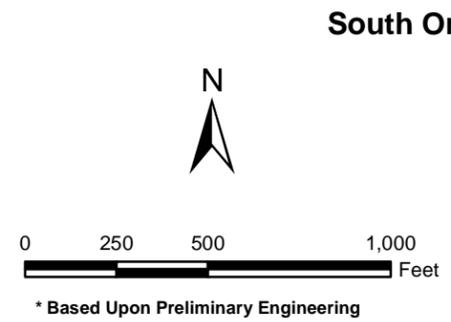
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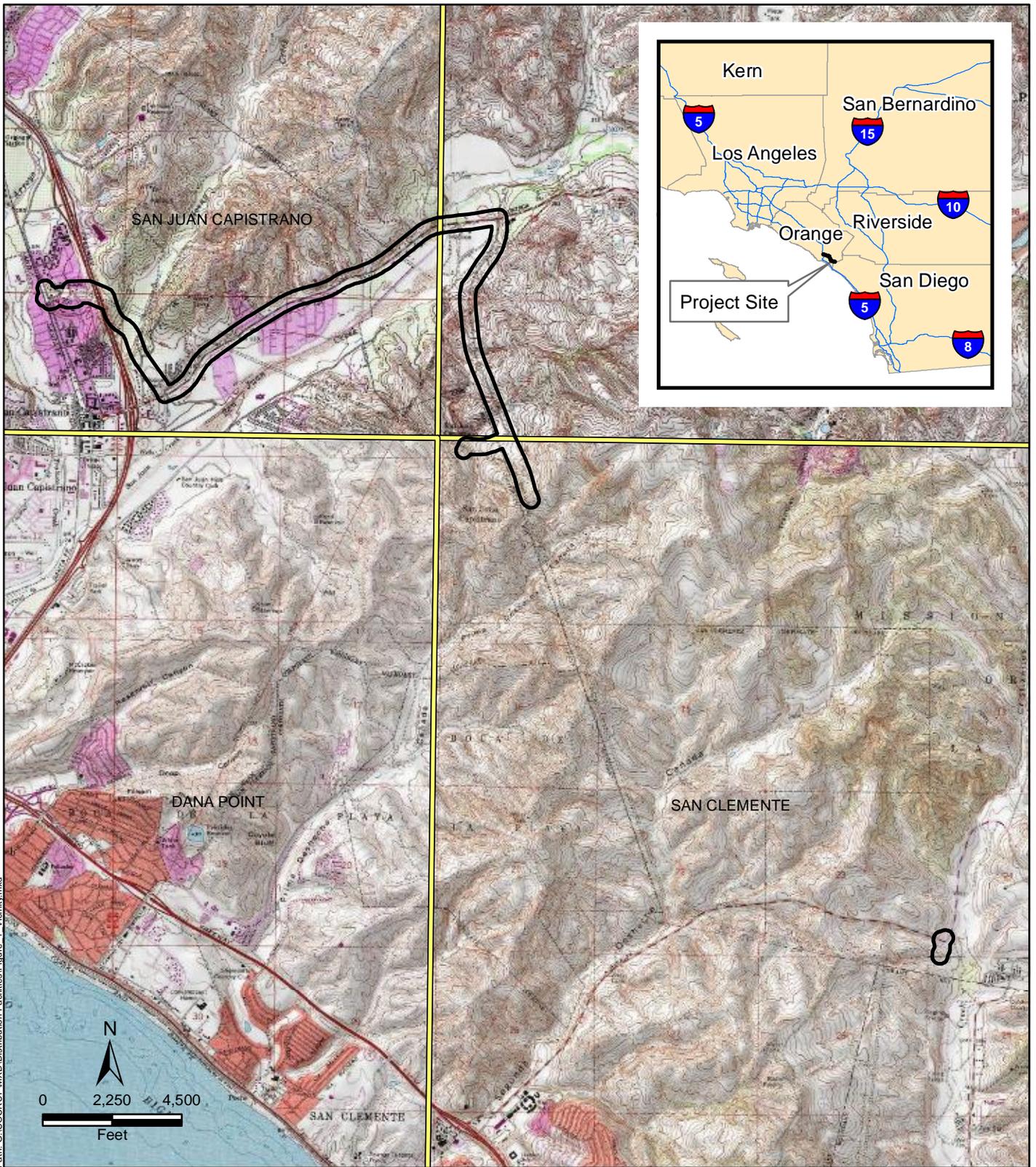
Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

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  - Pole Replacement Locations (Transmission/Distribution)
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  - New Cable in Existing Underground Conduit
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  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation





Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 1\_Vicinity.mxd

### South Orange County Reliability Enhancement Project

Survey Area Map

Figure 3

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

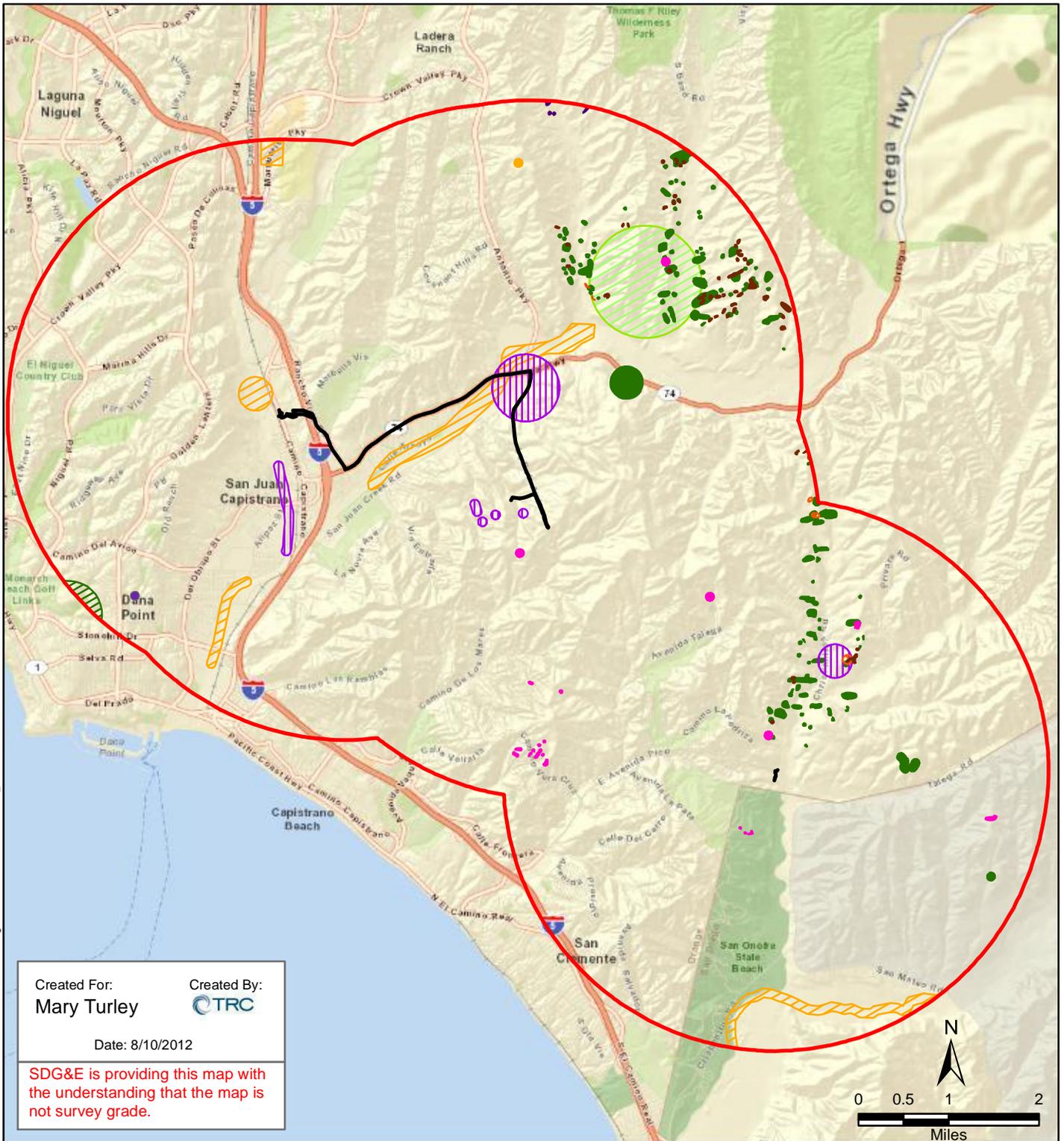
- Legend**
-  Distribution Facility Survey Area
  -  USGS Quadrangle Boundary

SDG&E is providing this map with the understanding that the map is not survey grade.

Source: USGS Topo Maps



Path: G:\SOCORUP\MXD\Distribution Facilities\Figure 3A Distribution\CNDDB\flora\_8x11.mxd



Created For: **Mary Turley**      Created By: **TRC**

Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



**Legend**

- |                                      |                           |
|--------------------------------------|---------------------------|
| Proposed Distribution Lines          | Salt Spring checkerbloom  |
| 3 mile radius from distribution work | intermediate mariposa-ily |
| Blochman's dudleya                   | many-stemmed dudleya      |
| California satintail                 | mud nama                  |
| Coulter's saltbush                   | southern tarplant         |
| Nuttall's scrub oak                  | thread-leaved brodiaea    |
| Palmer's grapplinghook               | white rabbit-tobacco      |

**South Orange County Reliability Enhancement Project**

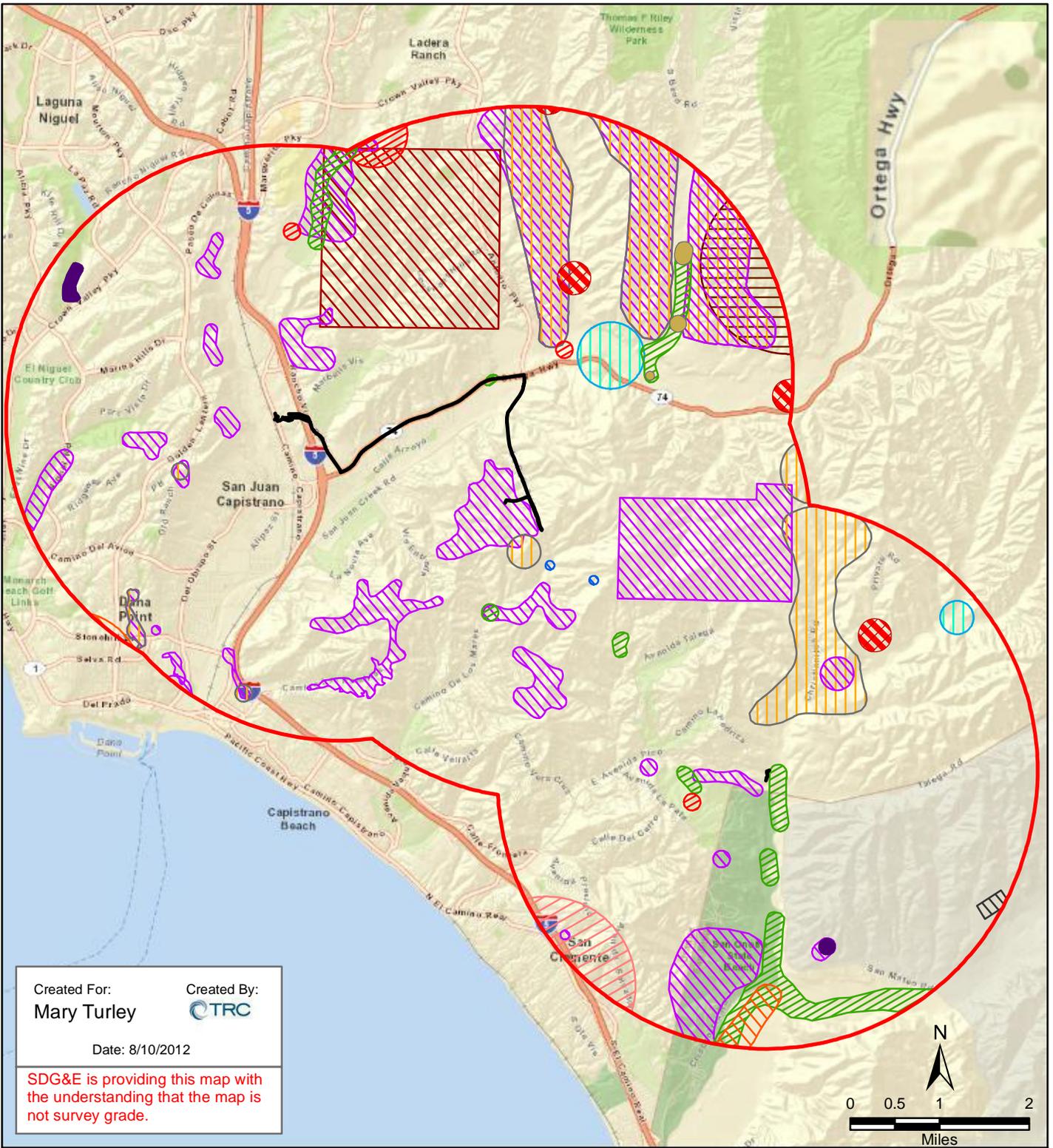
CNDDB Flora Species within a 3 mile radius of Distribution Lines

**Figure 4-A**



Source: CNDDB data 07/03/2012

Path: G:\SOCRUP\WXD\Distribution\Facilities\Figure 3B Distribution\CNDDBirdsMammals\_8x11.mxd



Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012  
 SDG&E is providing this map with the understanding that the map is not survey grade.

- Legend**
- Proposed Distribution Lines
  - 3 mile radius from distribution work
  - ▨ white-tailed kite
  - ▨ burrowing owl
  - ▨ coastal cactus wren
  - ▨ least Bell's vireo
  - ▨ southwestern willow flycatcher
  - ▨ coastal California gnatcatcher
  - ▨ tricolored blackbird
  - ▨ Stephens' kangaroo rat
  - ▨ Dulzura pocket mouse
  - ▨ Mexican long-tongued bat
  - ▨ Yuma myotis
  - ▨ western mastiff bat
  - ▨ pallid bat
  - ▨ southern California rufous-crowned sparrow

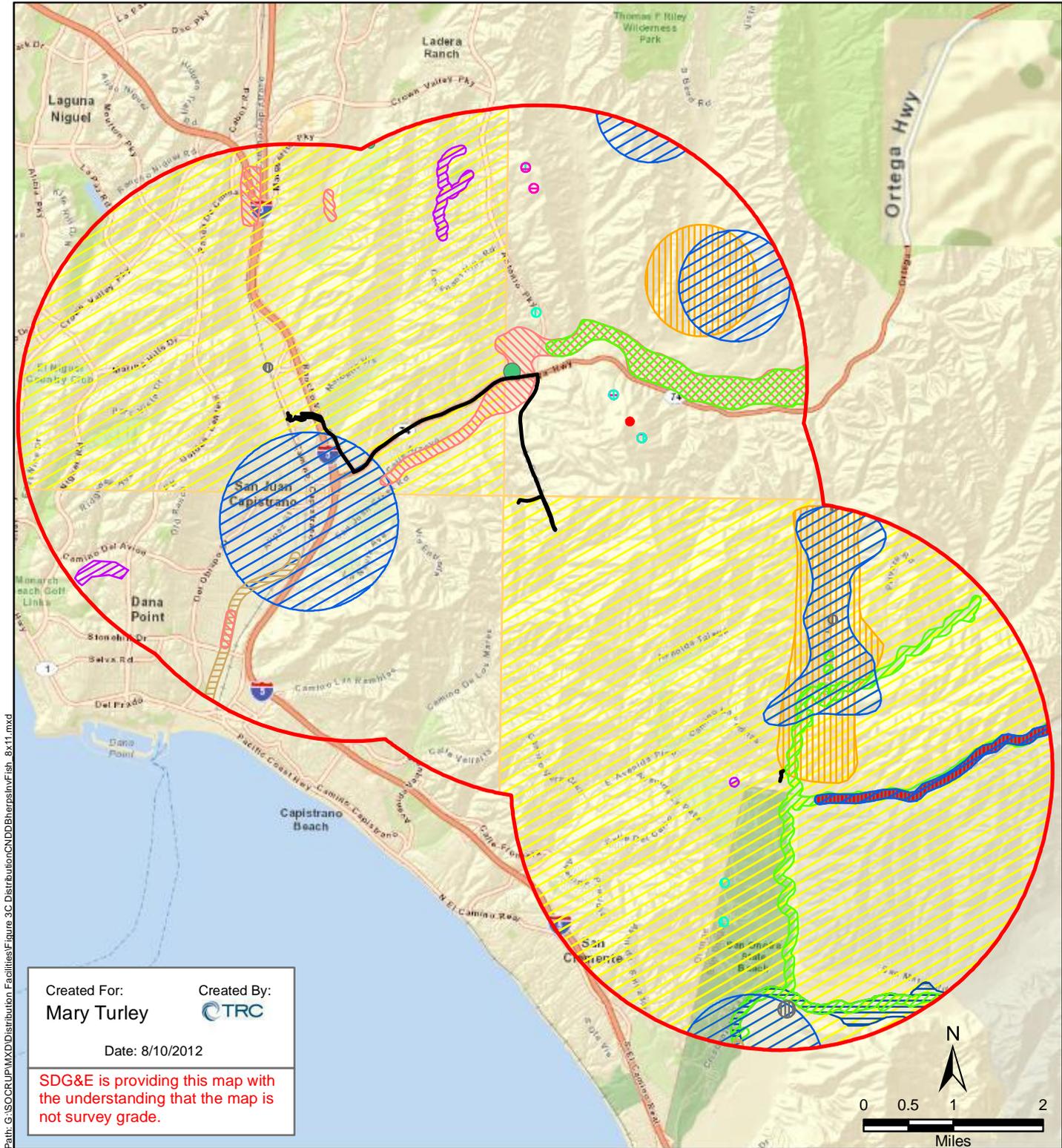
Source: CNDDB data 07/03/2012

**South Orange County Reliability Enhancement Project**

CNDDB Bird and Mammal Species within a 3 mile radius of Distribution Lines

**Figure 4-B**





Path: G:\SOCRUP\MXD\Distribution\_Facilities\Figure\_3C\_Distribution\CNDD\Bheaders\Fish\_8x11.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012  
 SDG&E is providing this map with the understanding that the map is not survey grade.

**Legend**

- Proposed Distribution Lines
- 3 mile radius from distribution work
- ▨ coast horned lizard
- ▨ orangethroat whiptail
- ▨ red-diamond rattlesnake
- ▨ two-striped garter snake
- ▨ western pond turtle
- ▨ western spadefoot
- ▨ arroyo toad
- ▨ tidewater goby
- ▨ arroyo chub
- ▨ Riverside fairy shrimp
- ▨ San Diego fairy shrimp
- ▨ monarch butterfly
- ▨ southern steelhead - southern California DPS

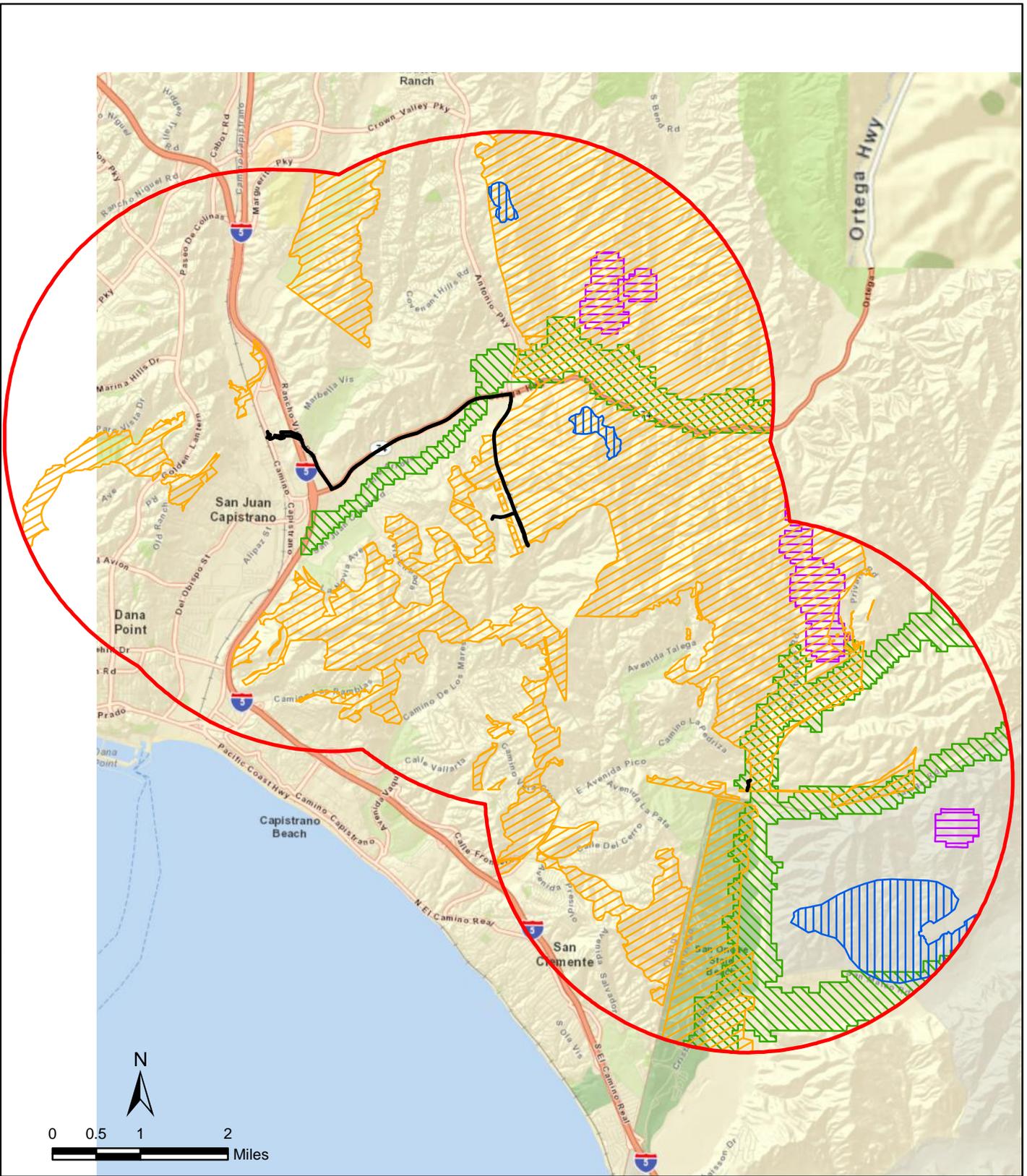
Source: CNDD data 07/03/2012

**South Orange County Reliability Enhancement Project**  
 CNDDB Reptile, Amphibian, Fish and Invertebrate Species within a 3 mile radius of Distribution Lines

**Figure 4-C**



Path: G:\SOCRUP\MXD\Distribution Facilities\Figure 4\_Distribution\CriticalHabitat\_8x11.mxd



Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012  
 SDG&E is providing this map with the understanding that the map is not survey grade.

Source: USFWS Critical Habitat

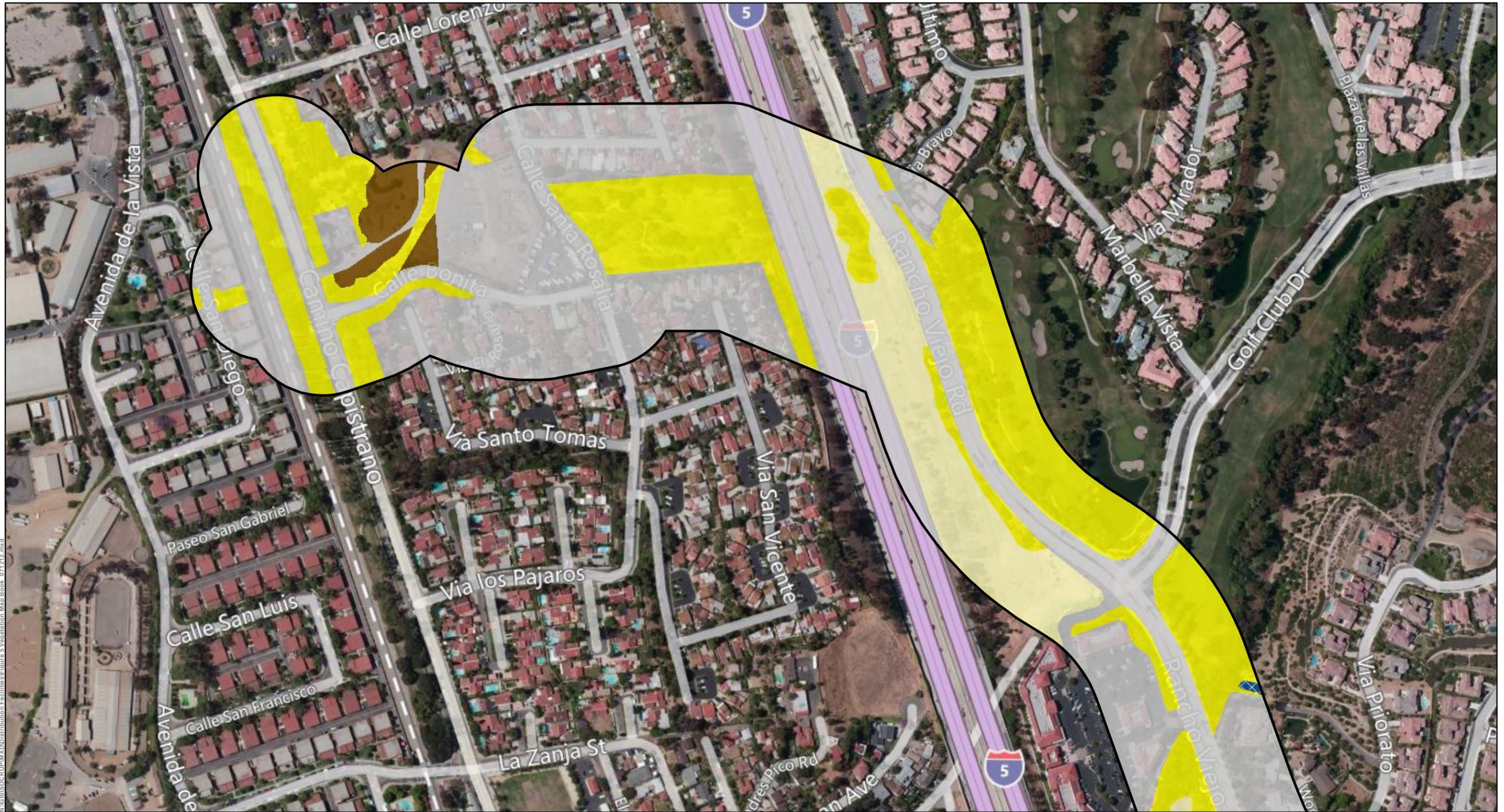
- Legend**
- Proposed Distribution Lines
  - 3 mile radius from distribution work
  - Arroyo (=arroyo southwestern) toad
  - Coastal California gnatcatcher
  - San Diego fairy shrimp
  - Thread-leaved brodiaea

**South Orange County Reliability Enhancement Project Critical Habitat Map**

**Figure 5**



A Sempra Energy utility



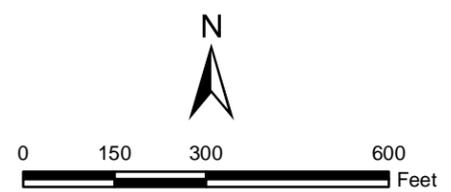
N:\GIS\SDG&E\XDD\Distribution Facilities\Figure 5 Vegetation Map Book\_071212.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- Distribution Facility Survey Area
  - Coastal Sage Scrub
  - Disturbed Coastal Sage Scrub
  - Coastal Freshwater Marsh
  - Southern Willow Scrub
  - Disturbed Southern Willow Scrub
  - Riparian Scrub
  - Ruderal
  - Disturbed
  - Ornamental
  - Dirt Road
  - Developed



**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 1**





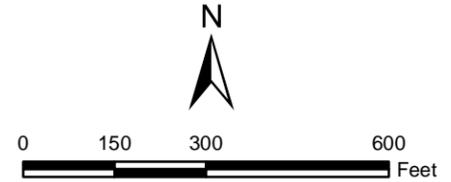
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- Distribution Facility Survey Area
  - Coastal Sage Scrub
  - Disturbed Coastal Sage Scrub
  - Ruderal
  - Disturbed
  - Ornamental
  - Dirt Road
  - Coastal Freshwater Marsh
  - Southern Willow Scrub
  - Developed
  - Disturbed Southern Willow Scrub
  - Riparian Scrub

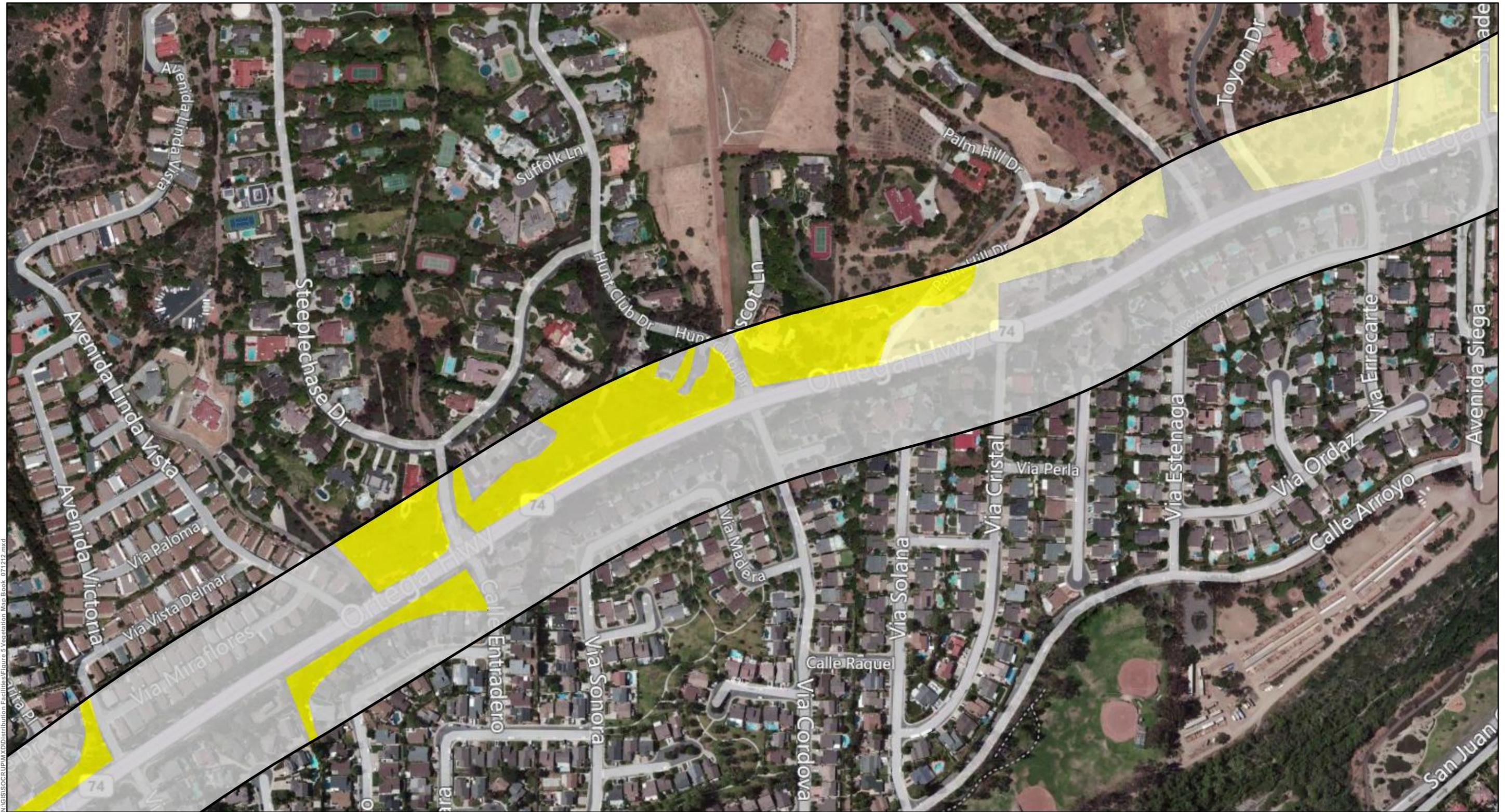


**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 2**





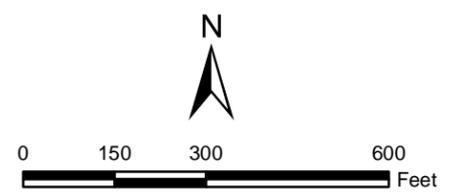
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

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- Legend**
- Distribution Facility Survey Area
  - Coastal Sage Scrub
  - Disturbed Coastal Sage Scrub
  - Coastal Freshwater Marsh
  - Ruderal
  - Disturbed
  - Ornamental
  - Dirt Road
  - Developed
  - Southern Willow Scrub
  - Disturbed Southern Willow Scrub
  - Riparian Scrub

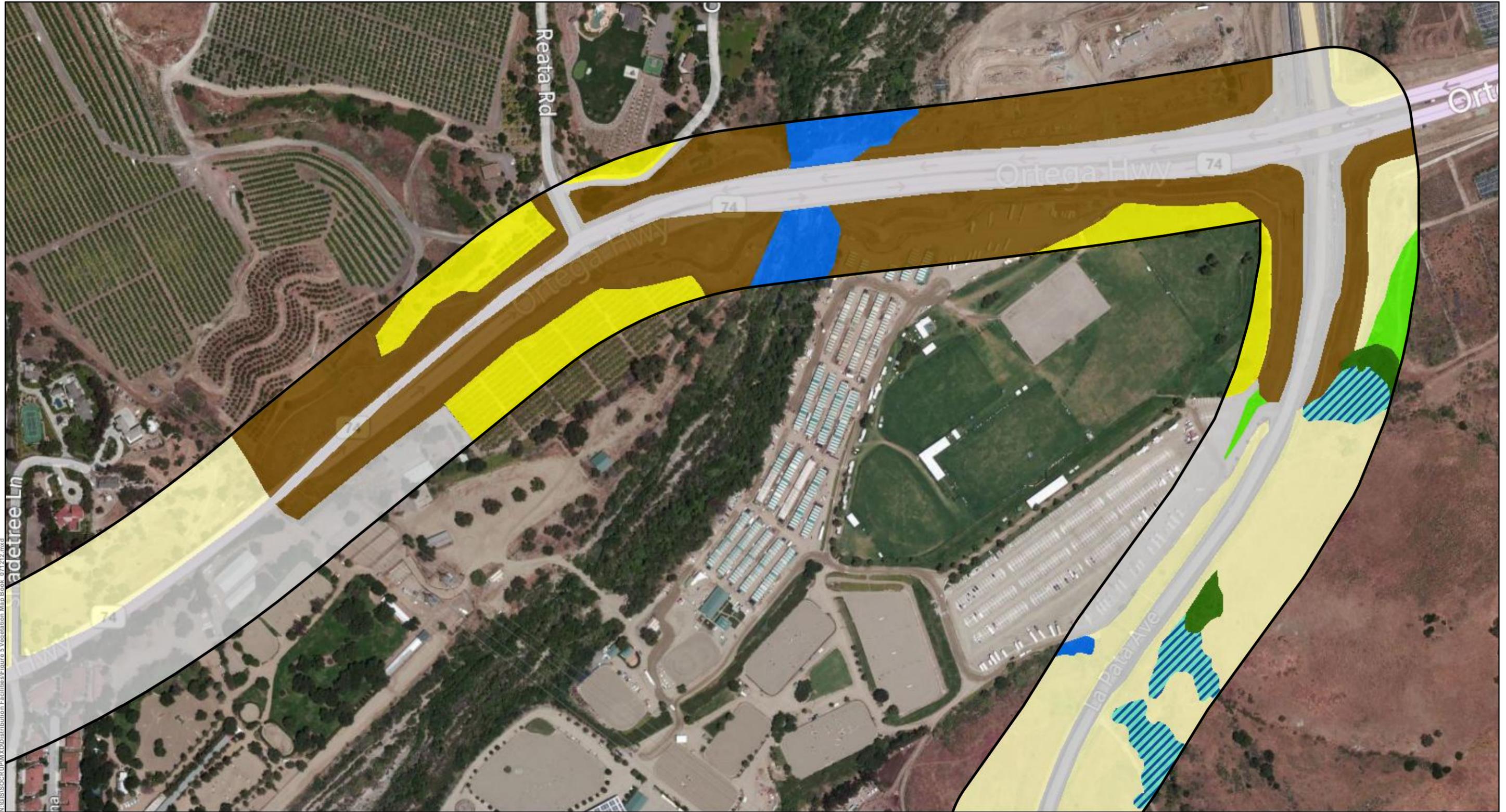


**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 3**





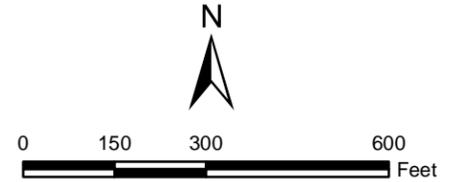
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- Distribution Facility Survey Area
  - Coastal Sage Scrub
  - Disturbed Coastal Sage Scrub
  - Coastal Freshwater Marsh
  - Southern Willow Scrub
  - Disturbed
  - Ornamental
  - Dirt Road
  - Developed
  - Riparian Scrub
  - Ruderal



**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 4**





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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- Distribution Facility Survey Area
  - Riparian Scrub
  - Coastal Sage Scrub
  - Ruderal
  - Disturbed Coastal Sage Scrub
  - Disturbed
  - Coastal Freshwater Marsh
  - Ornamental
  - Southern Willow Scrub
  - Dirt Road
  - Disturbed Southern Willow Scrub
  - Developed



**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 5**





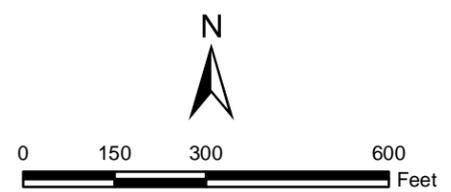
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

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- Legend**
- Distribution Facility Survey Area
  - Coastal Sage Scrub
  - Disturbed Coastal Sage Scrub
  - Ruderal
  - Disturbed
  - Ornamental
  - Dirt Road
  - Developed
  - Coastal Freshwater Marsh
  - Southern Willow Scrub
  - Disturbed Southern Willow Scrub
  - Riparian Scrub



**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 6**





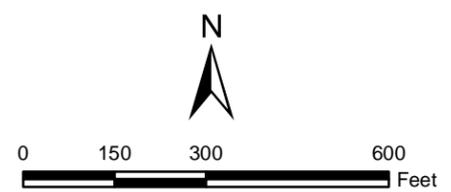
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- Legend**
- Distribution Facility Survey Area
  - Coastal Sage Scrub
  - Disturbed Coastal Sage Scrub
  - Disturbed
  - Ornamental
  - Dirt Road
  - Coastal Freshwater Marsh
  - Southern Willow Scrub
  - Disturbed Southern Willow Scrub
  - Riparian Scrub
  - Ruderal
  - Developed



**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 7**





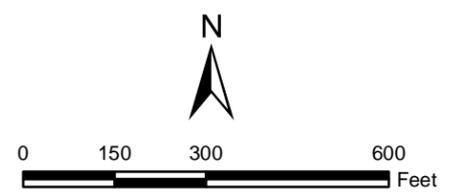
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  - Disturbed Coastal Sage Scrub
  - Coastal Freshwater Marsh
  - Southern Willow Scrub
  - Disturbed Southern Willow Scrub
  - Ruderal
  - Disturbed
  - Ornamental
  - Dirt Road
  - Developed



**South Orange County Reliability Enhancement Project**

Distribution Vegetation Map

**Figure 6  
Sheet 8**



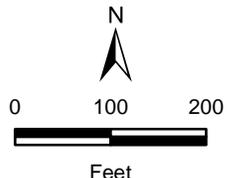


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Created For: **Mary Turley**  
 Created By: **TRC**  
 Date: 8/13/2012

**SDG&E is providing this map with the understanding that the map is not survey grade.**

- Legend**
- Distribution Facility Survey Area
  - Previously Surveyed Under Proposed Project
  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location



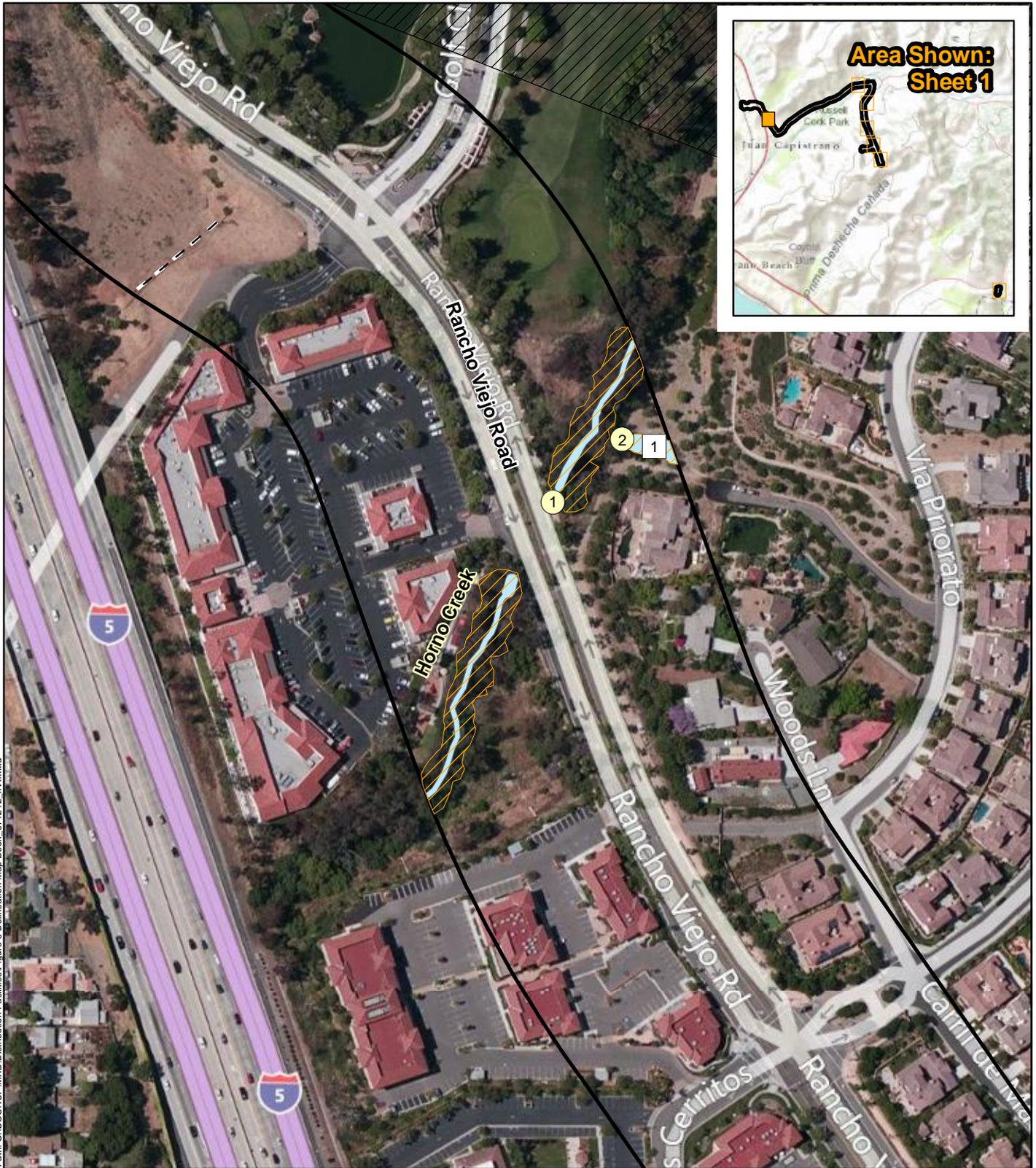
**South Orange County  
 Reliability Enhancement Project  
 Distribution Delineation Map**

**Figure 7  
 Sheet 7 of 7**



Source: Bing Maps Aerial Imagery

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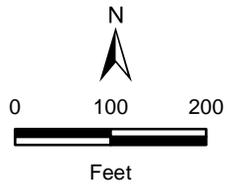


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Source: Bing Maps Aerial Imagery

- Legend**
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  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location



**South Orange County Reliability Enhancement Project**  
**Distribution Delineation Map**

**Figure 7**  
 Sheet 1 of 7



Path: G:\SOCR\UP\MXD\Distribution Facilities\Figure 6 Delineation Map Book\_071212\_INT.mxd



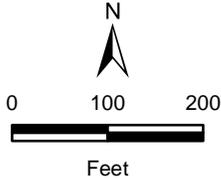
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Created By:  
**TRC**

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  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location

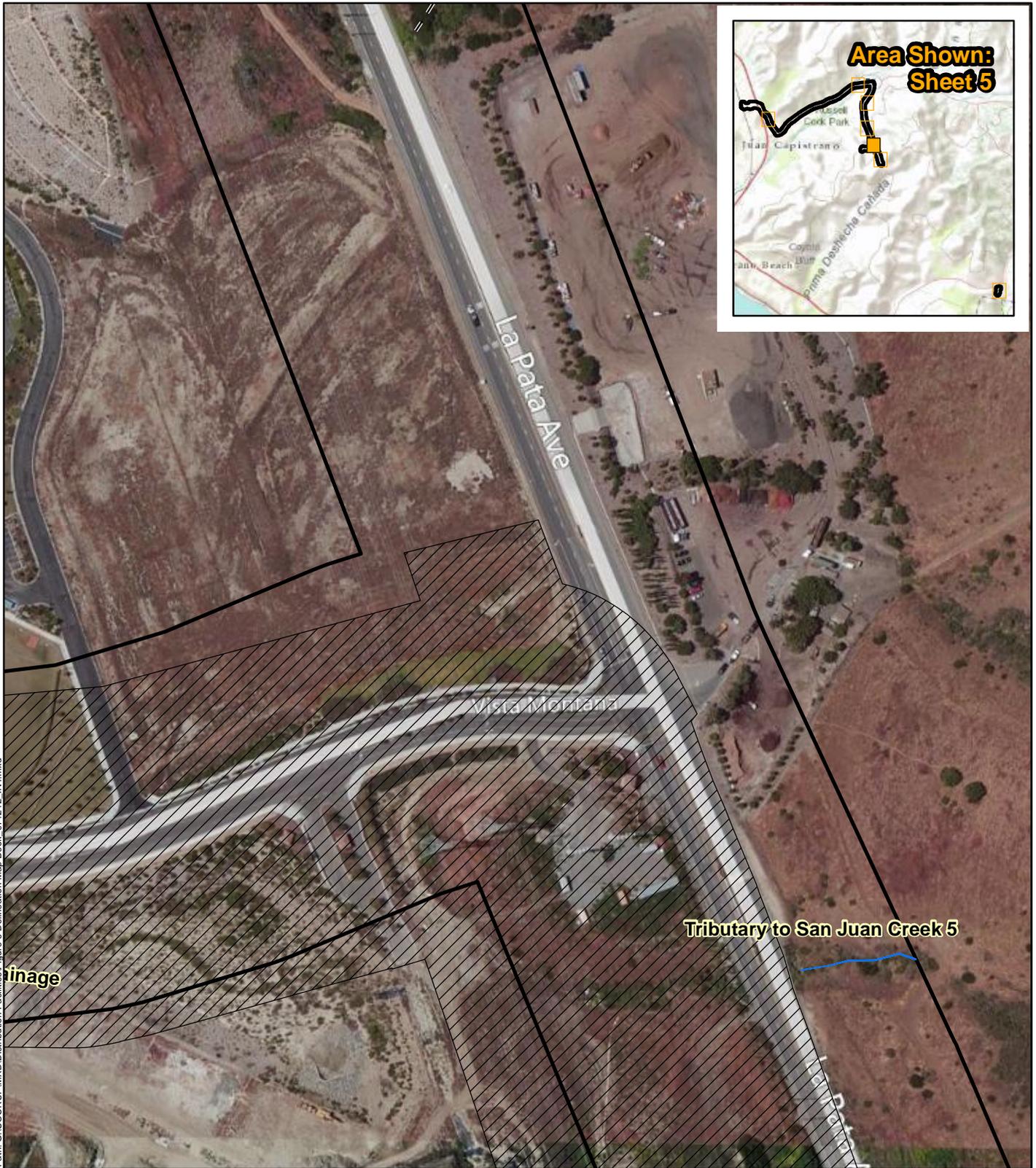


**South Orange County Reliability Enhancement Project**  
Distribution Delineation Map

**Figure 7**  
Sheet 6 of 7



Source: Bing Maps Aerial Imagery



Path: G:\SOCR\UP\MXD\Distribution Facilities\Figure 6 Delineation Map Book\_071212\_INT.mxd

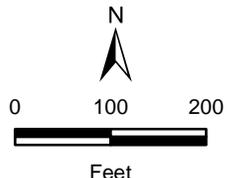
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  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location

**South Orange County  
 Reliability Enhancement Project  
 Distribution Delineation Map**

**Figure 7  
 Sheet 5 of 7**



Source: Bing Maps Aerial Imagery

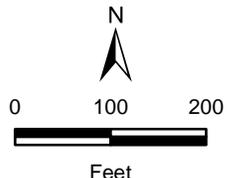


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Created For: **Mary Turley**  
 Created By: **TRC**  
 Date: 8/13/2012

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- Legend**
- Distribution Facility Survey Area
  - Previously Surveyed Under Proposed Project
  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location



**South Orange County  
 Reliability Enhancement Project  
 Distribution Delineation Map**

**Figure 7  
 Sheet 2 of 7**



Source: Bing Maps Aerial Imagery



Path: G:\SOCR\UP\MXD\Distribution Facilities\Figure 6 Delineation Map Book\_071212\_INT.mxd

Created For:  
**Mary Turley**

Created By:  
**TRC**

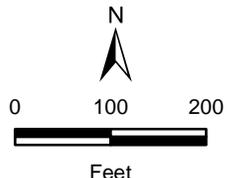
Date: 8/13/2012

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- Legend**
- Distribution Facility Survey Area
  - Previously Surveyed Under Proposed Project
  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location

**South Orange County Reliability Enhancement Project**  
Distribution Delineation Map

**Figure 7**  
Sheet 3 of 7



Source: Bing Maps Aerial Imagery



Path: G:\SOCR\UP\MXD\Distribution Facilities\Figure 6 Delineation Map Book\_071212\_INT.mxd



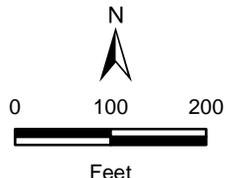
Created For:  
**Mary Turley**

Created By:  
**TRC**

Date: 8/13/2012

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- Legend**
- Distribution Facility Survey Area
  - Previously Surveyed Under Proposed Project
  - ACOE Waters
  - ACOE Wetland
  - CDFG Jurisdiction
  - Areas Of Non Jurisdiction
  - Data Pit Location
  - Photo Location



**South Orange County Reliability Enhancement Project**  
Distribution Delineation Map

**Figure 7**  
Sheet 4 of 7



Source: Bing Maps Aerial Imagery

**Appendix A:  
Photo Exhibit**

## Appendix A: Photo Exhibit



Photograph 1:  
View of Horno Creek  
drainage. Canopy was  
dominated by  
ornamental trees and  
the herbaceous layer  
was dominated by  
weedy riparian species



Photograph 2: View of  
wetland adjacent to  
Horno Creek. The  
wetland was  
composed of a  
monoculture of  
cattails.

## Appendix A: Photo Exhibit



Photograph 3: View of San Juan Creek near bridge crossing. Vegetation was dominated by willows (*Salix* sp.).



Photograph 4: View of Tributary to San Juan Creek 1 east of La Pata Road. Based on observations from a distance, the drainage seemed to be relatively undisturbed.

## Appendix A: Photo Exhibit



Photograph 5: View of Tributary to San Juan Creek 1 west of La Pata Road. Drainage was cleared of vegetation within the channel.



Photograph 6: View of CSS vegetation associated with the ephemeral Tributary to San Juan Creek 3.

**Appendix A: Photo Exhibit**



Photograph 7: View of CSS vegetation associated with the ephemeral Tributary to San Juan Creek 6.



Photograph 8: View of flood control basin associated with Tributary to Christianitos Creek 1.

**Appendix B:  
Wetland Delineation Data Forms**

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: SOCRE City/County: Orange Sampling Date: 7/5/12  
 Applicant/Owner: SDG&E State: CA Sampling Point: 1  
 Investigator(s): T. Kegel, S. Underbrink Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1  
 Subregion (LRR): Mediterranean Lat: 33.508587° Long: 117.657606° Datum: NAD83  
 Soil Map Unit Name: 206 SORRENTO LOAM, 0 TO 2 PERCENT SLOPES NWI classification: Non hydric  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. <u>Typha latifolia</u>	<u>100%</u>	<u>Y</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>100%</u> = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks: _____ _____ _____				



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: SOCRE City/County: Orange Sampling Date: 7/5/12  
 Applicant/Owner: SDG&E State: CA Sampling Point: 2  
 Investigator(s): T. Kegel, S. Underbrink Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 2-3  
 Subregion (LRR): Mediterranean Lat: 33.515203° Long: 117.622333° Datum: NAD83  
 Soil Map Unit Name: 206 NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. <u>Salix lasiolepis</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				<b>Prevalence Index worksheet:</b>
1. <u>Baccharis salicifolia</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
<u>Herb Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>
1. <u>Urtica dioica</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Artemisia douglasiana</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>Polypogon monspeliensis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>Bromus hordeaceus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____				

**SOIL**

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	2.5YR 4/2	99	7.5YR 4/6	1	C	M	Clay	

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: SOCRE City/County: Orange Sampling Date: 7/5/12  
 Applicant/Owner: SDG&E State: CA Sampling Point: 3  
 Investigator(s): T. Kegel, S. Underbrink Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 2-3  
 Subregion (LRR): Mediterranean Lat: 33.513166° Long: 117.623509° Datum: NAD 83  
 Soil Map Unit Name: 209 - NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. <u>Salix lasiolepis</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b>
1. <u>Conium maculatum</u>	<u>5%</u>	<u>Y</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b>
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 <sup>1</sup>
3. _____	_____	_____	_____	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: _____ _____ _____				



## **APPENDIX E**

### **Cultural Resources Assessment Addendum**



123 Technology Drive  
Irvine, California 92618

949.727.9336 PHONE  
949.727.7399 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

August 08, 2012

Ms. Mary Turley  
San Diego Gas & Electric Company  
8315 Century Park, CP 21C  
San Diego, California 92123

**RE: Addendum to the Cultural Resources Assessment Report for the South Orange County Reliability Enhancement Project, Orange and San Diego Counties, California.**

Dear Ms. Turley:

This memo addendum to the Cultural Resources Assessment Report for the South Orange County Reliability Enhancement Project, Orange and San Diego Counties, California, TRC, May 2012 is to identify the presence, or potential for presence, of cultural resources within disturbance areas associated with the distribution line component (Distribution Facilities) of the South Orange County Reliability Enhancement Project (Proposed Project), not addressed in the Cultural Resources Assessment (TRC, 2012). The Cultural Resources Assessment was included as Appendix 4.5-A to the Proponent's Environmental Assessment (PEA) prepared for the Proposed Project as part of an application for Certificate of Public Convenience and Necessity (CPCN) submitted by the San Diego Gas & Electric Company (SDG&E). The Proposed Project is located in Orange and San Diego Counties.

The area not previously covered under the PEA or Cultural Resources Assessment Report is hereafter referred to as the Survey Area, and includes: 1) a section of approximately 1.15 miles of new overhead distribution line located adjacent to La Pata Avenue between State Route 74 (SR 74) and Vista Montana, and 2) a section of approximately 700 feet of underground distribution line located north of the Talega Substation. Distribution Facilities generally refers to the relocation of existing distribution lines, or circuits, required in order to construct the transmission line and substation components of the Proposed Project. The relocation of these distribution lines will involve the replacement of existing poles, the installation of new cable in existing underground conduits, and the construction of new underground distribution lines (new trench, conduit, and cable). The Distribution Facilities are located in the immediate vicinity of the transmission lines that were addressed within the Cultural Resources Assessment (see Figure 1, Distribution Overview Map). A description of the Distribution Facilities, including those portions that constitute the Survey Area, is provided below.

## **Distribution Line Project Description**

Certain distribution facilities that are affected by the San Juan Capistrano Substation rebuild and/or construction of new 230 kilovolt (kV) transmission lines will be relocated. The preliminary preferred distribution line routes are discussed, as applicable, in the following subsections. The proposed distribution route is depicted graphically on Figure 2, Proposed Distribution Map (Sheets 1-5).

### Distribution Getaways (San Juan Capistrano Substation)

All seven distribution (12kV) circuits will leave the proposed San Juan Capistrano Substation from the 12kV switchgear in an underground position west into Camino Capistrano. Two circuits will travel north, two circuits will travel west (adjacent to proposed 138kV transmission lines) and the final three circuits will exit and travel south, and then east.

### Distribution Facilities at the San Juan Capistrano Substation

Required distribution work at the proposed San Juan Capistrano Substation was described, and impacts analyzed, within the Cultural Resources Assessment and PEA. Therefore, cultural resources within this area (and potential impacts to such resources) are not discussed within this Addendum. Only the portions of the distributions lines not previously surveyed for cultural resources are discussed within this Addendum.

### Proposed New Distribution Facilities

The proposed relocated distribution lines will involve new underground installation (new trenching, conduit, and cable), utilization of existing underground facilities, and replacement of existing overhead poles and conductor. Specifically, the Distribution Facilities will require the following:

- New underground distribution line (trenching, conduit, and cable) within the vicinity of the proposed San Juan Capistrano Substation (including approximately 2,000 feet of new underground distribution line between the substation site and the Interstate 5 (I-5) freeway to the east.
- New overhead distribution line (including four new cable poles) from Junipero Serra Park east over the I-5 freeway (refer to Figure 2, Sheet 1).
- A small portion of new underground distribution line between I-5 and Rancho Viejo Road (refer to Figure 2, Sheet 1).
- Utilization of a combination of existing underground conduit and cable (no trenching or other ground disturbance required) for approximately 15,650 feet (2.95 miles) south through Rancho Viejo Road, east through State Route 74 (SR 74), and south adjacent to La Pata Avenue (refer to Figure 2, Sheets 1 and 2).
- Approximately 6,000 feet (1.15 miles) of new double-circuit overhead distribution line (including one-for-one replacement of approximately 23 distribution poles) that will replace an existing single-single distribution line along La Pata Avenue (refer to Figure 1, Sheets 2 and 3). This portion was not previously surveyed for cultural resources.



- Utilization of a combination of existing conduit and cable near the intersection of La Pata Avenue and Vista Montana (refer to Figure 2, Sheet 4).
- Approximately 1,400 feet of new double-circuit overhead distribution line (including one-for-one replacement of approximately eight distribution poles) that will replace an existing single-circuit distribution line adjacent to La Pata Avenue as it enters the Prima Deschecha Landfill site (refer to Figure 2, Sheet 4).
- Installation of new underground distribution line (new trenching, conduit, and cable) as well as the utilization of existing conduit north of the Talega Substation (refer to Figure 2, Sheet 5). A portion of this was not previously surveyed for cultural resources.
- Removal of existing distribution lines between the existing Capistrano Substation and the Rancho San Juan development (refer to Figure 2, Sheets 1, 3, and 4).

### **Known Archaeological Resources**

The California Historic Resources Information System (CHRIS) maintains regional offices that manage records for known cultural resource locations and related technical studies. The regional office for Orange County is the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton, and the regional office for San Diego County is the South Coastal Information Center (SCIC) housed at San Diego State University.

An additional record search was conducted in-house at the SCCIC on July, 03, 2012 for the areas of the distribution line not covered in the original record search. Sources reviewed consisted of all recorded archaeological and historic sites and cultural resource reports within a ¼ mile radius of the Survey Area. Additional resources that were consulted included the National Register of Historic Places, the Historic Property Data File, the California Register, the California Historical Landmarks, the California Inventory of Historic Resources, and the California Points of Historical Interest. Also reviewed were historic maps.

### **Record Search Results**

There are a total of two additional cultural resources identified within a ¼ mile radius of the Survey Area. Table 1, Cultural Resources Previously Recorded within ¼ mile of the Survey Area summarizes the new cultural resources located within a ¼ mile of the Survey Area. One known cultural resource lies within the Survey Area. There have been eight cultural resource studies conducted within a ¼ mile radius of the Distribution Line Proposed Project area. One of the studies covered a portion of the distribution route, from the Ortega Highway to the Prima Deschecha Landfill (LSA, 2010). The results for this survey were negative.

**Table 1: Cultural Resources Previously Recorded within 1/4 mile of the Survey Area**

<b>Primary Number</b>	<b>Brief Description</b>	<b>Recorder and date</b>
30-000025	Camp	1949
30-000026*	Lithic scatter with groundstone	1949; Schuster, 1977; Cooley, 1980; Wlodarski & Romani, 1985; Demcak, 2010
* Denotes a cultural resource within the Survey Area		

Description of the Site within the Survey Area

Following is a brief description of the one site found within the Survey Area. Site 30-000026 was originally recorded in 1949 as a camp with no specific information given. In 1977, T.J. Schuster stated that the site was divided by the Ortega Highway and that portions of the site had been completely graded away, but it had yielded manos, portable metates scrapers and flakes. In 1980, T. Cooley found three loci and described the site as a substantial scatter of millingstone assemblage artifacts. In 1986, six test units were done by Caltrans. The site is almost totally destroyed with only approximately 20 centimeters of depth left. Surface artifacts still exist but appear out of context. In 2010, a new survey was conducted and only Locus A was relocated with artifacts on the north side of the Ortega Highway. The site has been found ineligible for the National Register by consensus through the Section 106 process.

Native American Scoping

No additional contact with the Native American Heritage Commission (NAHC) has occurred at this time. On July 25, 2012, TRC sent an additional letter via email with an attached map of the Proposed Distribution Line route to most of the Native American individuals and/or organizations on the list provided by the Native American Heritage Commission (January 18, 2012). Mr. Andrew Sala, Chairperson for the Gabrieliño Band of Mission Indians was the only person not contacted, as his correspondence from January 25, 2012 indicated that the Proposed Project was not within Gabrieliño territory.

On August 6, 2012, Ms Joyce Perry, Cultural Resource Coordinator for the Juaneño Band of Mission Indians Acjachemen Nation, called to discuss the additional area, and said the Juaneño would like to make the same recommendation as provided for the transmission line component of the Proposed Project (refer to PEA Section 4.5, Cultural Resources). This recommendation was archaeological and Native American monitors for the areas near previously recorded sites. There has been no other correspondence as of this time. Copies of the letters are attached to this memo (Attachment A).

**Archaeological Survey**

TRC was retained to conduct a cultural resources pedestrian survey of the Survey Area to determine the presence or absence of surficial cultural resources.



### Field Methods

On July 5, 2012, TRC archaeologist Ms. Susan Underbrink, MA, RPA surveyed the area of the distribution line Proposed Project routes that have not been previously surveyed for cultural resources, which have ground disturbance. A survey width of 250 feet on either side of the proposed center line was used. The Survey Area consisted of two distribution line segments, along La Pata Avenue between SR 74 and Vista Montana and the area around the existing Talega Substation. When possible, 15 meter transects were completed and in areas of poor visibility meandering transects were utilized to cover any open areas. A high-precision Trimble unit was available to record the location of any cultural material that was observed. In all cases aerial and topographic maps were utilized, and field notes as well as photographs were taken.

### Survey Results

The previously recorded site (30-000026) was recorded within the section of the Survey Area along La Pata Avenue between SR 74 and Vista Montana (refer to Figure 2, Sheets 2 and 3). The area had been recently graded and the site was not relocated within the Survey Area. The previously recorded site located within the Talega section (30-000363 which was previously described) was not relocated. Both portions of the Survey Area (adjacent to La Pata Avenue and north of the Talega Substation) had heavy vegetation, and poor ground visibility, so meandering transects were utilized to cover any open areas. Sections of the La Pata Avenue portion of the Survey Area had been previously disturbed and/or graded. No new cultural resources were located during the cultural resource survey.

### **Conclusions**

A record search and cultural resource survey were completed on the Survey Area (areas of the Distribution Line not addressed in the Cultural Resource Assessment). The cultural resource record search found one known archaeological site within the Survey Area. Surface visibility over most portions of the Survey Area was poor due to heavy vegetation, thus leaving some potential for surface or subsurface cultural resources to be located within the Survey Area. Although no new cultural resources were uncovered and the previously known prehistoric archaeological site (30-000026) was not relocated, it is recommended that a qualified archaeologist, monitor ground-disturbing activities near the previously recorded cultural resource. It is also recommended that in the event that cultural resources are discovered during construction, the monitor must be empowered to temporarily halt or divert construction in the immediate vicinity of the discovery while it is evaluated for significance. If the discovery proves to be significant, additional investigation, such as evaluation and data recovery excavation, may be deemed necessary.

Ms. Mary Turley  
August 08, 2012  
Page 6

If you have any comments or questions please contact Susan Underbrink at 949-727-7385 or via email [sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com).

Sincerely,

TRC Solutions, Inc.

*Susan Underbrink*

Susan Underbrink M.A., RPA  
Project Manager Archaeology



## **References**

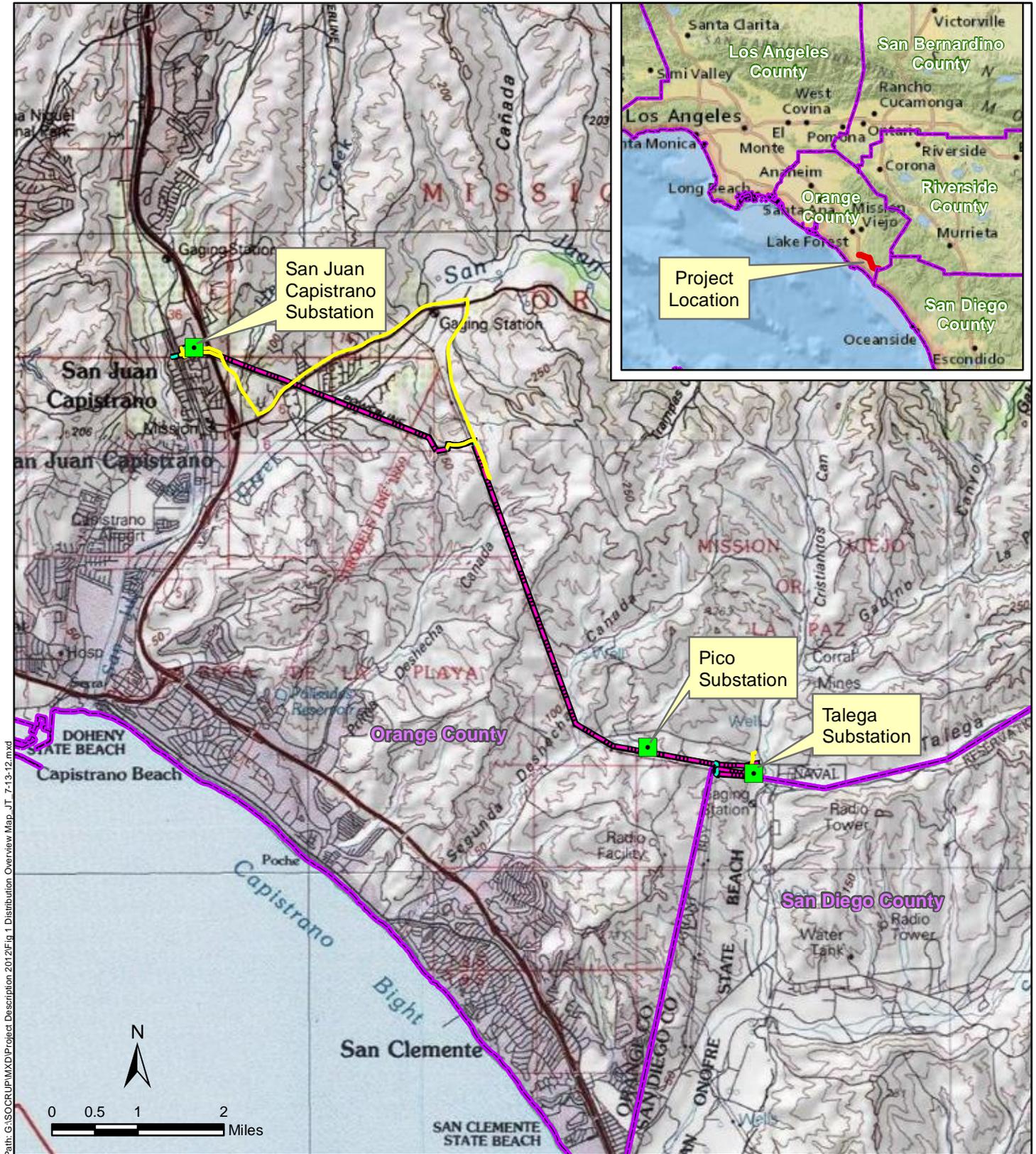
LSA.

2010 Cultural Resources Assessment Report for the La Pata Avenue Gap Closure and Camino Del Rio Extension. On file at the SCCIC.

TRC.

2012 Cultural Resources Assessment Report for the South Orange County Reliability Enhancement Project, Orange and San Diego Counties, California.

## **FIGURES**



Path: G:\SOCRUP\MXD\Project Description 2012\Efig 1 Distribution Overview Map\_JT\_7-13-12.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/10/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

### South Orange County Reliability Enhancement Project

#### Legend

- Proposed Distribution Lines
- Substations
- Proposed Overhead Transmission Lines
- Proposed Underground Transmission Lines
- County Boundary

Distribution Overview Map

Figure 1





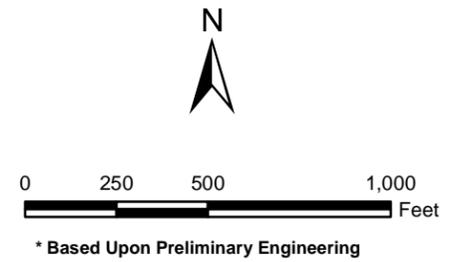
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Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**





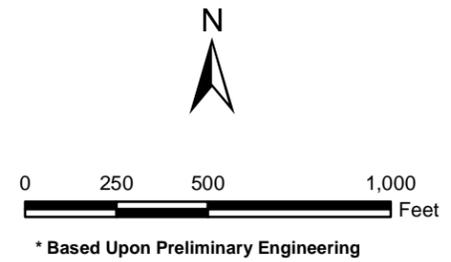
Path: G:\SOCR\B\W\X\N\Project\_Description\_2012\Distribution\Mapbook\06192012.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



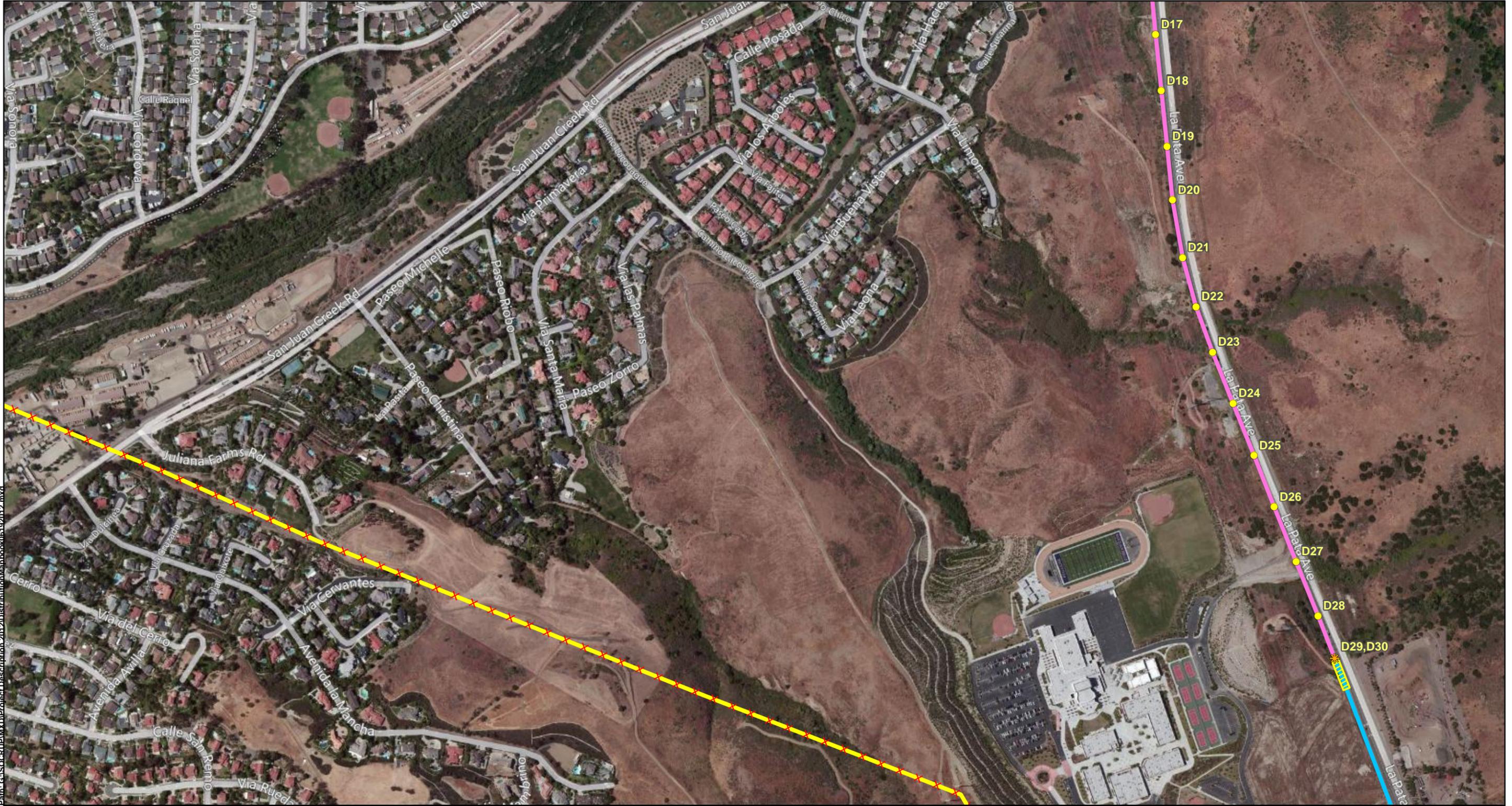
- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
  - Pole Replacement Locations (Transmission/Distribution)
  - New Underground Distribution (New Trench, Conduit, and Cable)
  - New Cable in Existing Underground Conduit
  - Remove Underground Cable
  - Existing Underground Distribution Line (No work needed)
  - New Overhead Distribution Line
  - New Overhead Distribution Line (Replace Existing Line)
  - Existing Overhead Distribution Line to be Removed
  - Stringing Site
  - New Road (14ft width)
  - Substation



**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**





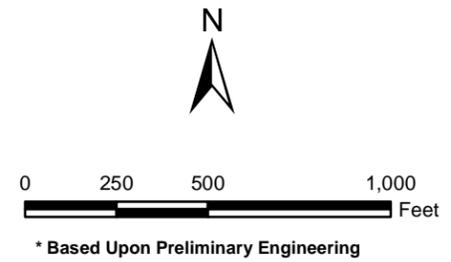
Path: G:\SOCR\UB\WXM\Project\_Description\_2012\DistributionMapbook06192012.mxd

Created For: Mary Turley  
 Created By: TRC  
 Date: 8/13/2012

SDG&E is providing this map with the understanding that the map is not survey grade.



- Legend**
- New Distribution Only Cable Pole
  - Pole Replacement Locations (Distribution)
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**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**



A Sempra Energy utility



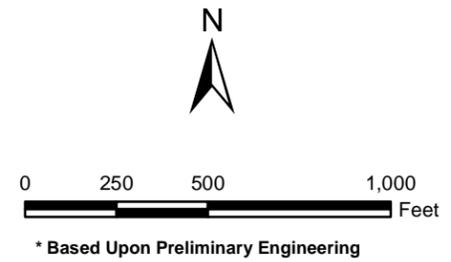
Path: G:\SOCR\B\W\X\N\Project\_Description\_2012\DistributionMapbook06192012.mxd

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**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**





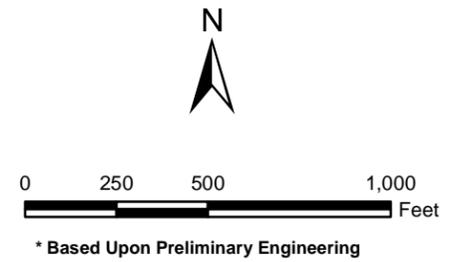
Path: G:\SOCRI\IP\WX\Project Description 2012\Distribution\Mapbook\06192012.mxd

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**South Orange County Reliability Enhancement Project**

Proposed Distribution Map  
**Figure 2**



**ATTACHMENT A**  
**Native American Correspondence**



123 Technology Drive  
Irvine, California 92618

949.727.9336 PHONE  
949.727.7399 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

July 25, 2012

Mr. David Belardes, Chairperson  
Juaneño Band of Mission Indians Acjachemen Nation  
32161 Avenida Los Amigos  
San Juan Capistrano, CA 92675  
Sent via email

Dear Mr. Belardes:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

TRC conducted an additional record search and an additional cultural resource survey. TRC is notifying Native American parties about the Project and inquiring about any cultural sensitivity concerns you may have.

If you have any questions or concerns regarding this Project, please feel free to contact me at any time. Thank you for your time and help.

Respectfully,

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
(949) 727-7385 direct line

Enclosure: Updated map



123 Technology Drive  
Irvine, California 92618

949.727.9336 PHONE  
949.727.7399 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

July 25, 2012

Mr. Alfred Cruz, Cultural Resource Coordinator  
Juaneño Band of Mission Indians  
P.O. Box 25828  
Santa Ana, CA 92799  
Sent via email

Dear Mr. Cruz:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

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Respectfully,

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
(949) 727-7385 direct line

Enclosure: Updated map



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Irvine, California 92618

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July 25, 2012

Ms. Sonia Johnston, Chairman  
Juaneño Band of Mission Indians  
P.O. Box 25628  
Santa Ana, CA 92799  
Sent via email

Dear Ms. Johnston:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

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Respectfully,

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
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July 25, 2012

Ms. Joyce Perry, Representing Tribal Chairperson  
Juaneño Band of Mission Indians Acjachemen Nation  
4955 Paseo Segovia  
Irvine, CA 92612  
Sent via email

Dear Ms. Perry:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

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If you have any questions or concerns regarding this Project, please feel free to contact me at any time. Thank you for your time and help.

Respectfully,

A handwritten signature in blue ink that reads "Susan Underbrink".

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
(949) 727-7385 direct line

Enclosure: Updated map



123 Technology Drive  
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July 25, 2012

Mr. Anthony Rivera, Chairman  
Juaneño Band of Mission Indians Acjachemen Nation  
31411-A La Matanza Street  
San Juan Capistrano, CA 92675  
Sent via email

Dear Mr. Rivera:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

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If you have any questions or concerns regarding this Project, please feel free to contact me at any time. Thank you for your time and help.

Respectfully,

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
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July 25, 2012

Ms. Rebecca Robles  
United Coalition to Protect Panhe  
119 Avenida San Fernando  
San Clemente, CA 92672  
Sent via email

Dear Ms. Robles:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

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Respectfully,

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
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July 25, 2012

Mr. Adolph "Bud" Sepulveda, Vice Chairman  
Juaneño Band of Mission Indians  
P.O. Box 25828  
Santa Ana, CA 92799  
Sent via email

Dear Mr. Sepulveda:

TRC Solutions, Inc. has been retained by San Diego Gas & Electric (SDG&E) to conduct a cultural study for a proposed South Orange County Reliability Enhancement Project (Project). The Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between the Talega and Capistrano Substations. As part of the overall Project, SDG&E will have to relocate some existing distribution lines. Please see the attached map for the new distribution line route. The Project is located in Orange County on the San Juan Capistrano, Dana Point, Cañada Gobernadora, and San Clemente United States Geological Survey (USGS) quadrangles as depicted on the attached map.

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Respectfully,

Susan Underbrink M.A., RPA  
Archaeologist  
[sunderbrink@trcsolutions.com](mailto:sunderbrink@trcsolutions.com)  
(949) 727-7385 direct line

Enclosure: Updated map



**APPENDIX F**

**Records Search Results (CONFIDENTIAL – SUBMITTED UNDER  
SEPARATE COVER)**



Rebecca Giles  
Case Manager  
San Diego Gas and Electric Company  
8330 Century Park Court  
San Diego, CA 92123-1530

August 16, 2012

Reg.12-10/A.12-05-020  
SOCRE CPCN

**SENT VIA EMAIL ONLY**

Mr. Andrew Barnsdale  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

**RE: SDG&E's Follow Up to Supplemental Response to Completeness Review Letter**

Dear Mr. Barnsdale:

Attached please find San Diego Gas & Electric Company's (SDG&E) follow up to its supplemental response to the questions posed in your June 15 2012 Completeness Review letter. This submittal supplements the response to Q1 previously provided on July 27, 2012 and August 14, and also completes the utility's response to this letter.

If you have any questions or require additional information, please feel free to contact me by phone at (858) 636-6876 or e-mail: [RGiles@semprautilities.com](mailto:RGiles@semprautilities.com).

Sincerely,

**Signed**

Rebecca Giles  
Case Manager

Enclosures

cc: Christy Herron – ED Consultant  
Ke Hao Ouyang - DRA  
Allen Trial – SDG&E  
Central Files - SDG&E

**SDG&E August 16, 2012 Follow up to Supplemental Response**  
**Re: June 15 2012 Completeness Review letter**  
**12-05-020 South Orange County Reliability Enhancement Project CPCN**  
**(i.e. Supplements response to Q1 previously provided on July 27 and August 14, 2012)**

**Question 1: Distribution Analysis**

- a. Were any GIS layers revised in the course of preparing the response to the deficiency letter (for example, were the GIS layers for spur and access roads revised?) – if so, we would like to receive copies of those GIS data.
- b. In addition, we would like copies of the GIS layers that correspond to the additional distribution information we received yesterday.

**SDG&E Response to Q1:**

- a. No, SDG&E did not revise any of the work areas and corresponding shape files as a result of the deficiency response. Only callouts were added and did not change any of the actual Shapefiles.
- b. The Distribution Line Shapefiles are attached.



SOCREDistributionSh  
apefiles.zip

*Response provided by:* Chris Terzich /Joshua Taylor

*The remainder of this page is intentionally left blank.*